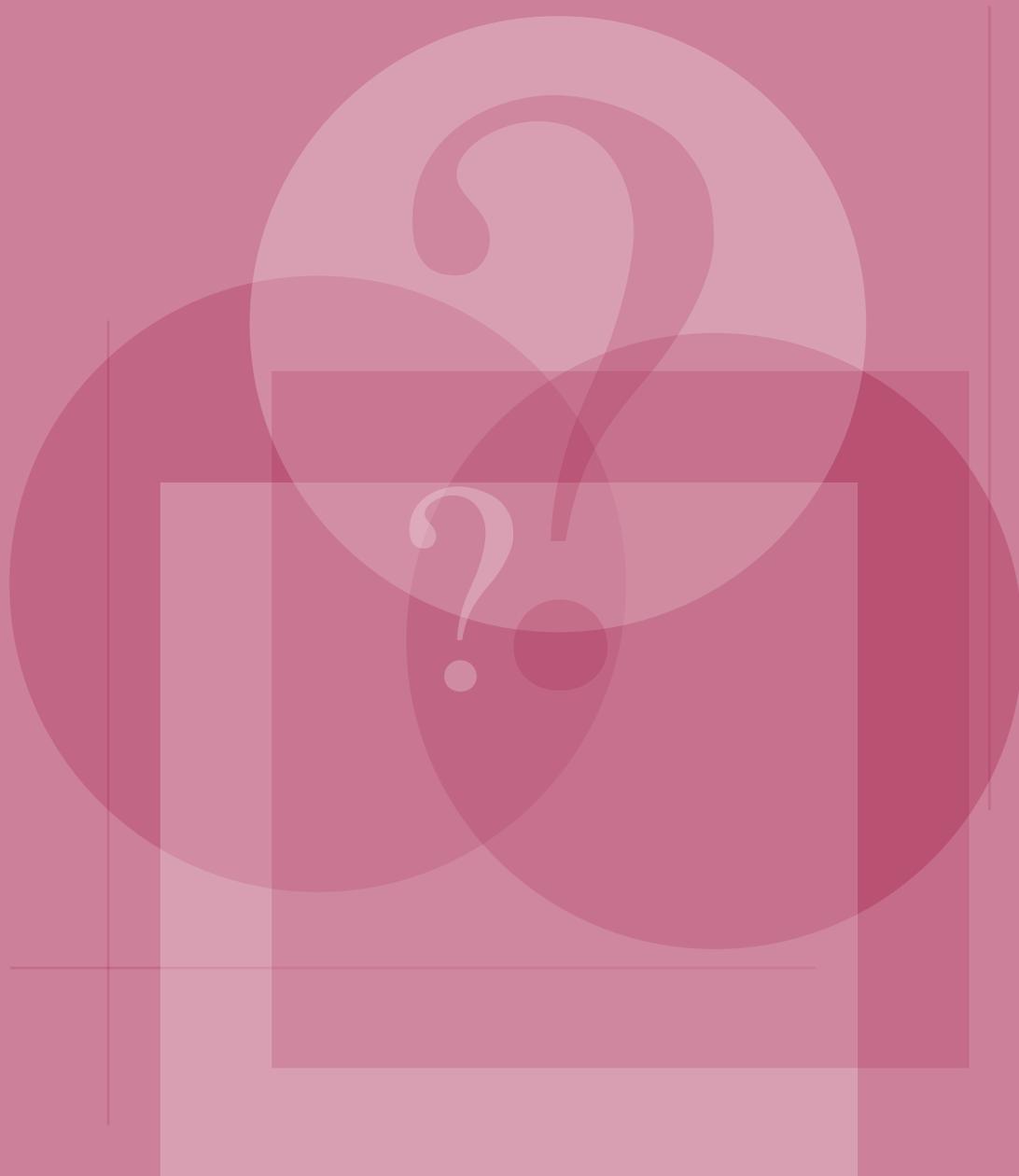


# Guidelines for Designing Questionnaires for Administration in Different Modes

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The Working Group was chaired by Kathleen M. Styles (DMD) and included Census Bureau participants Sarah Brady (DSCMO), Rosemary Byrne (FDCO PMO), Jennifer Hunter Childs (SRD), Art Cresce (HHES), Theresa J. DeMaio (SRD), Suzanne Fratino (DSCMO), Eleanor Gerber (SRD), Alice Greene (FLD), Wendy Hicks (DSSD), Joan Hill (DSSD), Jane H. Ingold (DMD), Elizabeth Martin (DIR), Louisa Miller (POP), Carol Pendleton (DMD), Courtney Reiser (DSSD), Anne Ross (POP), Janice Valdisera (POP). We also acknowledge the wisdom and advice imparted by survey methodology experts Mick Couper (University of Michigan), Don A. Dillman (Washington State University), and Fred Conrad (University of Michigan), and thank Héctor X. Merced for his invaluable assistance in finalizing this document.

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# **Guidelines for Designing Questionnaires for Administration in Different Modes**

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# 1. Introduction

## **Background**

Both the 2010 Census and the American Community Survey (ACS) will manage cost and quality by using multiple modes of data collection, including mail-out/mail-back, telephone, and personal visit. Multiple instruments and questionnaires, both paper and electronic, will be used in both the ACS and the 2010 Census.

Prudent survey management dictates that the U.S. Census Bureau attempt to better understand and minimize potential mode effects stemming from the use of these multiple instruments and modes. It is important to recognize, however, that while mode differences can and should be minimized, they cannot be completely eliminated for a number of reasons. For example, respondent data collected during Nonresponse Follow-up (NRFU) will differ from respondent data collected from mail returns, even if the questionnaire instruments are identical, because the universes are different.

## **Mode Consistency Working Group**

The 2010 Content Research & Development Planning Group chartered the Mode Consistency Working Group (“the Working Group”) to research mode consistency issues and suggest guidelines to be followed in the development of instruments for both the ACS and the 2010 Census. The Working Group is composed of survey methodologists, subject matter experts, project managers, and outside consultants working under contract<sup>1</sup>. The guidelines that follow represent the Working Group’s best judgment on how to minimize mode effects.

## **Scope and Limitations**

The Working Group considered all 100% items for the 2010 decennial program, but did not review items that will be used solely in the ACS. We reviewed not just question wording, but also the use of examples, formatting, design of automated instruments, and other matters. The Group considered all person data collection operations, including NRFU, group quarters, and post census surveys and reinterviews. Instruments used wholly for address operations (e.g., Address Canvassing) were excluded, as were the “utility” questions on certain instruments (e.g.,

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<sup>1</sup>The Working Group was chaired by Kathleen M. Styles (DMD) and included Census Bureau participants Sarah Brady (DSCMO), Rosemary Byrne (FDCO PMO), Jennifer Hunter Childs (SRD), Art Cresce (HHES), Theresa DeMaio (SRD), Suzanne Fratino (DSCMO), Eleanor Gerber (SRD), Alice Greene (FLD), Wendy Hicks (DSSD), Joan Hill (DSSD), Jane H. Ingold (DMD), Elizabeth Martin (DIR), Louisa Miller (POP), Carol Pendleton (DMD), Courtney Reiser (DSSD), Anne Ross (POP), Janice Valdisera (POP), and outside experts Mick Couper (University of Michigan), Don A. Dillman (Washington State University), and Fred Conrad (University of Michigan). Many people contributed to this report, but primary responsibility for drafting it is due to Kathleen Styles (Chapter 1), Elizabeth Martin (Chapter 2), Theresa DeMaio and Jennifer Hunter Childs (Chapter 3), Joan Hill (Chapter 4), and Jennifer Hunter Childs and Theresa DeMaio (Chapter 5). Don Dillman, Eleanor Gerber, and Courtney Reiser also contributed sections of the report, and Jennifer Beck (SRD) created the Appendix.

questions designed exclusively for the use of field staff). At the time the Working Group began its work, the Internet was among the data collection methodologies under consideration for the 2010 Census. The Census Bureau has since determined not to develop an Internet option for 2010. The references to the Internet in this document have been retained to reflect the valuable research performed, even though there will not be an Internet data collection operation in the 2010 Census.

### **Description of the Work**

The Working Group began by reviewing both internal and external research about mode effects, and compiled the Bibliography found in Chapter 5. We reviewed the wide variety of instruments used by the ACS and the 2010 testing program, including paper questionnaires, handheld computer (HHC) screen shots, computer-assisted telephone interview (CATI) scripts, scripts for computer-assisted personal interview (CAPI) laptops, and Internet instruments. The Working Group developed the Guidelines on an expedited schedule so that they could be used in the creation of instruments for the 2010 Decennial Census Program.

Members of the Working Group were struck with the extreme amount of variation between instruments for the same questions. All aspects of questionnaire design differed—sometimes the question wording was changed, sometimes different punctuation was used, sometimes the layout was different. No one anticipated the amount of variation that would be found across the various instruments and modes. In some instances, questions or response categories were changed so substantially when they were adapted for use in another mode, that they were not really the same question. Such differences may give rise to large differences in the data for the same question (see, e.g., Bennett and Griffin, 2002; Martin and Gerber, 2003). A quick perusal of the question facsimiles found in the Appendix will illustrate the variability of the instruments.

### **Central Principle**

The underlying principle for these guidelines is *Universal Presentation*: all respondents should be presented with the same question and response categories, regardless of mode. That is, the meaning and intent of the question and response options must be consistent. The goal is that instruments collect equivalent information regardless of mode. By equivalent, we mean that the same respondent would give the same substantive answer to a question regardless of the mode of administration.

### **Pretesting Changes Based on the Guidelines**

The Census Bureau requires that questionnaires be pretested before changes are implemented. (“Pretesting Questionnaires and Related Materials for Censuses and Surveys,” Version 1.2, March 9, 2006). Complete application of these Guidelines would require significant pretesting. Pretesting is particularly sparse for enumerator modes, as most pretesting has been focused on paper mail-out/mail-back questionnaires. Some of the recommendations in this document have not yet been cognitively or field tested and should be tested prior to implementation.

## **Application of the Guidelines**

Instrument developers will find that it is not possible to apply these guidelines mechanically. Rather the guidelines should be read and followed as a whole, instead of focusing on any one guideline out of context. The Working Group encourages instrument developers to seek appropriate survey methodological expertise as questions arise.

Given the likelihood of questions about how to apply these guidelines, particularly in the absence of pretesting, the Working Group compiled Chapter 3, “Application of Guidelines to Short Form Items.” Chapter 3 provides guidance on changes that should be considered to existing or tested questions to promote consistency. Content developers for the 2010 Census and ACS programs will attempt to apply these guidelines in developing the 100 percent items. Application of these guidelines to the detailed ACS questions will take place in a longer-term environment, after further testing.

## **Content Decisions Versus Mode Guidelines**

The Working Group was explicitly not charged with selecting the questions for the 2010 Decennial Census program. Content for the 2010 Decennial Census Program will be determined after review of results from the 2005 National Content Test and after discussion with internal and external stakeholders. There were instances, however, where it was impossible to develop a mode consistency guideline without addressing content in its broader context. This document highlights these instances. These guidelines attempt to avoid recommendations on the content of questions, although the distinction between the content and the design of the questions may sometimes be murky.

## **Internal Processes**

Development of instruments for censuses and tests has historically been a somewhat fragmented process at the Census Bureau. With the increasing use of automated instruments and the proliferation of instruments for specific operations, this fragmentation has become increasingly problematic. Rather than centralized forms development, certain areas of the Census Bureau have “owned” certain questions and/or forms. The Working Group recommends that roles and responsibilities be defined, clarified and documented.

The Decennial Management Division (DMD) originally managed the research and development of the 100 percent items through the Content Research and Development Planning Group. This group concluded its work in 2006 by recommending final content and was replaced by the Content Implementation Team. The Content Implementation Team is empowered to work with instrument developers to apply these guidelines for all instruments in the 2010 Census. The Content Implementation Team will rely on this document to make decisions on how the questions should be administered across modes and instruments.

The original intent was to enforce these guidelines by centralizing final review of all 2010 Census forms and instruments in DMD's Content and Data Products Branch. The branch's duty was to review all instruments, both electronic and paper, to help ensure that these guidelines are applied uniformly, and to document this content in requirements, which would be managed through the change control process. In practice what has happened has been different; self-policing has become the norm. Instrument developers, subject matter experts, survey methodologists, and project managers have all noticed differences between instruments; these differences have been debated by the Content Implementation Team. Thus far only one issue has been elevated for resolution through the 2010 Census Issues Resolution Process, but all other issues have been resolved through discussion and compromise within the Content Implementation Team. This process is on going at the time these guidelines are finalized.

Finally, the Working Group recommends establishment of a permanent Mode Consistency Advisory Council composed of technical and subject matter experts. The guidelines proposed here cannot be considered as final. Many of the issues on which recommendations have been made lack research (ideas for a research agenda are found in Chapter 4, "Recommended Research"). In addition, as final recommendations for question wording in the 2010 Census are made, it is likely that new issues will arise that were not anticipated in these guidelines. Thus, we recommend that the Census Bureau create an ongoing structural capability for addressing mode technical and policy issues as they arise. The Advisory Council would be responsible for high level oversight of the application of these guidelines, and for advice on future research activities. It would meet on a monthly basis and be chaired by either the Statistical Research Division or the Decennial Statistical Studies Division.

### **Next Steps**

This document was released May 2, 2006, for internal review and comment and was widely disseminated and discussed. Few formal comments were received; rather the process that has occurred over the last 8 months has involved interpretation of the guidelines in the context of implementation.

Finally, it should be noted that these final guidelines represent the 2010 Decennial Census Program's best judgement at the time they are adopted. It is the Working Group's hope and expectation that the Advisory Council referenced above will be established and will continue to examine and possibly modify the guidelines in light of experience and further research.

## 2. Guidelines

The underlying principle for these guidelines is *Universal Presentation*: all respondents should be presented with the same question and response categories, regardless of mode. While one might assume that this principle requires questions, categories, instructions, etc., to be identical across modes, this assumption turns out to be neither feasible nor desirable. Rote repetition would result in awkward and difficult-to-administer instruments that are unlikely to achieve consistent response data. Rather, Universal Presentation says that the meaning and intent of the question and response options must be consistent. In some cases, questions or instructions need to be modified so they can be communicated to, attended to, and understood by respondents the same way in different modes. The goal is that instruments collect equivalent information regardless of mode. By equivalent, we mean that the same respondent would give the same substantive answer to a question regardless of the mode of administration.

These guidelines apply the principle of Universal Presentation to nine major aspects of instrument design: question wording and instructions, examples, response categories, formatting of answer spaces, visual design elements, question order and grouping, flashcards, and prompts and help. Additional guidelines spell out apparent exceptions to the principle of Universal Presentation. These are situations in which a change in the question wording, order, instructions, or other features is essential for operational reasons, or better preserves the question than would asking exactly the same question in an identical way in different modes.

We attempt to balance the operational demands of the census with the requirement of standardization. For example, it is neither reasonable nor realistic to require that very long lists of response categories or examples be repeated exactly as worded for every person in tens of millions of U.S. households by quickly-trained census enumerators. Evidence from behavior coding in census tests shows that enumerators do not read long lists of response categories. These guidelines try to set forth a realistic expectation of field implementation and attempt to allow enough flexibility to permit development of well-designed instruments that exploit the advantages of a particular mode while maintaining essential consistency. The guidelines are intended to support census enumerators and ACS interviewers in carrying out their jobs well, rather than making interviews more difficult and time-consuming, or by forcing them to take shortcuts that undermine data consistency.

We attempt to rely on available evidence to develop these guidelines, but we are encumbered by gaps in the knowledge about several topics (e.g., design and use of flashcards, use and comparability of branching or unfolding questions) and by the absence of rigorous evaluations of the comparability of information collected across modes. Many unanswered questions need to be addressed by research before we can be fully confident that these guidelines represent best practice. In Chapter 4, we offer recommendations for research that is needed.

## **Question Wording and Instructions**

As a general rule, decisions about wording and formatting of questions across modes should be made with due consideration for the effect on responses. The design of questions for a particular mode should strive to maximize the quality of data collected using that mode and to minimize differences in the data obtained across modes. To do that, better information about the magnitude of mode effects and their sources is needed.

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

Repeated tests conducted by the Census Bureau and by survey methodologists for nearly 100 years show that seemingly minor variations in question wording can lead to unanticipated differences in how questions are interpreted and answered, resulting in large differences in data for the same question (see, e.g., Bennett and Griffin, 2002; Martin and Gerber, 2003). Thus, it is essential that the same question meaning be conveyed in all modes.

If attempts to use identical wording seem especially troublesome to a particular mode, then two courses of action seem appropriate. One is to change the wording so that common wording can be maintained. When the original wording is so complex or wordy that it cannot be administered the same way in various modes, then the original wording should be simplified to achieve standardization across modes. Often, this may imply simplifying the wording used in the paper form. Of course, such revisions should be evaluated, preferably in field tests.

The other possibility is to consider an exception for the problematic mode, but this requires supporting evidence. Sometimes, a change in wording is needed to communicate the intent of a question in different modes and produce equivalent responses in each. An example is the instruction in the race question to, “Mark one or more. . .”. Cognitive testing for a 2001 census evaluation showed that redundancy was needed for respondents to absorb the one-or-more option in telephone administration (Davis et al., 2001). A slightly reworded question and instruction produced more common understanding of the intent of the question in telephone interviews than would have resulted from asking the identical question that appeared in the mail questionnaire (Martin and Gerber, 2004).

The evidence needed to support an exception may come from qualitative testing, field testing, or from survey methodological literature that shows that the same wording or way of asking a question does not produce comparable results in different modes. Ideally, evidence that the same question does not produce the same results across modes would be based on a split-panel field experiment in which respondents were randomly assigned to different modes, but were asked an identically worded question. Lack of data comparability would be indicated by differences in response distributions, for example, or other data indicating differences by mode in responses to

the question. Similarly, evidence that different question wordings produce comparable results in different modes would be based on a field experiment in which (for example) treatment 1 involved asking wording #1 in mode #1, and treatment 2 involved asking wording #2 in mode #2, with respondents assigned randomly to one of the two treatments. Use of different wordings in the two modes would be supported if the variant produced the same response distribution and data of similar or higher quality. Ideally, such an experiment would also randomize question wording within each mode, which would be useful for diagnosing problems and sources of mode discrepancies. Practically speaking, such evidence is unavailable, because studies that experimentally assign mode are expensive and rarely done. (In Chapter 4, we recommend research to assess mode effects, including alternative designs that might illuminate the problems and possible solutions to mode effects.)

Suggestive, but ambiguous, evidence may come from mixed-mode surveys or censuses. Such surveys frequently produce large differences in data for respondents interviewed using different modes (see, for example, Bennett and Griffin, 2002). However, such differences cannot be unambiguously attributed to the effects of mode. They may instead be due to selection bias, since respondents select the mode in which they respond.

Practically speaking, we think that the standards of evidence required to support an exception to Guideline 1 should vary according to the performance of a question. For example, if testing shows that a question performs poorly in a given mode, then an adaptation may be called for even in the absence of evidence demonstrating that an adapted version is superior and works well. On the other hand, if a question is working well, then it should not be reworded without supporting evidence to show that the revised version is superior or at least equivalent. In other words, “if it’s not broke, you have to prove you can do better before you fix it”—but if a question appears broken when administered in a given mode, some tinkering may be needed even when there is not as much evidence as we would like to support the change.

All changes to questions should be tested in some way, in accordance with the Census Bureau’s pretesting standard. Substantive changes to questions and categories should be evaluated in a field experiment before being implemented, if possible.

Guidelines 2, 3, and 4 are acceptable exceptions to Guideline 1’s requirement for the same question wording across modes.

*Guideline 2. Preambles and instructions on the answering process may require different wording to be appropriate to the individual mode. They should not vary within modes.*

Although it is often advisable to strictly follow the same wording of the question across modes, the preamble and accompanying instructions may, and often should, be varied to facilitate responding in different modes. For example, the preamble to the race question in ACS CATI (“I am going to read a list of race categories. . .”) helps telephone respondents understand they should wait to hear the categories, but is unnecessary in a visual mode when respondents fill out a mail questionnaire or are shown a flashcard.

Similarly, different wording may be needed to facilitate actions that are a part of the answering process. For example, it makes no sense to tell paper questionnaire respondents to click on their answers, to tell Web respondents to mark an x in a box, or perhaps to give any special directions at all to telephone respondents on how to designate their answers.

If a specific preamble is used in one instrument for a particular mode, it should be used in all instruments administered in that mode.

Another acceptable adaptation of question wording occurs for administration of a question in a topic-based or person-based instrument (see discussion in Guideline 22).

*Guideline 3. Fills (e.g., for name) in the question are permissible in automated instruments, and should have the same format. If name (or other) fills are used, the format (e.g., first name + middle initial + last name) should be consistent across all automated modes and questions.*

Automated instruments make it possible to automatically fill in the name of the person a question asks about, while self-administered paper questionnaires must refer to “Person 1” or “this person.” We recommend allowing the use of automatic fills that clarify name (or other) references and make the question easier for respondents to read or interviewers to administer. For example, usability testing for the Internet application showed that the relationship question was better understood and worked well using a fill for name and altering the wording, e.g., “Jane is John’s...”, to clarify whose relationship to whom is being asked about.

*Guideline 4. The elements of a question may be reordered if necessary to ensure that respondents are exposed to all essential information in interviewer-administered modes. Any reordering should be constant within mode.*

The universal cue that a question has ended and an answer is expected is the rising inflection indicated by a question mark. In interviewer-administered surveys, respondent break-ins occur when additional instructions or examples follow the question proper (Oksenberg, Cannell, and Kalton, 1989). Placing instructions, examples, and response categories after the question mark is less problematic in self-administered surveys because respondents can see that additional text follows the question.

In interviewer-administered modes, essential information needs to be placed before the end of a question, or presented another way (such as a flashcard). In interviewer-administered modes, response options may be incorporated as part of the question, to ensure that respondents are exposed to them before they begin to answer the question, or they may be presented on a flashcard.

An example is the overcount question (“Does this person sometimes live or stay somewhere else?”), which is very vague without its categories. Respondents try to answer before the categories are presented, or interviewers skip some or all of the numerous categories. A possible

solution would be to reorder the elements of the question to incorporate some or all categories as part of the question.

Reordered versions of a question should be tested in the intended mode to ensure they have the same meaning as the original.

*Guideline 5. Substantive instructions and explanations should be consistent across modes.*

For example, explanations to respondents (e.g., why we request a telephone number) should be consistent across modes, unless different explanations apply (for example, phone numbers are requested for a different purpose). A substantive preamble (e.g., “We do not want to miss any people who might have been staying here on April 1, 2006”) should be used consistently.

Procedural instructions and preambles need not be consistent across modes; see Guideline 2.

*Guideline 6. The underlying response task posed by a question should be consistent across modes, even if the implementation differs.*

Providing respondents with the same wording, and asking them to perform the same task (e.g., select one, mark all that apply) maximizes the consistency of responses to a question across modes. The response task should not be altered as the question is adapted for various modes. An example points to the need for this guideline. For the decennial undercount question, self-administered forms (mail, Internet) provide a list of categories and ask respondents to “mark all that apply.” In interviewer-administered forms, the question is turned into a series of yes/no questions. (See p. 87 in Appendix.) This alters the task the respondent is asked to perform, and the two tasks do not produce comparable results. Rasinsky, Mingay, and Bradburn (1994) and Smyth et al. (2006) show that reporting is more complete when a series of individual questions is asked. These two question formats are unlikely to yield consistent data.

It is permissible under this guideline to create a branching structure for a question with a long list of response categories. The use of branching questions receives support from the survey methodological literature. For example, Krosnick and Berent (1993) find that branching questions obtain more reliable data and are quicker to administer than non branching versions of questions about political party identification and policy attitudes.

A branching question may be appropriate for the traditional race question, which, with its 15 categories, is difficult to administer on the telephone. Transforming it into a series of branching questions makes it easier to ask and answer and appears to obtain comparable data (Bentley et al., 2003). On the other hand, a branching question may alter the meaning of the question or its categories. An example is the relationship question. In the 2004 NRFU instrument, respondents were first asked, “Is NAME related to Person 1?”; “yes” answers branched to a set of related categories, while “no” branched to nonrelated categories. The problem was that respondents did not define “related” in a uniform way (some included only blood relations, for example). They needed the categories (or a more clearly worded question) to understand the distinction, so in

this case the branching question performed poorly (Hunter and DeMaio, 2004, and Hunter, 2005).

The comparability of a branching question should be evaluated in a field test before it is implemented, if possible.

This guideline implies that interviewer instructions of the form, “If not obvious, ask” should not be used. This instruction, which appears in the ACS for sex, transforms the item from a question to be answered by respondents into one based on observation by interviewers, which alters the response task in an unacceptable way, and (especially on the telephone) may lead to errors. No question on a census or ACS questionnaire should be reported by the interviewer by observation or inferred through response to another item. On the other hand, it is acceptable to instruct interviewers to “Ask or verify.” This means that interviewers are allowed to confirm with respondents that (for example) they are male or female, but are not allowed to record an answer based solely on observation. (An interviewer might say, for example, “I’m putting you down as male, is that correct?”)

It is permissible under this guideline to use automated instruments to perform calculations (e.g., calculating age based on date of birth) when that results in better data.

*Guideline 7. Question punctuation should be consistent and appropriate for the response task.*

Punctuation provides meaning to respondents (Truss, 2003) and should be used similarly across questionnaires. When punctuation differs across questionnaires, a different emphasis, or a different task, may be implied. Punctuation tells an interviewer how to ask a question. A comma tells the interviewer to pause before continuing, while a question mark identifies the end of the question and says the interviewer should stop and wait for an answer.

Minor adjustments are permissible to support proper administration of questions by interviewers. Punctuation should support respondents’ correct understanding of what they are being asked to do. A question mark following each category implies that each is a separate question to which an answer is expected. “Mark one” questions should not be punctuated this way in interviewer-administered modes. Rather, categories should be separated by commas, with the final category preceded by “or” and ended with a question mark.

For example, in some decennial instruments the punctuation of the tenure question is inconsistent with the response task, with question marks placed after each response category, even though the respondent is to select only one. Other instruments correctly place a single question mark at the end, after the question and categories have been read. (See p. 89 in Appendix.)

*Guideline 8. Question wording may be simplified for questions to be repeated for multiple household members.*

“Topic-based” administration involves asking the same question for all household members before proceeding to the next question (see discussion under Guideline 22). In such designs, it is accepted survey practice to ask the full question on its first asking, then reword the question as a prompt (e.g., “What about NAME...?”) for additional people. It should be read in full as necessary, for example, if a respondent does not appear to yet comprehend the choices.

The full question should always appear on the screen in case the interviewer needs to repeat it. The underlying principle here is that once common ground has been established, and the respondent understands the full question and its categories, the question may be simplified on subsequent askings for additional people in a household. If this common ground is uncertain or has been disrupted (e.g., by additional probing or follow-up questions, an interruption in the interview, a change in respondent, etc.), then it needs to be reestablished by repeating the full question wording.

A specific application of this guideline concerns examples (discussed in more detail in the next section). In interviewer-administered modes, repeating examples for each person becomes redundant and boring for respondents and is resisted by interviewers. In practice, repetition of examples is subject to unsystematic alteration or deletion by interviewers, according to behavior coding results. The redundancy of rereading the examples is particularly irritating in topic-based administration, when there are no intervening questions. There was some discussion in the Working Group about whether rereading the examples might be more necessary in person-based applications of the questionnaire. The possibility of rereading them only as necessary or after the third or fourth Person was discussed, but seems difficult to script adequately in all applications.

While interviewers should read all examples on the first iteration of a question, it is acceptable to read examples only as necessary after the first iteration of the question in topic-based and person-based interviewer-administered modes.

We do not believe that it is similarly acceptable to eliminate examples for subsequent persons in self-administered modes. This is because respondents create their own context in visual administration of forms. A respondent may not need examples in Person 1 and thus skip them, but may want to refer to them for subsequent persons. In some cases a form may be passed around to others to fill out (such as in roommate households).

In all modes, questions with examples should always print the examples for every person, for the interviewer to read or the respondent to consult, as necessary.

## **Examples**

We assume that basic decisions about when examples are necessary, and which examples to use, are made by subject matter specialists and therefore we do not address example effects in general. Our concern is that respondents should receive the same information from the examples in all modes, when they are used.

Examples may affect reporting because they illustrate for respondents the intended specificity of response. That is, they affect comprehension of the intent of the question. Examples also may stimulate recall, because they can serve as reminders of specific items that might not otherwise come to mind. Examples may introduce bias, because they can enhance recall for example items but inhibit it for non example items.<sup>2</sup>

In the decennial questionnaire, examples are used mostly in questions about respondents' identities, such as Hispanic origin and race. Research supports their use in Hispanic origin and race, at least in the mail questionnaire. Inclusion of examples resulted in more detailed Hispanic origin and race information, both for groups mentioned as examples and those that were not (Martin, 2003). However, examples can distort data if they influence respondents to select an example as a response. For instance, adding "German" and dropping "English" as examples in the ancestry question in the 1990 census apparently resulted in a large increase in the number of people reporting German ancestry and a large decline in the number claiming English ancestry, compared to the 1980 census (Scarr, 1993). Cognitive interviewing for the shortened sequence of Hispanic origin, race, and modified ancestry questions suggests that the longer the list of examples, the more likely respondents are to misinterpret it as a pick list (Gerber and Crowley, 2005). This argues for a list that is as short as possible to support respondents' correct interpretation of question intent, but not induce example effects. Unfortunately, we do not have research to support guidance on what number of examples is appropriate.

We know of no research on the effects of examples in these questions for interviewer-administered questionnaires. Other research shows that different cues and examples have a powerful effect on the types of crimes respondents recall and report in an interviewer-administered victimization survey (Martin et al., 1986).

*Guideline 9. The same examples, in the same order, should be presented in a question in all modes. Exceptions may be made if evidence exists that adding or deleting examples, in one mode improves data quality (e.g., reduces item nonresponse) and does not bias response distributions. Unless such evidence exists, examples should not be introduced into (or eliminated from) a single mode.*

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<sup>2</sup>In psychology, this effect is termed the part-set or part-list cuing effect. If subjects learn a list of words, then providing as cues part of the list increases recall of the cued items and suppresses recall of noncued items, compared to unaided or free recall. The effect is found generally for both episodic and semantic memory, that is, memory for events and general knowledge. (For example, Roediger and Neely, 1982.)

Examples may help respondents interpret a question—for example, by indicating the type of response that is intended—and they also help respondents find a response that fits them. We believe that the primary influence of examples on question interpretation occurs during a respondent's first exposure in both visual and interviewer modes.

For example, improved reporting of ethnicities when examples are given occurs on the conceptual level, primarily by indicating to respondents the intended specificity of the response. Since it is important to ensure common question interpretation in all modes, the same examples should be presented to respondents in all modes.

Without a visual aid, such as a flashcard, it is difficult to convey a long list of examples in an interviewer-administered mode. When interviewers are required to read a long list of examples, it leads respondents to break in before the list is finished, or interviewers to present only a few examples from the list (Hunter and Landreth, 2005). Thus, in practice, verbal communication of a long list of examples is unlikely to be consistent with visual presentation.

Ideally, choice of a short list of examples should take into account ease of administration in all modes before a final common list is selected. Research should be conducted to support selection of a set of examples that can be readily administered in all modes, and that aid correct interpretation of the question, without distorting responses (see Chapter 4). Field experiments are needed to show that examples do not bias the data by suggesting particular responses.

In some cases, it may be reasonable to take advantage of the special features of certain modes (e.g., the Internet) to promote overall response quality by using examples, or having a larger number of examples, if it can be shown that examples improve response quality, as measured by, e.g., administrative records or careful reinterviews. Such evidence is currently lacking for most questions. In other modes, response quality may be improved by deleting examples. Again, evidence would be required to support this inconsistency.

Providing a standard context by using the same examples across modes is critical. It is not advisable to have examples in one mode that do not exist in another, unless there is clear evidence of overall improvement in data quality.

*Guideline 10. Placement and presentation of examples may vary by mode, consistent with the principle of universal presentation.*

Optimal placement and presentation of examples varies by mode. In a self-administered questionnaire, respondents can read them from the form. In a personal visit interview, a flashcard may be used as a visual aid so the respondent can read the examples while the interviewer reads them aloud. A flashcard cannot be used in a telephone interview, so another way of presenting examples must be used.

Respondents generally provide an answer as soon as they hear the question in interviewer-administered modes. As a result, if examples are placed after the question, respondents may

never hear them. It is preferable to incorporate examples in the question itself for interviewer administration, or attach them to a preamble if it is present, or present them on a flashcard if the interview is in person. Choice among these modes of presentation might depend on the number of examples needed to communicate the concept.

*Guideline 11. Examples should be shown on the screen in Internet applications, rather than being available only behind hyperlinks.*

If examples are read or shown to respondents in other modes, it is important NOT to put the examples behind hyperlinks on the Internet, to preserve the exposure of respondents to the same material across modes. Examples in the race and Hispanic origin questions can alter response distributions (see Martin and Gerber, 2004). Seeing examples is also important when they help respondents interpret the questions as intended, such as the ancestry question (Gerber and Crowley, 2005). Thus, for Hispanic origin, race and ancestry questions, we recommend not putting any examples behind hyperlinks.

Internet hyperlinks to examples might be justified for some purposes. If a list of examples is to be “read if necessary” by interviewers, then hyperlinks might promote equivalent exposure to the material on the Internet. That is, if interviewers are instructed to read the examples when they feel the respondent is unsure or confused, and Internet respondents click the examples link when they need help, the context may be similar. Without more supporting evidence, creating a guideline to cover this situation is premature.

### **Response Categories**

*Guideline 12. Identical response categories should be used across all modes.*

Results are not comparable if respondents in different modes select from different response categories. Categories should be written the same way they are to be read, and read the same way they are written. (Branching questions are a permissible adaptation.)

*Guideline 13. For closed questions (i.e., those with fixed categories), instruments in all modes should be designed and administered to expose respondents to the response categories, in the same order, and to present response categories with the question.*

Response categories provide necessary context for respondents to understand the intent of a question. Presenting questions and categories together supports the respondents’ use of the response categories to interpret the question, and helps respondents keep the question in mind as they select a category (Couper et al., 2004).

Respondents in self-administered questionnaires may not read all information that is presented, and in aural mode may not retain all response categories in short-term memory. The aim of the designer is to increase the chances that interviewers present the categories to respondents, and

that respondents read or hear them and retain them in working memory while formulating a response.

Behavior coding evaluations for the 2004 census test (Hunter and Landreth, 2005) show that enumerators too often (1) fail to present any of the response categories (e.g., overcount question), (2) rephrase or eliminate some categories to shorten a long question (e.g., tenure), or (3) offer additional categories that are not part of the question (e.g., race). These problems reflect the need for enumerator training, but they also reflect flaws in the design of the instruments.

Comparability across modes, and performance in any given mode, may be improved by reducing the number and length of categories, so that respondents may adequately hear (or read) and retain them in all modes.

It is permissible under this guideline to use branching or unfolding questions, which should be considered when the list of categories is long and visual aids cannot be used. (See also Guideline 26.) More research is needed to establish the comparability of data from branched and unbranched versions of the same question.

An example of a question that does not meet Guideline 13 is the overcount question (“Does this person sometimes live or stay somewhere else?”), which is very vague without its categories. Respondents try to answer before the categories are presented, and interviewers skip some or all of the long list of categories. A possible solution would be to prune the number of categories and reword the question to incorporate some or all categories as part of the question. Alternatively, if all categories must be retained, then a flashcard for this question is needed for in-person interviews. Obviously, a flashcard cannot be used in telephone interviews, which argues for reducing the number and wordiness of categories across modes.

*Guideline 14. When “Don’t Know” is presented to respondents as an explicit response option in one mode, it should be offered in all.*

Typically, “don’t know” is not offered as a response option in survey questions, because doing so greatly increases the fraction who choose it, thereby reducing the amount of usable data (Schuman and Presser, 1981). Usually, however, interviewers are allowed to mark “don’t know” or “refused,” even for those questions that do not offer the option. It is acceptable survey practice to include “DK” and “REF” as options in interviewer-administered instruments, even when self-administered versions do not contain these options.

When a self-administered instrument offers an explicit “don’t know,” on the other hand, instruments in other modes should do likewise. An ancestry question that was evaluated in census tests in 2005 and 2006 did not conform to this guideline. A “don’t know” response option was printed in the mail questionnaire, but did not appear on the flashcard used in nonresponse follow-up, although the enumerator could find this option by scrolling through the long list of ancestries.

*Guideline 15. When compiling a household roster, pre filling the last name given by the previous person listed is an acceptable practice in automated instruments used by experienced interviewers.*

Automated instruments make it possible to pre fill last name of a household member based on the name of the previously-listed person, or on the respondent's answer to the question, "Does everyone in this household have the same last name?" This might lead to errors if respondents or interviewers fail to correct a pre filled last name that is in error.

We have no reason to believe that an experienced interviewer would not correct an incorrectly pre filled last name in an interviewer-administered interview, but, we do worry about how temporary interviewers might handle this. We recommend pre filling last name only in instruments administered by experienced interviewers (e.g., the ACS) but not in those administered by inexperienced interviewers (e.g., decennial NRFU).

In the Internet we have no evidence that respondents would purposely misuse a question that asks if everyone in the household has the same last name, but they may not realize that it is possible to change a pre filled last name. Alternative designs might make it clear to the respondent that changes may be made, such as eliminating the current "same last name" question but offer a "same as above" checkbox option next to the last name box, for each household member. (Without javascript the name would not appear until the page is refreshed.) In the Internet and instruments used by inexperienced interviewers (e.g., NRFU), the last name might be filled automatically only if the interviewer/respondent begins typing the same last name as the previous person, or takes an action such as selecting the down arrow or a drop-down box.

### **Formatting of Answer Spaces**

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

Answer spaces should be formatted in the same way for questions that involve the same task (such as selecting one response, marking all that apply, etc.) to avoid confusing respondents or interviewers. Consistent formatting conventions should be used for all questions within a questionnaire if possible, but space limitations for the mail questionnaire in particular make it difficult to do this. More research is needed to provide general guidance about the optimal formatting of answer spaces in self-administered questionnaires.

The response labels for the population count question (Question 1) and for the age and date of birth items should be constant at least within self-administered modes, and across modes if possible. For example, if boxes for date of birth will be indicated by "Month" "Day" "Year of birth" in some modes, this should be carried across modes to the extent possible.

An example that does not follow this guideline is the undercount question. In the automated NRFU instrument it is formatted with checkboxes, falsely suggesting a "mark all that apply" question, when the respondent is expected to answer yes/no for each part of the question. (See p.

87 in Appendix.) This question should be formatted the same way as other yes/no questions in the NRFU instrument, with yes/no buttons and categories appearing below each part, and the instruction deleted.

*Guideline 17. Maintain the check box/radio button distinction in the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes for multiple responses.*

Check boxes are used somewhat differently in user interfaces (including Web surveys) than in paper questionnaires. In user interfaces, radio buttons are used to allow only one response, while check boxes are conventionally used to allow multiple responses. In paper forms, check boxes are used for both types of responses.

To ensure that Internet respondents are informed when multiple responses are allowed, a written instruction should appear on the Internet form as it does on paper. Consistent with Guideline 2, the instruction should be suitable for the mode. No instruction is necessary for radio buttons in the Internet application.

*Guideline 18. The amount and arrangement of space for write-in boxes should be consistent across all modes and appropriate for the required response. (Use of shared write-in spaces is an exception by necessity.) Other aspects of visual layout and design differences should be carefully reviewed and tested if possible for their impacts on responses.*

Our primary concern here is with how the size and organization of write-in spaces affects respondents' interpretations of the information being requested, and their ability to provide usable data.

On paper the write-in spaces must be large enough to accommodate variations in handwriting, and space limitations on paper constrain the amount of space for write-in entries. In contrast the Internet and handheld computer devices do not need to accommodate variations in the size of characters and are less constrained by space limitations, and so can be designed to allow many more characters to be entered for each write-in than is practical for paper.

Although the design of write-in boxes necessarily differs between paper and electronic modes in order to accommodate differences between handwritten and typed answers, unintentional secondary effects of different visual layouts need to be avoided. Designs that are advantageous for capturing and processing the data may inadvertently affect the response process. For example, shared write-in lines may save space, but confuse respondents. Maximizing the number of segmented boxes may capture as much data as possible, but also form visual barriers that made some respondents think multiple race questions were being asked instead of just one (Dillman, Parsons and Mahon-Haft, 2004, p. 58).

There are three aspects of this issue: segmentation, size and number of write-in spaces, and shared write-in boxes.

## **Segmentation**

Currently the decennial mail form uses segmented write-in boxes, while the ACS form does not. The use of segmentation bars and white write-in spaces against contrasting backgrounds helps people write individual letters that can be better recognized by the Optical Character Recognition (OCR) used for decennial processing (Dillman, 1995). The ACS system (key from image with Optical Mark Recognition) does not require such precision. When OCR is to be used, segmentation is essential because it leads people to print rather than use cursive writing.

## **Number of write-in spaces**

The size of the input field affects how much respondents write or enter into it (Fuchs and Couper, 2001; Couper, Traugott, and Lamias, 2001; Dennis, deRouvray, and Couper, 2000). Segmentation and number of lines provide cues to respondents as to the expected length and number of responses. For example, three write-in lines were provided on one version of the ancestry question on the mail and Internet forms. Usability research confirmed that three write-in spaces communicated to Internet respondents that they were meant to enter up to three responses for ancestry; they did not make this inference from a free-text field (Ciochetto, Murphy, and Agarwal, 2006).

Thus, the number of write-in areas and the amount of space they provide for respondents to write (or enter) should be constant across modes.

## **Shared write-in spaces**

The traditional two-part version of race and Hispanic origin contains a long list of race categories with four write-in boxes, one of which is shared by the “Other Pacific Islander” and “Other Asian” categories. (See pp. 111–117 in Appendix.) Although they reduce the amount of space required on a paper questionnaire, shared write-in boxes may pose a navigational challenge for respondents, who have to interpret multiple arrows. The Internet and handheld devices do not require shared write-in boxes. However, if the number and placement of write-ins in relation to categories differs (for example by shifting from double- or triple-banking of categories on paper to a linear display on the Internet form), then one needs to be careful that secondary effects do not occur because of the different visual appearance and arrangement.

We do not favor the use of shared write-in spaces in any mode, but they are necessary in the race question in order to fit the questions and categories on the paper questionnaire. Since there is one record layout for all modes in the decennial census, all modes need to output the data in a way that fits the record layout. This may require special edits or conventions for data from shared write-in spaces.

## **Visual Design Elements**

*Guideline 19. The use of selective emphasis should be consistent across modes. The convention (boldface, underlining, capitalization, italics, etc.) used to communicate it may vary across modes although consistency is preferable.*

Questionnaire designers conventionally use typeface to identify different parts of a questionnaire. There are no hard and fast rules, but questions are usually in boldface in self-administered questionnaires. In interviewer-administered questionnaires, questions and categories are in bold to indicate they must be read aloud to respondents. Instructions may be in ordinary type, or in italics (in self-administered census mail forms).

Boldface, underlining, or capitalization may variously be used to emphasize particular words or phrases in a question. Words and phrases that are emphasized in one mode should be emphasized in all.

Typeface provides meaning to respondents, and Dillman, Gersteva, and Mahon-Taft (2005) argue that typefaces should be used consistently within questionnaires. While there is no literature that examines these differences across modes, these features should be used consistently within modes, and across modes when possible. In some instances electronic conventions make consistency across modes unfeasible or undesirable. The hyperlink convention necessarily requires that underlining cannot be used for other purposes on the Internet form, although it might be used for emphasis in a paper form.

*Guideline 20. Include a marker to uniquely identify each question in an instrument.*

Conventionally, questions are numbered in both self-administered and interviewer-administered questionnaires. Both interviewers and respondents use question numbers to guide them through a questionnaire, and question numbers (or some other sequential demarcation, such as the alphabet) are essential when a respondent or interviewer must follow skip instructions. Question numbers also help respondents communicate with the Census Bureau if they need help answering questions.

The 2005 version of the Internet form did not number questions, but instead used a clickable question mark icon, which doubled as a hotlink to information about the question. In usability testing, respondents correctly interpreted the question mark icon as a marker for the next question, but did not realize that clicking on the icon would provide help for the question (Murphy et al., 2005).

In mixed mode data collections, it is an open question to what extent respondents may use multiple modes—for example, by using the paper form as a guide to help fill out the Internet questionnaire. If they do this, it argues for using the same unique question identifier in all self-administered modes for that survey.

## **Question Order and Grouping**

Ample evidence demonstrates that the order of questions, including factual questions, can affect the resulting data (Schuman and Presser, 1981; Bates et al., 1995). Generally, our goal should be to choose an order of questions that maximizes the quality of the data in all modes and use the same order across all modes. In rare cases data quality may be improved by changing the order of questions in some modes but not others.

*Guideline 21. Question order should be constant for all modes unless there is empirical evidence to show data quality is improved in one mode, and comparability of data between modes is not reduced, by using a different order.*

An example in which reordering questions in only one mode might be desirable involves the relationship item. Respondents sometimes reverse the relationships between members of a household, for example, calling someone a father, when he should be a son (see Love and Byrne, 2005). If the mail questionnaire order of relationship, sex, age, and date of birth were changed to ask relationship last in automated instruments, then the instrument could check whether reported relationship is consistent with the relative ages of the people reported about.

On the other hand, there is no explicit reason to change the traditional order for paper modes. One could argue for consistency: if the order in the electronic modes is changed, it should be changed across paper modes as well. However, the revision would need to be evaluated. On a paper form, it may be more desirable to have the relationship question closest to the person number so that the question "How is this person related to Person 1?" is in context. On the other hand, asking age prior to relationship on the paper form may clarify that the 8-year old is the son, not the parent. Any change in order would need to be field tested in both modes prior to full implementation.

Placing sex immediately following name may also enable respondents and interviewers to more easily spot errors in recording sex.

Another example is the order of age and date of birth questions. It is advantageous in electronic instruments to collect date of birth first and then calculate age from birthdate. If a respondent does not know the full date of birth, the instrument would then ask age. Calculating age yields more accurate data than reported age (Spencer and Perkins, 1998), takes advantage of automation to reduce respondent burden, and provides a check for typing errors or misreports. However, Spencer and Perkins (1998) also found that on a paper form, asking age first, then date of birth, produced more complete data.

A mode inconsistency in the order of questions would be acceptable if results of a field test showed that different orders produce better data in the respective modes. As it turns out, in this case a 2005 mail-out test found that the date-of-birth-first order provided better data in the mail questionnaire as well (Martin, 2006a).

Any changes in the order of questions in one mode should be tested in a field experiment to ensure the data are consistent with data collected with a different question order in other modes.

*Guideline 22. Whether an instrument is person- or topic-based should be decided based on evidence about data quality and ease of administration in each mode, and the comparability of data across modes.*

A fundamental questionnaire design choice is whether to ask all questions person-by-person, or to cover a topic for everyone in a household before moving on to the next topic. In the first, person-based approach, a series of questions is asked in its entirety about the first person, then the same series is administered again about the next person, and so on (e.g., sex, age, date of birth, Hispanic origin, and race data are gathered for Person 1, then for Person 2, etc.). The alternative topic-based method collects data on a single topic for everyone in the household before moving on to the next topic (e.g., sex is asked for everyone in the household, then Hispanic origin, and so on).

Topic-based interviewing appears better for interviewer-administered modes. Research suggests that topic-based interviewing is more "respondent friendly" than person-based interviewing. Moore and Moyer (2002) examined differences in the data gathered by person- and topic-based versions of the ACS. The person-based approach had lower response rates, higher refusal rates, and longer interview length (see also Colosi, 2001). Interviewers reported that the topic-based approach facilitated rapport-building with the respondents, and was more helpful with reluctant respondents than the person-based one. In assessing data quality, research suggests that there is no difference in the data obtained through a person- versus topic-based approach for simple demographic data (Moore and Moyer, 2002). Based on this research, topic-based appears to be the best strategy for automated interviewer-administered questionnaires.<sup>3</sup> We know of no research to indicate which method produces better data with an interviewer-administered paper questionnaire.

An experimental evaluation of topic-based and person-based design of the Internet application produced mixed results (Zajac, 2006). The Internet topic-based form, which used a hybrid of single question screens and small matrices, produced fewer break-offs and count discrepancies, slightly more item nonresponse, and less within-household diversity.

The format of the ACS self-administered paper form will be determined based on results (or preliminary results, as necessary) from field tests.

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<sup>3</sup>These include the NRFU, the Census Coverage Measurement (CCM) Person Interview (PI) and the Coverage Follow-up (CFU) instruments and ACS CATI/CAPI. (Memo 2 in the 2010 Planning Memorandum Series "2006 Census Test: Decision to Proceed with Topic-Based Instrument for Nonresponse Follow-up without a Special Purpose Test," dated February 23, 2005, documents this decision for NRFU). These instruments all employ the method of a single question per page and do not use the matrix format.

In a self-administered paper form, the closest equivalent to a topic-based design is a matrix format, with either questions in rows and people in columns or vice versa. However, comprehending and following a matrix form are not the same as having questions administered topically by an interviewer. In addition, respondents (and enumerators) can choose to answer topically or person-by-person in a matrix format. This option is not available in most other designs.

Before 2000, decennial mail forms were designed as a matrix, with the short form questions in rows and people in columns. Qualitative research showed that respondents found the matrix format intimidating (e.g., Elias-Olivares and Farr, 1990). Dillman developed a “respondent friendly” person-space format (i.e., an individual space on the form grouped all the questions for a person) that was evaluated in a series of tests preceding the 2000 census (Dillman, Sinclair, and Clark, 1993). An experimental comparison of a 1990-style matrix with the person-space Census 2000 form showed that the latter produced generally lower item nonresponse rates and a higher unit response rate in areas of the country with historically low mail response (Martin, 2002).

*Guideline 23. Extra questions (asked in some modes but not others) should if possible be asked after rather than before the core short-form questions, to avoid introducing order effects. When this is not possible, they should be carefully reviewed to ensure that they do not introduce new concepts, terms, or meanings that might influence answers to subsequent, core questions.*

Some decennial interviewer-administered forms have questions prior to the start of short-form data collection to identify the path (non proxy vs. proxy) and the housing unit status (seasonal or not). These questions have used terms like “household” and “usual residence”—words that were carefully considered and determined inappropriate for the household count and roster questions. These upfront questions should be reviewed carefully and pretested to ensure that they will not negatively impact the critical data items, like household count and roster.

Other instruments should be examined for any questions that occur prior to the demographic items that may influence how the respondent comprehends those later items. For non critical data items, such as respondent name (in the case of a proxy) and telephone number, these items should be asked at the end of the interview, if possible, where they will not impact data collection.

### **Flashcards**

*Guideline 24. When used, the content and design of a flashcard should be developed to best achieve the objectives of a question.*

While respondents to self-administered questionnaires can see all the relevant information, this is not the case in interviewer-administered surveys. In personal interviews, flashcards provide a visual stimulus to facilitate respondents’ question comprehension, retention, and recall. They are used as a visual aid to communicate numerous or lengthy response categories, or when respondents must consider many factors when formulating an answer, or to provide cues and

examples intended to stimulate recall. These various purposes for using a flashcard should guide its design and content.

Survey methods research supports the use of flashcards. They result in more standardized administration of questions, with fewer changes by interviewers in question meaning and response categories, and fewer interviewer and respondent problems of other sorts (van der Zouwen and Dijkstra, 2002; Sykes and Collins, 1992).

Our guidance on the design and content of flashcards is limited by the lack of research, despite the long-standing use of flashcards in surveys. The paucity of research may account for the fact that flashcards in the 2006 Census Test and the ACS are not standardized as to their content. For example, the household count question flashcard includes the lengthy residence rules, but neither the question nor the response categories. The relationship flashcard includes the many precoded response categories, but not the question.

We considered whether to standardize the format of flashcards by recommending that the text of a question always appear on a flashcard. For some questions, this may help respondents, who can read along while the interviewer asks the question. In other cases, it may not be helpful. The household count flashcard, for example, is already cluttered with text, reducing the likelihood that it will be read at all. In the absence of clear evidence or standards, we suggest that question designers carefully think through the objectives of a question in deciding whether to use a flashcard and how to design it. This should include consideration of how a prior flashcard may affect interpretations of the current one. For example, a card that shows response categories (e.g., relationship) may lead respondents to interpret a subsequent card that shows examples (e.g., ancestry) instead as a list of options to choose from.

In the end, we think it is up to the question designer to determine what elements of information belong on the flashcard for a given item. The flashcard should be pretested together with the questionnaire. Chapter 4 recommends research to improve the design and implementation of flashcards.

Although we do not offer guidelines for a standardized format for flashcards, we do have suggestions to improve consistency:

- The same flashcard should be used (or not used) consistently for a question in personal interviewing modes.
- If titles are printed on flashcards, they should be meaningful and helpful to respondents.
- If question text is printed on a flashcard, it should be the same text that the interviewer reads aloud.
- If a flashcard is used for a question that includes examples, the examples should appear on the flashcard.

A question that is unresolved is whether presenting examples or response categories on a flashcard can substitute for the interviewer reading them aloud, especially when the list of examples or categories is a long one. We think this is acceptable practice only if there is a basis for having confidence that the interviewers consistently present the flashcard to respondents.

*Guideline 25. When flashcards are used, their use should be scripted for the interviewer.*

If the interviewer is instructed to present a flashcard to the respondent, a script for the interviewer to read while doing so helps in two ways. First, the script tells the respondent why the interviewer is handing them a piece of paper, and provides a cue for interviewers to do so. This introduction to the card should be standard, not improvised by the interviewer. Second, a script allows behavior coding from an audiotape to record an indicator of whether or not the flashcard was presented (interviewers may not read the prompt if they are not presenting a card).

One instrument (see p. 84 in Appendix) uses the following introduction for the residence rules flashcard, "Before you answer the next question, please refer to this card." Alternatively, a flashcard booklet might be designed, with instructions to respondents to "turn the page for the next question" scripted for interviewers.

Research is needed to make flashcards useful and an integral part of the enumeration process, rather than an encumbrance to enumerators, as they often appear to be now.

*Guideline 26. If more than five response options are presented to the respondent, the question should, if possible, be adapted for interviewer administration (by use of a flashcard, a branching question, or other adaptation).*

Short term memory has a limited capacity (Miller, 1956). Limitations on working memory imply that only about four things can be thought about while performing a mental calculation or other retrieval (Cowan, 2001). For survey research, this indicates that a respondent can only store four to five pieces of information while trying to process a survey question. For this reason, if more than five response options are given to a respondent, a flashcard should be given or shown to the respondent for in-person interviews, or another way found to communicate and help the respondent keep the response categories in mind. Survey designers should beware that administering more than five response options over the phone may cause the respondent to have difficulty remembering all of them while processing the survey question; a branching question may address this problem, and shorten the time required to administer the question.

This is another area in which research is needed. None of the research cited above addresses respondents' ability to keep the categories in mind while answering survey questions. It should be possible to retain more response options when the list is already familiar to respondents.

## **Prompts and Help**

*Guideline 27. Soft edits should be applied across all automated instruments when they increase data completeness and consistency.*

“Soft edits” include a check by the automated instrument to be sure that responses are not blank and are in a valid range, and a prompt to the user if there is a problem. (“Soft edits” permit a user to move on without correcting the error, rather than requiring a correction before proceeding.) Research has indicated that the use of edits in Web surveys results in more complete data, as measured by item non response (Brady et al., 2004, Roy et al., 2004). Soft edits can improve consistency, and prompts have been shown to motivate respondents and convey the importance of providing an answer to each question (deRouvray and Couper, 2002). The administration of soft edits is allowed to vary between modes as long as the same valid ranges and consistency check rules are applied. (Of course, soft edits are not possible in mail questionnaires.)

When edits and prompts are likely to produce different substantive responses in different modes, we recommend against their use. Currently, the ACS uses a consistency check to verify that the reported relationship is consistent with reported sex (i.e., if household members are reported to be spouses and of the same sex, the interviewer is prompted to verify this with the respondent). Given that some states now allow same-sex marriages, as well as the lack of consistency with other modes, we recommend that the relationship/sex consistency check be modified or removed from the ACS CATI/CAPI instrument. Similarly, the ACS instrument prompts the interviewer to verify when a person is reported to have more than one spouse. For consistency with other instruments/modes, we recommend that the two-spouse consistency check either be modified or removed from the ACS instrument, or added to other instruments.

A flag that simply warns the interviewer of an inconsistency, alerting her to the possibility of miskeying but not requiring her to probe respondents, would seem acceptable as a form of soft edit (see above).

*Guideline 28. Easily interpreted and relevant help should be provided across all modes in some form.*

Survey concepts are not always understood as intended, and misunderstandings occur often enough to raise concerns about data quality (Conrad et al., 2006). Conrad and Schober (2000) found that providing definitions to respondents can improve response accuracy. Given the potential gains in data quality and response accuracy, we recommend that question-specific help be offered, and that it be available to both interviewers and respondents, in some form. Although the format of help will not be consistent across modes, its content should be consistent.

*Guideline 29. Help for all modes should come from the same source, such as an improved Questionnaire Reference Book (QRB).*

Census 2000 research found that the help provided in the Internet Questionnaire Assistance (IQA) was not helpful because it was not the type of information respondents were looking for (Stapleton and Irwin, 2002). To avoid providing irrelevant, unhelpful, or redundant information, research should be conducted on the type of help that respondents need and/or expect. Interviewers should also be able to easily understand the concepts, and respondents and interviewers should have access to the same information in some form. Research is needed to focus on what is relevant to respondents who seek help, to support a better-designed help system.

*Guideline 30. Help should be user-initiated, reasonably accessible in each mode, and require low levels of effort to obtain.*

Research (Conrad et al., 2006) has shown that the level of effort required to access help can impact whether a respondent uses it. Thus, across each mode, help should be implemented in ways that require low levels of effort by respondents or interviewers, while remaining cost-effective and meeting respondent expectations. Some modes will require more effort to obtain help than others. For example, a respondent to a paper questionnaire will expend more effort to call Telephone Questionnaire Assistance (TQA) or visit a Questionnaire Assistance Center than an Internet respondent will to click a link on the screen.

Users will have to seek out help in designated ways for each mode (TQA, IQA, etc.). While research has shown that mixed-initiative help (in which the system can volunteer help and the user can request it) led to more accurate answers than just user-initiated help, mixed-initiative help is not feasible at this time. Instead, survey designers should look for ways to motivate respondents to give good answers and/or realize that help is available and easy to access. If this can be successfully accomplished, we may observe gains in response accuracy.

### 3. Application of Guidelines to Short Form Items

In this section, we document, for each short form item, existing differences in items across modes and apply the guidelines to recommend options for addressing item-level differences, and for improving the performance of items across modes. Each item is addressed in the order it appears in the mail form. The discussion of each item includes the following sections: summary of differences, issues, and applying the guidelines.

In producing this section of the report, we reviewed the wide variety of instruments used by the ACS and the 2010 testing program. We began with the most recent versions of questionnaires available when our work began: 2005 ACS and 2006 Census Test forms. The scope broadened to include Census 2000 forms when equivalent forms (e.g., Be Counted) had not yet been developed for the testing program. It expanded further to include census evaluation instruments, for which consistency has been an issue in developing forms for 2010. See the Appendix for facsimiles of the specific items discussed in this section of the report.

At the time the draft guidelines were issued (May, 2006), the Census Bureau had not decided on actual content for the 2008 DR. The presentations that follow discuss DR presumed content of the race and Hispanic origin items, which is based on the content of the 2005 National Census Test (NCT) DC-1A form.

Issues of comparability that were identified during our review of the questionnaires are presented, and these are elaborated in discussions about implementing the Guidelines. To the extent possible, the results of research that bear on these issues are presented as we document how the application of the guidelines suggests changes that should be made to questions. In some cases, application of the guidelines is assumed to alleviate observed problems, but the “fix” may not have been tested. These instances are noted in the text. Additionally, in a few places we offer recommendations that we realize cross the line into content areas. These are presented as “other content recommendations” at the conclusion of each question section.

#### **Residence Rules and Pop Count**

##### **Summary of Differences** (see p. 84 in the Appendix)

- **Preamble.** There are introductions to the residence rules on the decennial mail-out form, the Update/Enumerate (U/E), the Nonresponse Follow-up (NRFU) and the Internet forms, but they all differ. Some refer to “your address,” some refer to “this house, apartment, or mobile home” and some do not refer to the housing unit at all in the preamble. The U/E uses the preamble to introduce the flashcard, but the NRFU does not. The NRFU is the only instrument to include the date of Census day in the preamble as well as the question. The NRFU instrument instructs the interviewer to “show” the flashcard, while the U/E instrument instructs the interviewer to hand it to the respondent.

- Availability of rules as instructions. The Internet form makes exclude and include lists available behind hyperlinks; on mail-out forms, the lists are printed on the questionnaire within the question text. A flashcard is used to present residence rules in U/E and NRFU. The Be Counted form only has a paragraph at the bottom of the Person 1 column indicating who to include and who not to include—the content is slightly different than in the other instruments.
- Use of questions to convey residence rules. The ACS uses a series of five include/exclude questions for the CATI and CAPI modes. However, the ACS by design has different residence rules than census. The CFU and CCM are much more in-depth instruments, so they are exempt from applying the residency rules in exactly the same manner. In the CFU the interviewer starts with the census roster and asks probing questions based on residence rules to determine true household composition. The CCM instrument also uses a series of questions to determine residence according to the residence rules for both census and CCM.
- Instruction about whom to count. The ACS paper questionnaire, ACS CATI/CAPI, and the 2000 Be Counted form use “at this address” rather than “house/apartment/mobile home,” as contained on the decennial mail-out, U/E, and NRFU forms.
- POP Count Response field label. The label for the response write-in varies, as well as the location of the box for the number of people in relation to the label. For example, the decennial and the ACS paper questionnaires have “Number of people =”, while the U/E paper questionnaire has “\_\_\_Number of people”, the NRFU handheld has “\_\_\_ ENTER in number of people”, and the Internet has “\_\_\_ people.”
- Applicability. The residence instructions do not directly apply to the Group Quarters (GQ) Individual Census Report since there are special rules for enumeration in a GQ (i.e., the “most of the time” rule does not apply in a GQ). By design, the ACS and CCM forms use slightly different residence rules for collecting a roster. Additionally, neither survey asks for POP count.

## **Issues**

One of the main problems with the residence instructions is getting the respondent to correctly apply the very complex decennial census residence rules. A relatively lengthy double column include/exclude list is used in both self-administered and interviewer-administered modes (via flashcard for personal visit) for the decennial census as of 2006. Many cognitive tests have shown that respondents have difficulty applying these rules to their own, as well as hypothetical, situations (Gerber, 1994; Gerber, Wellens, and Keeley, 1996).

Several issues emerge: (1) how do we increase the likelihood that the respondent will read and apply the include/exclude list in the self-administered modes; (2) how can we get the respondents to understand the lengthy list over the telephone; (3) how do we provide the same

information to respondents in the personal visit mode; and (4) should a single method be applied to all modes, even if it is difficult to implement in certain modes?

Conrad and Couper (2004) recommend turning the include/exclude list into explicit questions. They emphasize that respondents are likely to ignore the lengthy instructions for paper and Internet. Gerber, Wellens, and Keeley (1996) assert that when instructions are intuitive (like including people on temporary vacations), respondents do not need the list but when they are counter-intuitive (like excluding college students), respondents need to be made aware of the rules, although they still may disregard them. Regarding the use of include/exclude lists on the Internet, Conrad and Couper (2004) cite related research that suggests that respondents do not take advantage of clickable definitions and do not read definitions on the Web that are displayed by default.

A related problem with interviewer-administered modes like NRFU is that it is difficult for respondents to read the include/exclude list on a flashcard while the interviewer is talking and asking questions (Hunter, 2005; Childs et al., 2006). Over the phone, the include/exclude list method is even harder to implement, given the difficulty of effectively imparting the relatively long list of rules to the respondent without a visual display (e.g., flashcard). Reading the include/exclude list over the phone is as likely to be ignored as the presentation of a flashcard but could reduce satisfaction and increase break-offs (Conrad and Couper, 2004).

### **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

Mode consistency problems associated with the presentation of residence rules lead us to recommend considering the explicit question strategy across modes for conveying and applying residence instructions. ACS CATI and CAPI modes use this method currently. If this method could be used in mail as well as telephone and personal visit, the response process would be more consistent. The respondent would be asked to cognitively process (and answer for) each rule similarly in each mode (rather than supplying instructional text in some modes and explicit questions in others). A version of this was tested in the 2005 Census Test and was not successful (Linse, 2006). Research along this vein should be continued for future censuses.

The objective of ensuring the highest quality data where possible (in this case in automated instruments) should take priority over using comparable information collection strategies in an attempt to be consistent across modes. Evidence cited above demonstrates that the flashcard displaying the residence rules in interviewer-administered modes functions poorly. Additionally, ACS CATI and CAPI forms have been using explicit questions, as do CFU and CCM. The CFU and CCM instruments use the explicit question strategy because it is believed to provide a better

measure of household composition. Asking a series of shorter questions also seems ideal for a telephone-administered instrument. For these reasons, automated instruments such as the Internet and NRFU should use the explicit question approach, as it provides a solution to problems with a flashcard in the NRFU and problems with respondents skipping the instructions in the Internet. Additionally, the explicit question strategy would presumably provide the best quality data for the within-household count.

*Guideline 2. Preambles and instructions on answering process actions require different wording to be appropriate to the individual mode. They should not vary within modes.*

The introduction to the residence rules may differ between modes and be customized to each specific mode (this is the first piece of the questionnaire and may need to be contextualized as such), but according to Guideline 5 below, the introduction should contain the same content. Within a mode, the same introduction to the residency rules should be used.

*Guideline 3. Fills (e.g., for name) in the question are permissible in automated instruments, and should have the same format. If name (or other) fills are used, the format (e.g., first name + middle initial + last name) should be consistent across all automated modes and questions.*

We recommend that the wording for ACS and decennial self-administered forms be made the same by choosing either “house/apartment/mobile home” (used in decennial instruments) or “at this address” (used in the ACS). Note that cognitive testing showed confusion when the form switched among references to “at this place,” “at this address,” and “at this house, apartment, or mobile home” so references should be consistent within a questionnaire as well as across modes. Research suggests using “house/apartment/mobile home” rather than “at this address” because there has been much more testing of the decennial wording and “house/apartment/mobile home” seems to work (as required by the Pretesting standards). Using “at this address” may have problems that are yet unidentified due to lack of testing. (However, it is permissible for ACS to use the term “address” in a previous question to verify that the interviewer has reached the correct address, which is required for this sample-based survey.)

Additionally, it is acceptable to use a fill for “house/apartment/mobile home” in interviewer-administered personal-visit interviews so the interviewer does not have to read all three unit descriptors, but picks the one most relevant to the place he/she is interviewing.

*Guideline 5. Substantive instructions and explanations should be consistent across modes.*

The same content of the residence rules should be applied across all modes, even if the method of conveying the rules is different between modes. For example, if we give an instruction about college students on the paper form, we should communicate the same rule in the interviewer-administered instrument (even if it means asking a separate question to apply the college rule).

Additionally, the Be Counted form should also consider including some version of the residence rules.

The Internet form should, at a very minimum, let the respondent know the topics of each of the residence rules (e.g., college students, military personnel, people in jail) on the main page. Hyperlinks can be investigated as long as it is clear from the main page exactly what topics are behind the hyperlinks.

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

The POP count response space label (Number of people) should be constant within modes and across modes. Placement of the label can differ between modes because there is a lack of evidence to suggest that: 1) there is a problem with the current placement in any particular form, and 2) any one placement is better than the other.

*Guideline 24. When used, the content and design of a flashcard should be developed to best achieve the objectives of a question.*

If a flashcard is used to convey residence rules, it is a tool to convey additional information to the respondent while he/she comes up with a household count. The residence rules are meant to provide information on special situations that the respondent may not consider unless the flashcard is presented. A facsimile of the question text on the flashcard is not necessary. In fact, it may be undesirable because of the amount of text already on the flashcard.

*Guideline 25. When flashcards are used, their use should be scripted for the interviewer.*

For example, the U/E uses the introduction “Before you answer the next question, please refer to this card.” The same introduction to the flashcard should be used in all interviewer-administered modes if flashcards are used.

*Guideline 27. Soft edits should be applied across all automated instruments when they increase data completeness and consistency.*

There is a soft edit dealing with the number reported in POP count and the number of names rostered in the 2006 NRFU instrument. It reads “Earlier I recorded that there were 2 people living or staying at ADDRESS. Just now we listed 3 people. Which number is correct?” This gives the respondent the chance to correct the mistake that was made. An edit like this should be applied consistently across all automated instruments where there is an opportunity to get a conflicting POP count and number of people rostered. For instruments that do not collect an explicit POP count, like the ACS, this does not apply.

## **Undercount**

**Summary of Differences** (see p. 87 in the Appendix)

- **Question wording.** The wording of the question varies across mode. The interviewer-administered modes (NRFU, U/E) include a preamble (“We do not want to miss any

people who might have been staying here on April 1, 2006.”). They also end the question with “for example” as a lead-in to the response categories. Additionally, the self-administered forms refer to “Question 1” whereas the interviewer-administered forms omit that reference in the question text.

- Question emphasis. This varies in ways that may affect interpretation and administration of this question. In the decennial mail-out questionnaire (only), “additional” and “did not include” are underlined, for emphasis. In the Internet, “not” is capitalized, for emphasis.
- Question format and response task. The question is formatted differently across modes. The decennial mail-out questionnaire is a “Mark-all-that-apply” with a final category, “No additional people.” For NRFU and U/E, the interviewer is supposed to mark “Yes” or “No” for each response category (i.e., a forced-choice format).
- Question punctuation. The decennial mail-out and Internet forms have a question mark at the end of the original question stem, but do not have any punctuation at the end of each response category; the U/E and NRFU questionnaires have question marks after each response option, and a colon after the question stem.
- Response categories. An additional response category (“Other individuals or families staying here”) appears only in the U/E instruments. (This was added at the recommendation of Race and Ethnicity Advisory Committee (REAC), to be tested on Indian reservations.) Consistent with its check-all-that-apply format, the decennial mail-out form includes a category, “No additional people,” that the other instruments do not. The Internet has “No” and “Yes” categories listed at the top, with the substantive categories appearing below the “Yes” (as was consistent with one of the mail-out panels in the NCT).
- Question order. The undercount question appears in different places on different forms. In the decennial mail-out form, it immediately follows Question 1 (Pop Count). In NRFU, it is asked after names have been obtained for all the people counted in Q1. In U/E, it is found at the end, after demographics have been collected about everyone else.
- Collection of information about added people. The NRFU collects name and demographic information about any people mentioned in this question. The decennial mail-out, Internet, and U/E forms do not. However, in the absence of any instructions about what to do, there is strong evidence that mail respondents go ahead and add the people to their form, leading to a large number of count discrepancies between the number in Q1 and the number of person spaces filled out (Krejsa et al., 2005).
- Applicability. This question does not apply to the GQ Individual Census Report (ICR) since data are only collected on the respondent. Similarly, the question does not have a comparable mate in the CCM or CFU, as the goals of those questionnaires are to assess

undercount and overcount in depth. The ACS has different residence rules and is also exempt from consistency on the coverage items.

## Issues

This question functions differently in different modes, primarily because of differences in placement. In NRFU, it essentially functions as a probe that adds additional people to the roster. In the 2004 census test, an earlier version of this question<sup>4</sup> functioned relatively well for that purpose, in that most of the people added through this question turned out to be household residents when followed up in CFU (Krejsa et al., 2005). However, it was skipped in 18 percent of behavior coded cases, and read with major changes a third of the time (see Hunter and Landreth, 2005). In the 2006 NRFU cognitive testing, there were issues with this version of the question picking up people who clearly spent most of their time at another home elsewhere (Hunter, 2005; Childs et al., 2006). In the decennial mail-out form, it is supposed to be a check on coverage that triggers a follow-up interview, not a probe to add people to the roster. However, many respondents appear to treat it as a continuation of Q1 and report on all the people they counted in either Q1 or Q2 (Gerber, 2004). This leads to count discrepancies that must be followed up to be corrected. In U/E, its placement is consistent with its function as a coverage check, but we do not know how well it works since it has not been evaluated.

From cognitive tests of the decennial mail-out form, we know that respondents are confused as to how to interact with the combination of the Pop count and the undercount questions (Gerber, 2004). Some go back and change their answer to Pop count after reading the undercount question; some list all the people counted in both questions (causing a count discrepancy); some respondents think they are classifying the people counted in the Pop count into the categories that are presented in the undercount question. Some respondents feel insulted by the undercount question, because it reiterates several of the residence rules, and respondents feel like it is checking up on them, or looking for deception (Gerber, 2004).

Methodological research (Rasinski, Mingay, and Bradburn, 1994; Smyth et al., 2006) shows that “check all that apply” questions obtain less complete information than asking respondents to answer yes/no for each option. Respondents answering check-all questions spend less time and may not process all the response options (Smyth et al., 2006). Consistent with the use of forced-choice format in interviewer-administered modes, question marks appear after each response category, indicating each is to be treated as a separate question. For the NRFU, this means the interviewer must enter a “Y” or “N” in each checkbox. This is the only question in the NRFU that was completed in this way. According to usability testing, this unconventional format created problems because interviewers did not know how to enter an answer (see Olmsted, Hourcade, and Abdalla, 2005).

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<sup>4</sup> “Besides the name[s] you gave me earlier, were there other people who lived or stayed at this place part of the time but were not permanent residents? For example, live-in employees or children in joint custody?”

## **Applying the Guidelines**

*Guideline 2. Preambles and instructions on the answering process may require different wording to be appropriate to the individual mode. They should not vary within modes.*

The lack of reference to "Question 1" in the interviewer-administered forms is appropriate, because there are no question numbers in the NRFU and the respondent is not aware of the question numbers in the U/E.

The preamble for interviewer-administered forms is appropriate as a transition that is not necessary in a self-administered form. The same preamble should be used within a mode.

*Guideline 6. The underlying response task posed by a question should be consistent across modes, even if the implementation differs.*

If the question is retained, we recommend that the decennial mail-out and Internet forms convert to a forced-choice (i.e., "yes/no") format, like that used in the interviewer-administered forms. Note, however, that this has not yet been tested.

*Guideline 7. Question punctuation should be consistent and appropriate for the response task.*

If each question is a yes/no, then each category should end with a question mark.

*Guideline 12. Identical response categories should be used across all modes.*

We recommend that the same categories be used in all versions of this question (this is not the case for the U/E form).

If some (or many) interviewers are not reading all response options, as evidenced in behavior coding of the 2004 NRFU (Hunter and Landreth, 2005), then the same response options are not communicated between modes. This suggests a modification to question wording (per Guideline 1) to incorporate response categories into the question text or use a flashcard (per Guideline 27). More research needs to be done on how to communicate the response categories in an interviewer-administered form of this question.

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

Response options should be presented in the same way for questions of the same type, to avoid confusing respondents or interviewers. In NRFU this question is formatted with checkboxes; this falsely suggests a mark-all-that-apply question, when in reality the interviewer is expected to enter yes/no for each part of the question. This question should be formatted consistently with other yes/no questions in the NRFU instrument.

*Guideline 21. Question order should be constant for all modes unless there is empirical evidence to show data quality is improved in one mode, and comparability of data between modes is not reduced, by using a different order.*

The placement of this question immediately following Question 1 is awkward in the decennial mail-out questionnaire, and the 2004 census test gave rise to inconsistencies between the household count and the number of person spaces filled out. A version of this question was tested at the end of the questionnaire in the 2006 “Person 1” field test. Results showed that respondents found this a logical place to check whether anyone had been left off the form, and that households flagged by the final question were significantly more likely to have a person missing (as identified in the coverage follow-up operation) than were non flagged households (Martin, 2006b). Alternate placement should be further investigated.

*Guideline 23. Extra questions (asked in some modes but not others) should if possible be asked after rather than before the core short-form questions, to avoid introducing order effects. When this is not possible, they should be carefully reviewed to ensure that they do not introduce new concepts, terms, or meanings that might influence answers to subsequent, core questions.*

We recommend that some version of the undercount question be retained in interviewer-administered and automated instruments (i.e., NRFU and the Internet), even if it is dropped from other modes. This would supplement the roster, so that these instruments would collect name and demographic information about added people. These automated instruments should flag people who were listed in response to the additional coverage probes for follow-up to determine if they were actually Census Day residents of the housing unit (to parallel the methodology used in the decennial mail-out form). The decennial mail-out form would not collect this additional information (names and demographic data) because there is currently no method to separately distinguish people enumerated by the original POP count from those added by the undercoverage probe. Under the assumption that those added by the coverage probes should be followed up, they would need to be identified as potential non residents if they were to be listed on the roster.

### **Other content recommendations**

- The 2006 NRFU version of this question is picking up people who clearly do not belong in the housing unit in cognitive testing (Hunter, 2005; Childs et al., 2006). This may also happen using the decennial mail version. The question should be carefully evaluated using the 2006 question wording and perhaps revised according to these findings.

### **Tenure**

#### **Summary of Differences (see p. 89 in the Appendix)**

- Fills. The U/E and NRFU questionnaires contain fills for interviewers to choose house/apartment/mobile home as appropriate. The ACS CATI and CAPI instruments fills with “house,” “apartment,” “mobile home,” or “unit” depending on response to a

previous question. There are also automated fills, which differ across questionnaires in what is filled. The NRFU handheld instrument automatically fills “you/this/that” to account for proxies. The ACS CATI and CAPI questionnaires fill in with the householder’s name.

- Instruction. “Mark [X] ONE box” appears only in the decennial mail-out questionnaire.
- Punctuation. Some instruments (decennial mail-out, NRFU, CCM, Internet, Be Counted, ACS paper) place a question mark after each response category, suggesting that each represents a separate, independent question. The U/E and ACS CATI and CAPI questionnaires instead use commas except for the last response category, which ends with a question mark. Some instruments (decennial mail-out, U/E, Internet, ACS paper) have an em-dash after the opening phrase (“Is this house, apartment, or mobile home —”); others (NRFU, ACS CATI and CAPI, CCM ) have no punctuation.
- Question wording. The ACS CATI and CAPI questionnaires modified the wording to incorporate the response categories into the question. The question is, “Do you or someone in this household own this house with a mortgage or loan, own it free and clear, rent it, or occupy it without having to pay rent?” This wording avoids the passive voice of the other versions.
- Question order. Tenure precedes person-level questions on the decennial mail-out, Internet, CCM, and NRFU forms. On the ACS, it is asked while gathering other housing unit data because it resides with similar data items. Tenure is asked toward the end of the U/E form with other household-level coverage questions.
- Response formats. The Internet form uses radio buttons rather than checkboxes for the response categories. The ACS CATI and CAPI questionnaires have numbers in front of response categories.

## **Issues**

In self-administered mode, this passive-voice question sometimes has to be reread before it is understood. Initially it is often read as “Is this a house, apartment, or mobile home” or “in this house, apartment, or mobile home” (Hunter and DeMaio, 2004; Dillman et al., 2004). It also performs poorly in behavior coding (Hunter and Landreth, 2005), because the response options are so wordy that interviewers tend to rephrase or omit them. It was asked with major changes in two-thirds of cases in the 2004 census test.

## **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a*

*difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

While the ACS interviewer-administered versions of this question use the active voice, census interviewer-administered instruments do not. We recommend that the ACS wording be used in all interviewer-administered forms. The evidence to support this change was set forth above in the Issues section.

We have no current recommendation for changing the self-administered wording despite the problems noted in the Issues section.

*Guideline 2. Preambles and instructions on the answering process may require different wording to be appropriate to the individual mode. They should not vary within modes.*

The “mark one box” instruction on the decennial mail-out questionnaire is intended to communicate how checkboxes should be marked. This instruction is not necessary on the ACS paper questionnaire, in which the tenure question is embedded within the long-form housing section.

*Guideline 3. Fills (e.g., for name) in the question are permissible in automated instruments, and should have the same format. If name (or other) fills are used, the format (e.g., first name + middle initial + last name) should be consistent across all automated modes and questions.*

The NRFU handheld instrument automatically fills “you/this/that” to account for proxies. The ACS CATI and CAPI questionnaires fill in with the householder’s name. The wording should be changed to be consistent.

This question also involves a different kind of fill. The paper U/E form and the automated NRFU instrument include wording options on the form, from which interviewers are expected to select one at the time of interview (house/apartment/mobile home). This long string of characters takes up valuable space on the small NRFU screen. An option to get around this would be to add an NRFU check item that interviewers could complete by observation, without asking the respondent. This entry could then be used as an automated fill in the instrument. This would not be a data item, but used simply for the purposes of administering the instrument. We recommend such an option, which would represent an appropriate mode difference. This has not been tested.

*Guideline 7. Question punctuation should be consistent and appropriate for the response task.*

Differences in punctuation occur among forms, with question marks after each response category in some instruments, and a question mark at the end of the question in others. This difference is not acceptable because it suggests that each category in the former is a separate yes/no question. We recommend that all responses categories on all forms use commas between each option and a question mark at the end. This has not been tested on the decennial mail-out form.

The dashes after the question stub in the self-administered forms, which do not appear in the interviewer-administered forms, reflect an acceptable mode difference. This punctuation would be transparent to the respondent on interviewer-administered forms.

*Guideline 17. Maintain the check box/radio button distinction on the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes or multiple responses.*

The difference between radio buttons on the Internet form and check boxes on other forms is an acceptable mode difference.

## **Telephone Number**

### **Summary of Differences** (see p. 91 in the Appendix)

- **Question wording and explanation for the request.** This text varies among modes. The decennial mail-out questionnaire says, “We may call if we don’t understand an answer.” ACS paper directs the respondent to “Include the telephone number so we can contact you if there is a question.” The U/E asks, “In case we need to contact you, what is your telephone number and the best time to call?” with response categories for day, evening, or either. The NRFU and CCM questions are identical, and use the word “please.” “In case we need to contact you again, may I please have your telephone number?” The Internet is the most basic, “What is Person 1’s telephone number?”
- **Whose telephone number?** Most applications request “your” (presumably the respondent’s) phone number. The Internet requests Person 1’s phone number (as was done in the Census 2000 mail-out form), because this change was not received in time to incorporate into the instrument.
- **Question order.** In most cases the question appears at the beginning of the form, but in some (CCM, NRFU) it appears at the end.

### **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

There are several differences in question wording across modes: (1) some forms ask for the telephone number of the respondent (decennial mail-out, U/E, NRFU, ACS paper, ACS CAPI), while others request the number of Person 1 (Internet, Be Counted); (2) some forms simply ask for the phone number (Internet, Be Counted), while others include the reason for another call and

the best time to call in the question (U/E, NRFU); (3) in some forms the best time to call is collected (U/E, NRFU, ACS CAPI) and in others it is not (decennial mail-out, Internet, Be Counted, ACS paper). The wording of this question should be consistent.

*Guideline 2. Preambles and instructions on answering process actions require different wording, and need to be appropriate to the individual mode. They should not vary within modes.*

Some interviewer-administered forms include “please” (NRFU) while others do not (U/E Reinterview). This deviation to use the language of “politeness” is acceptable in interviewer modes, and it should be used across all of them.

*Guideline 5. Substantive instructions and explanations should be consistent across modes.*

Some forms give the reason for a telephone call to the respondent as “if we don’t understand an answer” (decennial mail-out, Be Counted), while for others the reason is “in case we need to contact you”(U/E) or “in case we need to contact you again” (NRFU) or “if there is a question” (ACS), or providing no reason at all (Internet). These reasons should all be the same, and one of the generic reasons could accommodate all the situations for which follow-up occurs.

## **Person 1 Instructions**

### **Summary of Differences** (see p. 93 in the Appendix)

- **Question goal.** This question serves as the roster question in the NRFU, but not necessarily in other forms. In the self-administered forms, Person 1 is listed on the first page, then other household members are listed on subsequent pages. In the CCM and ACS CATI and CAPI forms, the householder is explicitly identified in a question separate from the roster.
- **Preamble.** There are preambles in the U/E, the ACS CATI and CAPI, and the Be Counted forms that deal with the questions that will follow. These differ between questionnaires (and modes).
- **Question content and wording.** The text specifying who is Person 1 also differs between instruments and modes. Sometimes there is an instruction about what to do if an owner or renter does not live there, and sometimes there is no such instruction.
- **Applicability.** The Person 1 instructions do not apply to the GQ ICR since data are only collected for a single person on each form. Similarly, the Person 1 instructions do not apply to the CFU since the interviewer asks to speak to the census respondent and Person 1 is established on the unit’s original census form.

## Issues

In general, the decennial census and ACS currently instruct the respondent to list as Person 1 the resident in whose name the housing unit is owned or rented, or any adult resident of the housing unit if the owner/renter is not a household member. This instruction in its various forms is awkward and unclear to respondents, according to cognitive tests (Dillman et al., 2004; Hunter and de la Puente, 2005).

Respondents can fail to include themselves on the roster or provide person data as a consequence of the confusing nature of the Person 1 instruction (Hunter and de la Puente, 2005). Some respondents are confused as to whether or not to include their own name on the paper form because of the complicated third-person wording of the paper form (Parsons et al., 2005).

A revised version of the Person 1 instruction caused less respondent confusion in cognitive testing, but did not significantly reduce the frequency with which respondents left themselves off the census form, according to results of the 2006 “Person 1” field test (Martin, 2006b).

A second issue is that the collection of a roster and identification of Person 1 are slightly different tasks between modes of administration. Since a roster is collected up front in interviewer-administered modes, the script to gather a roster is combined with the script to identify Person 1 first. In the census self-administered person-based instrument, the task differs because Person 1 is identified, then demographic data are collected for that person, then Person 2 is identified, etc.

A third problem is that interviewers do not properly administer the instruction, but instead frequently ask respondents to start with themselves (Hunter and Landreth, 2005). Selecting the wrong person as Person 1 may affect relationship data, since relationship is asked with respect to Person 1.

Note that non proxy CCM PI interviews and ACS CATI and CAPI interviews (all of which are non proxy) start interviewing the person who is initially contacted regardless of his/her status within the household, and later ask for the owner/renter. Since these are automated instruments, the reference person can be identified anytime before determining the relationships in the household. Additionally, these instruments separate the two necessary tasks into two discrete tasks—identifying the roster and identifying the reference person.

## Applying the Guidelines

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

The wording for the Person 1 instructions for all paper self-administered modes should be consistent.

Since automated instruments can gather a roster first and then identify the reference person anytime before the relationships are determined, a broad guideline for automated instruments is to separate the rostering and Person 1 identification into a set of simple questions, similar to what is currently done in ACS and CCM CAPI (and ACS CATI) instruments. This could be done in both interviewer- and self-administered automated instruments (i.e., the Internet).

We have very little experience pretesting our paper interviewer-administered modes (U/E). An empirical question is whether this should be designed like the decennial mail-out or the NRFU form. In the absence of testing, this should remain like paper forms. In the short run, cognitive testing of both versions should be conducted. In the long run, a split panel study should investigate both methods and determine which leads to higher data quality with the smallest respondent and interviewer burden.

*Guideline 2. Preambles and instructions on the answering process may require different wording to be appropriate to the individual mode. They should not vary within modes.*

Currently, the U/E, the ACS CATI and CAPI, and the Be Counted forms all use different preambles, but as these three forms are three different modes (interviewer-administered paper, CATI/CAPI, and self-administered paper) it is an acceptable difference because they convey the same content to respondents (per Guideline 5).

*Guideline 5. Substantive instructions and explanations should be consistent across modes.*

If preambles are to be used, some version of the preamble should be used in all forms to convey the same information to all respondents.

## **Name (Roster)**

### **Summary of Differences** (see p. 93 in the Appendix)

- **Name order.** Some versions have the format First Name, MI, Last Name (NRFU, ACS CATI and CAPI, Internet), while others use the format Last Name, First Name, MI (ACS paper and decennial mail-out versions).
- **Format for write-in spaces.** The format of the input fields and the amount of space devoted to each field vary. For example, the two paper versions (ACS and decennial mail-out) differ in the following way: The decennial mail-out divides the input field for last name into 15 separate spaces, with a total field length of 76 mm, while the ACS version is a single blank field with no dividers and a length of 55mm. Similarly, the first name field is 13 spaces and 66mm long for the decennial mail-out and 45mm long for ACS. The MI field is identical, at 5mm in each version. The automated instruments are

identical for the NRFU and topic-based Internet: 13 characters for first name, 1 character for MI, and 15 characters for last name fields. The person-based Internet form permits 15 characters for first name (the other field sizes are the same). The ACS CATI and CAPI instrument allows 16 characters for last name (the other field sizes are the same as the NRFU and topic-based Internet forms).

- Middle initial abbreviation. The NRFU instrument spells out “Middle Initial” while all other versions use “MI.” A panel of the 2005 NCT tested spelling out “Middle Initial” for Person 1.
- Fills. The ACS allows the computer to pre fill last name after it is gathered for the first person. The NRFU instrument has a drop-down feature that allows the enumerator to select a previously entered last name. Some tested versions of the Internet form have had a question asking “Does everyone in this household have the same last name?” which allows the instrument to pre fill last name.

### **Issues**

The 2005 NCT test shows that spelling out Middle Initial for Person 1 and relocating it on the mail-out questionnaire obtains more complete reports of middle initial (Martin, 2006).

Automated instruments could permit collection of additional information where there is not room on the decennial mail-out form. For example, entire middle name and suffix could be gathered on automated instruments. This would aid not only with matching and unduplication (Lynch, 2005), but would also facilitate the interview when there are members of the household (e.g., father, son) with the exact same first and last name (e.g., What is Joe Smith’s sex? How about Joe Smith?).

### **Applying the Guidelines**

*Guideline 2. Preambles and instructions on answering process actions require different wording to be appropriate to the individual mode. They should not vary within mode.*

On self-administered forms, the field to input middle initial is apparent (i.e., the respondent can see it and knows it is desired information). In interviewer-administered modes, the respondent does not know if middle initial is required or requested. We recommend adding an interviewer instruction to probe for middle initial in interviewer-administered instruments, given its importance for matching to identify duplicates in the census (Lynch, 2005). This instruction should be the same in all interviewer-administered modes.

*Guideline 15. When compiling a household roster, pre filling the last name given by the previous person listed is an acceptable practice in automated instruments used by experienced interviewers. Pre filling last name in the Internet self-administered instrument requires further research.*

Automated instruments make it possible to pre fill the last name of household members based on the name of the previously listed person. The Working Group discussed whether pre-filling last name might lead to errors if respondents or interviewers failed to correct a pre filled the last name that was in error. We have no reason to believe that an experienced interviewer would not correct an incorrectly pre filled last name in an interviewer-administered interview. However, we do worry about how novices might handle this, so we only recommend pre-filling last name in instruments administered by experienced interviewers (e.g., ACS).

The NRFU instrument allows selection of the previous last name entered through a drop-down menu. This is acceptable as long as it is not the default (i.e., the interviewer has to take an action to fill the last name with the previously entered one). The NRFU interview would be extremely burdensome without this function, since data entry is done with a stylus.

In the Internet we have no evidence to show that respondents would purposely misuse the “same last name” box but they may not realize that it is possible to change a pre-filled last name. Alternative designs might make it clear to the respondent that changes may be made and/or take advantage of the technology, while still deterring respondents from saying everyone had the same last name, simply to save time. One possibility is to fill the last name only if the interviewer or respondent begins typing the same last name as the previous person. A second option is to use the NRFU method (having a drop-down box to select previously entered last names, though we are unsure if this would be possible in an Internet application). A third is to offer a ‘same as above’ checkbox next to the last name box, for each household member. (However, without javascript the name would not appear until the page is refreshed.) These options should be investigated.

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

We recommend that all interviewer-administered applications use the same order for gathering name, which is FN, MI, LN. This order has not yet been tested in the decennial mail-out mode and should not be applied to that form until it is tested.

MI (middle initial) should be spelled out consistently across self-administered modes to the extent real estate allows for it (see Martin, 2006). Note that this has not been tested in modes other than the decennial mail-out form.

All modes (or instruments, e.g., ACS, decennial mail-out, CFU, CCM) should capture the same number of characters in the input fields for first and last name. This number should be driven by research on the optimal number for data capture.

### **Other Content Recommendations**

- We recommend adding an apostrophe as a legitimate character for name entries in all modes to capture names such as “O’Connell.” While this may not be feasible with the

current ACS software, it should be considered across the board as software updates eliminate this constraint.

- Allow automated instruments to collect suffix and middle name, as opposed to just middle initial. If a proxy interview was obtained in one instance and a non-proxy in another and we tried to match William Brown with Junior Brown, we might not be confident it is the same person without knowing that William's full name is William Brown, Jr. Similarly, if we collected middle name it would be easier to match William Brown with Joe Brown if we knew his full name was William Joseph Brown. The consequence is that it might make automated matching more difficult. The additional argument for gathering suffix is to ease interviewer and respondent burden in houses where there is a Jr. and Sr. (so we can clearly identify who the interview is asking about).

## **Relationship**

### **Summary of Differences** (see p. 96 in the Appendix)

- Question wording and use of branching. The decennial and ACS mail-out forms ask "How is this person related to Person 1?" The U/E questionnaire is the same except it asks, "How is each person related to (Read name of Person 1)?" NRFU, CCM, and CFU have converted the question into a branching question that begins by asking, "Is 'NAME X' related to 'NAME 1'?" A "related" response branches to, "Which one of these categories best describes how <you are/NAME X is> related to <you/NAME 1>?" with all the "related" categories on that screen. A "not related" response branches to "Which one of these categories best describes NAME X's relationship to NAME 1?" with the unrelated categories on the screen.
- Instructions. The decennial mail-out and U/E forms include an instruction to "mark one box" but other modes do not. U/E and NRFU include an instruction to "Show Card A, Relationship," and in NRFU the interviewer is directed to "Read selections aloud if necessary" on both the related and non related branches (CCM and CFU do not include this instruction). The ACS CAPI and CATI instruments instruct the interviewer to "Ask if not apparent."
- Response categories. The same 15 response categories appear in decennial instruments, in double-banked format for most. The ACS has different response categories, and it has only 12 of them. The ACS paper form has a heading "Relationship of Person 2 to Person 1," "Relationship of Person 3 to Person 1," etc., for the response categories for Person 2 through Person 5. The Internet has headings "Related" and "Not Related" over the two banks of categories.
- Prefilling of names in automated instruments. Electronic interviewer instruments pre fill first + last names (or "you") for Person 1 and the person about whom the question is asked. The Internet form does not.

- Flashcards. The format of the NRFU and ACS flashcards are somewhat different, with the NRFU flashcard categories double-banked and headed by “Related” and “Not Related.” For ACS they are numbered and single-banked, headed by “Relationship.”
- Response formats. The Internet uses radio buttons rather than checkboxes for the response categories.

## **Issues**

Respondents sometimes get the relationships between members of the household reversed, for example, calling someone a son, when they should be a father (see Love and Byrne, 2005). The current order of demographic questions in the census is relationship, followed by sex, age, and date of birth. This order could be changed for automated instruments, to solve reporting problems. If age is collected first, and then the instrument asks the relationship question, the automated instrument can do a real-time edit check to see if the relationship makes sense given the age we have already collected. By doing a real-time edit, we might help interviewers who are also confused about the direction of relationships they are entering.

The branching question (“Is NAME related to Person 1?”) on the NRFU questionnaire offers an additional step in obtaining relationships for each household member. This is problematic. In person, the respondent can see the 15 relationship category options on the flashcard before answering the first part of the unfolding relationship question. However, when the two-part relationship item is administered over the telephone, the respondent may branch to the wrong set of relationship categories based on their answer to the “Yes, Related/No, Not Related” screener. Cognitive interviews (Hunter and DeMaio, 2004) have shown, for example, that respondents identified spouses as “not related” because they were not related by blood.

## **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely the same wording to produce consistent meaning and equivalent answers.*

The wording of the related/not related branching question in the NRFU instrument has not been shown to be superior based upon evidence. In fact, cognitive testing of the branching question (Hunter and DeMaio, 2004) has shown the opposite. When asked simply “Is NAME related to Person 1?”, respondents have different definitions of “related,” and some of those (e.g., blood relative) result in incorrect classifications. Respondents need to see/hear the categories to understand what we mean by related. In the NRFU instrument, a misunderstanding of the related/not related distinction will take interviewers to the wrong set of relationship categories. High item nonresponse rates for the relationship question in the Interactive Voice Recognition (IVR) system of the telephone mode in the 2003 National Census Test (Brady et al., 2004)

support the notion of confusion over a screener question. This mode variation is not acceptable based on these guidelines.

*Guideline 2. Preambles and instructions on answering process actions require different wording to be appropriate to the individual mode. They should not vary within modes.*

The process action to “mark one box” should be the same for this item on all paper forms. It appears on the 2000 decennial mail-out and U/E forms, but not on the 2005 ACS paper form.

*Guideline 3. Fills (e.g., for name) in the question are permissible in automated instruments, and should have the same format. If name (or other) fills are used, the format (e.g., first name + middle initial + last name) should be consistent across all automated modes and questions.*

The first name + last name convention is used in both the CCM and the NRFU. We recommend that middle initial be added for assistance for the respondent in cases where only the MI differs. The Internet form does not use name fills for this question, but should be made consistent with CCM and NRFU.

*Guideline 6. The underlying response task posed by a question should be consistent across modes, even if the implementation differs.*

The wording of interviewer instructions to respondents is different on the NRFU and ACS CATI and CAPI, and CCM instruments. On the NRFU and CCM instruments, the instruction reads “Read selections aloud if necessary;” the ACS CATI and CAPI instruments contain no such instruction. We recommend instructing either all interviewers or no one to read aloud if necessary. If the instruction is included, the choice can be made by interviewers based on whether a flashcard is used and on the reading ability of the respondent.

In contrast, the ACS CATI and CAPI instructions read “Ask if not apparent.” The latter instruction encourages interviewers to fill in relationship based on observation. Interviewers may then carry over this instruction to other questions, which would be improper interviewer behavior. Another version of this instruction, “Ask or verify,” would be acceptable and should be adopted for all interviewer-administered forms. With interviewer training that stresses the use of standard verification techniques, interviewers would then say something like the following: “You said NAME is your husband, right?”).

*Guideline 12. Identical response categories should be used across all modes.*

The census form contains 15 response categories while the ACS contains only 12. This difference will be standardized in the future.

*Guideline 13. For closed questions (i.e., those with fixed categories), instruments in all modes should be designed and administered to expose respondents to the response categories, in the same order, and to present response categories with the question.*

While all response categories must be exposed to respondents in all modes, minor changes are acceptable. The use of a related/not related spanner, as used in the Internet form and the NRFU flashcard, is acceptable. The spanner is used to organize the response categories, which are all presented to respondents at the same time. Cognitive research (Hunter and DeMaio, 2004) using the self-administered paper questionnaire showed that respondents were able to locate the categories they sought with and without the spanner.

*Guideline 17. Maintain the check box/radio button distinction on the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes or multiple responses.*

The difference between radio buttons on the Internet form and check boxes on other forms is an acceptable mode difference.

*Guideline 24. When used, the content and design of a flashcard should be developed to best achieve the objectives of a question.*

The NRFU and ACS relationship flashcards are different in layout. ACS contains single-banking while NRFU categories are double-banked; and spanners contain different text (Relationship in ACS vs. related/not related in NRFU). These should be consistent.

*Guideline 25. When flashcards are used, their use should be scripted for the interviewer.*

Additional text needs to be inserted for interviewers' use when handing respondents the flashcard. For example, "Using the categories on this list, . . ."

*Guideline 26. If more than five response options are presented to the respondent, the question should, if possible, be adapted for interviewer administration (by use of a flashcard, a branching question, or other adaptation).*

Since the relationship question contains more than five response categories, a flashcard or branching question should be used. However, the related/not related branching question in the NRFU instrument is not satisfactory due to problems observed with its use.

*Guideline 27. Soft edits should be applied across all automated instruments when they increase data completeness and consistency.*

Electronic modes offer the possibility of correcting seemingly inverted relationships. We recommend exploring the possibility that a soft edit be implemented consistently in automated instruments (NRFU, Internet, ACS), using age to assess the accuracy of potentially problematic relationships such as parent/child. This would be used only when there appears to be an inverted relationship. This could be accomplished with a question such as the following: "So, just to confirm, NAME 2 is NAME 1's <reported relationship>. Is that correct?" If not: "How is NAME 2 related to NAME 1?" This needs to be tested before it is implemented.

## Sex

### **Summary of Differences** (see p. 101 in the Appendix)

- Question wording. The interviewer-administered modes (e.g., NRFU, ACS CATI and CAPI) ask “Are you male or female?” whereas most self-administered modes ask “What is Person 1’s sex?” Another wording variation is in the topic-based Internet version, which combines sex, date of birth, and age into one question, “What is each person’s sex, date of birth, and age?”
- Instruction to interviewers. The ACS CATI and CAPI version precedes the “Are you male or female” question with an interviewer instruction, “If not obvious, ask.”
- Instruction to respondents. The decennial mail-out version has an instruction (“Mark [X] ONE box”), but the 2005 ACS paper version does not. (The 2006 ACS Content Test form did include the instruction.) The instruction is a holdover from 1990 and earlier censuses, when sex was the first item the respondent filled in, and it was intended to illustrate how to mark or fill in the answer boxes or circles. In this census, tenure is the first item that is marked.
- Layout of response options. In the NRFU and ACS paper forms, the “male” and “female” response options are presented vertically, with a check box to the left of the label. The 2005 Internet version also presents the response options vertically but with radio buttons to the left, restricting the selection to one or the other, but not both. In ACS CATI and CAPI, they are numbered (1. male, 2. female). In the decennial mail-out version, the options are presented horizontally with the check boxes to the left of the labels.
- Response formats. The Internet uses radio buttons rather than checkboxes for the response categories.

### **Issues**

The self-administered and interviewer-administered versions of this question are worded differently. While both wordings seem to work, it would be beneficial (and conform to the guidelines) if a single question wording could be adopted.

The interviewer instruction to “If not obvious, ask” in ACS CATI presents a potential source of response error due to ambiguity over the telephone. This can be addressed by using the standard interviewing practice of verification.

## Applying the Guidelines

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

The self-administered version of this question (“What is this person’s sex?”) has the visible response options (male/female) to give meaning to the question. However, it is an awkward question for an interviewer to ask. The interviewer-administered version (“Is this person male or female?”) is immediately clear and would seem to work well in any mode. We recognize that there are no documented problems with either version. Nonetheless, a consistently-worded question is desirable and meets Guideline 1. This does not seem to present any problems; however, using the interviewer-administered wording in a self-administered form would have to be tested before it could be adopted. This wording would also be incorporated into the Internet version, which should present the wording of each question (i.e., sex and age/date of birth) separately.

*Guideline 2. Preambles and instructions on answering process actions require different wording to be appropriate to the individual mode. They should not vary within modes.*

The process action to “mark one box” appears on the 2000 decennial mail-out and U/E forms, but not on the 2005 ACS paper form. The “mark one box” instruction on the decennial mail-out questionnaire is intended to communicate how checkboxes should be marked. This instruction is not necessary on the ACS paper questionnaire.

*Guideline 6. The underlying response task posed by a question should be consistent across modes, even if the implementation differs.*

An ACS CATI and CAPI instruction — “If not obvious, ask .” — precedes the question. Interviewers may incorrectly infer a person’s gender based on voice quality. It should be replaced with an alternative instruction, “Ask or verify” in all interviewer-administered questionnaires. This means that interviewers are allowed to confirm with respondents that they are male or female, but not to record the answer based only on observation. (An interviewer might say, for example, “I’m putting you down as male, is that correct?”)

*Guideline 13. For closed questions (i.e., those with fixed categories), instruments in all modes should be designed and administered to expose respondents to the response categories, in the same order, and to present response categories with the question.*

The variation in the layout of response options reflects the appropriate adaptation to each mode. These minor variations are acceptable under the guideline.

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

The response spaces are formatted differently among paper forms — horizontally for the decennial mail-out form, vertically for U/E, ACS paper, and ICR. These should be consistent, if feasible.

*Guideline 17. Maintain the check box/radio button distinction on the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes or multiple responses.*

The difference between radio buttons on the Internet form and check boxes on other forms is an acceptable mode difference.

### **Age and Date of Birth (DOB)**

#### **Summary of Differences** (see p. 103 in the Appendix)

- **Question wording.** In the decennial mail-out form, the question is “What is Person 1's age and what is Person 1's date of birth?” with “this person” substituted for Persons 2-6. (An NCT panel tests a shortened wording, “Print Person 1's age and date of birth.”) The U/E question is in the past tense, mentions the date, and is topic-based: “What was each person’s age on April 1, 2006, and what is each person’s date of birth?” For the Internet topic-based application, sex, date of birth, and age are combined into one question (“What is each person's sex, date of birth, and age?”) For the person-based Internet application, age and date of birth are asked as separate questions (“What is NAME’s date of birth? (*mm/dd/yyyy*)” and “What is NAME’s age?”) Age is calculated in the Internet form if a valid date of birth is provided. In the automated interviewer instruments, age is calculated from date of birth, and the age question confirms the calculation. In NRFU and CCM, the question is “For the Census, we need to record age as of April 1, 2006. So, just to confirm – (you were/NAME was) YY on April 1, 2006?” In ACS CATI and CAPI, it is “That makes you/NAME YY. Is this correct?”
- **Question order.** In the automated instruments (NRFU, Internet, CCM, and CFU), date of birth is asked before age. In other instruments, age is asked before date of birth. When an instrument asks date of birth before age, it electronically calculates and confirms age with the respondent or collects age if date of birth is unknown.
- **Reference to Census Day date.** Several interviewer instruments incorporate the reference date into the age question (U/E, NRFU, CCM; see above), while the self-administered instruments include the date in the label for the write-in space. Consistent with its collection day reference date, the ACS does not mention the date at all.
- **Format, labelling of write-in spaces.** For the decennial mail-out form, age is beside DOB, but for U/E, age is above DOB, with DOB headed by “DATE OF BIRTH.” The age

write-in space is variously labeled “Age (in years)” (ACS paper), “Age on April 1, 2006” (decennial mail-out form and ICR) or “Age (on 9/15/2005)”, with “years” appearing after the age response box (Internet). The date of birth response boxes are labeled “month,” “day,” and “year” above the boxes (decennial mail-out, U/E, ICR, Be Counted, ACS paper); the Internet form labels the response boxes “(mm/dd/yyyy),” and the CCM includes “enter month, enter day, enter year” as a separate instruction. A panel in the 2005 NCT tests the effects of lightly printing “MM,” “DD,” and “YYYY” in the response boxes for date of birth, while another panel tests age above DOB with the labels to the left of each box.

- Instructions. An instruction to respondents on reporting age for babies (“Please report babies as age 0 when the child is less than 1 year old.”) is being evaluated in the 2005 NCT, and is incorporated in decennial mail-out instruments. It does not appear on the ACS paper instrument. An instruction to “Print numbers in boxes” applies to Age and DOB (in U/E, ACS paper) or just to DOB (short form, ICR) or does not appear at all (Internet).
- Follow-up probes and questions for incomplete or “don’t know” answers. Some automated instruments include follow-up questions to probe for or estimate missing information. ACS CATI and CAPI instruments do this, as well as CCM, though they do it in different ways.

## **Issues**

Some instruments (decennial mail-out) ask age before date of birth, while others (NRFU and CCM) ask date of birth before age. Factors related to automation make the second sequence preferable for electronic questionnaires; if respondents know date of birth, age can be calculated automatically.

The 2005 NCT tested both orders of these questions within a horizontal layout (as is the plan for 2010). The results of this test showed that asking date of birth before age on the paper form led to small but significant improvements in date of birth, with no statistically significant effects on the completeness or validity of reported age (Martin, 2006a). In research using a vertical layout of the questions, Spencer and Perkins (1998) found that age calculated from birthdate is more accurate than respondent-reported age. This suggests that asking date of birth before age has positive effects on the accuracy of age data.

An instruction designed to increase accuracy of reporting of babies’ age (“Please report babies as age 0 when the child is less than 1 year old”) was also tested in the 2005 NCT. This is desirable because respondents have a tendency not to think of their children as “0” years of age, and report their age in months instead. Results showed a significant increase in the percentage of children reported as age 0 compared with a version of the question that did not contain the instruction, as well as a significant decrease in those reported ages 1–11 (Hill et al., 2006).

## Applying the Guidelines

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

Four aspects of question wording differ here: one includes the reference date for the age question (U/E); one reverses the order of the date of birth and age questions; one includes information about sex, date of birth, and age in a single question (topic-based Internet); and one includes separate questions for age and date of birth (person-based Internet).

The U/E interviewer-administered forms' inclusion of the reference period in the question wording is an acceptable mode difference from the decennial mail-out version because in the U/E the respondent cannot see the April 1<sup>st</sup> mail-out date in the response space (see Guideline 4 below). Other interviewer-administered forms are electronic and ask the date of birth question first. The reference period is included in the NRFU age verification question.

Reversing the order of date of birth and age, and calculating age from date of birth in electronic forms is an acceptable practice based on the results of research reported above (Spencer and Perkins, 1998; Martin, 2006a).

The inclusion of sex with date of birth and age is an awkward combination and should be separated to make question wording consistent in the topic-based Internet form. The person-based Internet form, which has separate questions for age and date of birth, results in a better placement of respondent instructions. The format of the date of birth write-in appears immediately after the date of birth question, and the instruction about babies' age appears immediately after the age question. This likely will result in better reporting of these data. This is an acceptable mode difference.

*Guideline 4. The elements of a question may be reordered if necessary to ensure that respondents are exposed to all essential information in interviewer-administered modes. Any reordering should be constant within mode.*

The reference date is included in the age question for interviewer-administered modes, in which no other place for presenting the reference date to respondents is available, but not self-administered modes, where it is present in the response space. This is an acceptable mode difference due to reordering the necessary information for interviewer-administered modes.

*Guideline 5. Substantive instructions and explanations should be consistent across modes.*

The instruction about babies' age should be treated consistently (either included or excluded) with the age question in all instruments. Results from the 2005 NCT (reported above in the issues section) suggest this is a beneficial change.

A question or instruction to request estimated age when respondents don't know either age or DOB should be included, and with the same wording, in all interviewer-administered modes. The question is currently implemented in the NRFU, CCM, and ACS CATI and CAPI instruments, but the wording differs across the instruments.

*Guideline 8. Question wording may be simplified for questions to be repeated for multiple household members.*

When repeating the age verification ("For the Census, we need to record age as of April 1, 2006. So, just to confirm—(you were/NAME was) YY on April 1, 2006?" ) in an interviewer-administered automated instrument, it is appropriate to omit the first sentence for multiple household members after it has been read in full for the first person.

*Guideline 16. Formats for answer spaces for a given question should be applied consistently within mode.*

The response space labels for age and date of birth should be constant at least within modes, and across modes if possible. For example, if boxes for date of birth will be indicated by "Month" "Day" "Year" in some modes, this should be carried across modes to the extent possible. Additionally, the response space label (e.g., Age on April 1, 2010) should be the same within modes and across modes for Census data collection to the extent possible. (ACS has no reference date.)

*Guideline 21. Question order should be constant for all modes unless there is empirical evidence to show data quality is improved in one mode, and comparability of data between modes is not reduced, by using a different order.*

See Guideline 1 that justifies asking DOB before age in automated instruments. The order of age and DOB on the paper form should be based on empirical evidence. Preliminary results from the NCT indicate that date of birth is more complete when date of birth is asked first, and there is no significant difference in completeness or validity of age data by order (Martin, 2006a).

*Guideline 27. Soft edits should be applied across all automated instruments when they increase data completeness and consistency.*

For all automated instruments, use the same consistency checks (e.g., conduct an age/date of birth consistency check, for year of birth, conduct a range check for valid years, for month and day, conduct a range check for valid days for a given month).

## Hispanic Origin

### **Summary of Differences** (see p. 107 in the Appendix)

- Question wording. The Census 2000 mail-out form asked “Is Person X Spanish/Hispanic/Latino?” The 2000 U/E form asked as a topic-based question (“Are any of the persons that I have listed Mexican, Puerto Rican, Cuban, or of another Hispanic or Latino group?”) and collected the information for each person. The 2000 Accuracy and Coverage Evaluation (ACE) used a 2-question sequence, first asking “(Is anyone/are you) of Spanish, Hispanic, or Latino origin?” and then a follow-up for yes answers: “(Are you/Is NAME) of Mexican, Puerto Rican, Cuban, or some other Spanish origin?” The 2004 NRFU form asked a different two-part question: first, “Are you of Spanish, Hispanic, or Latino origin?”; second, “Are you Mexican, Mexican-American, Chicano? Puerto Rican? Cuban? Another Spanish, Hispanic, or Latino origin?” The 2008 presumed DR asks “Is Person X of Spanish, Hispanic, or Latino origin?” The 2005 ACS CATI and CAPI instruments use a still-different two-part sequence: first, “(Are you/Is NAME) Spanish, Hispanic, or Latino?” and second, “(Are you/Is NAME) of Mexican origin, Puerto Rican, Cuban, or some other Spanish/Hispanic/ Latino group?”
- Instructions. Census 2000 mail-out form had an instruction that read “Mark (X) the “**No**” box if **not** Spanish/Hispanic/Latino.” In addition, preceding the Hispanic origin question was an instruction that read “NOTE: Please answer BOTH Questions 7 and 8.” The enumerator form had the same NOTE, but did not have the other instruction. There were no enumerator instructions on the Coverage Measurement form. The 2008 presumed DR content contains the following instruction: “Mark (X) the “No” box if not of Spanish, Hispanic, or Latino origin.” It contains the same NOTE as the Census 2000 mail-out form.
- Response Categories. There were one “no” and four “yes” response categories to this question on the Census 2000 mail-out and enumerator forms. Each of the four yes categories included a more specific group (Mexican, Puerto Rican, Cuban, other Spanish). The four response categories to the second 2000 ACE question were the same as the census forms. The 2008 presumed DR content has the same five response categories. The wording of the “no” category is different: the 2008 presumed DR category is “No, not of Spanish, Hispanic, or Latino origin.” The wording on the 2000 form was “No, not Spanish/Hispanic/Latino.” The wording of the “other” category is also slightly different: 2008 presumed DR wording is “Yes, another Spanish, Hispanic, or Latino origin,” while the 2000 said “Yes, other Spanish/Hispanic/Latino.”
- Examples. While none of the 2000 census forms contained examples for other Spanish, the 2008 presumed DR content contains six examples of other Spanish origin (Argentinean, Colombian, Dominican, Nicaraguan, Salvadorean, Spaniard).

- Write-in. There was a write-in entry for “other Spanish” on the Census 2000 mail-out and enumerator forms. The 2008 presumed DR content provides the same write-in entry. The 2000 ACE did not collect a write-in for specific other Spanish origins.
- Flashcard. The Census 2000 enumerator form had a flashcard; the interviewer-administered 2000 ACE and ACS CATI and CAPI forms did not.
- Response formats. The Internet uses radio buttons rather than checkboxes for the response categories.

## **Issues**

Census 2000 questionnaires included an instruction to “Mark (X) the “**No**” box if **not** Spanish/Hispanic/Latino.” This instruction reduced nonresponse in the mail-out form (from 19 to 8 percent), according to experiments conducted in the 1990s (Bates et al., 1995). Cognitive interviews with the mail-out form indicate that respondents often have difficulty interpreting this sentence. It may change question interpretation for some respondents, who then mark “no” because they have been specifically instructed to do so even if they would prefer to mark “yes” alone. Since this stress on “No” is exclusive to paper forms, it can be argued that the context of the question presented to respondents is different in paper than in interviewer-administered modes.

In the 2004 NRFU, this question was asked with major changes 42 percent of the time (Hunter and Landreth, 2005). About half the changes occurred because interviewers only included one or two of the terms (Hispanic, Spanish, Latino).

## **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

The 2000 U/E form presents a different concept from the mail-out form, by eliminating the concept of Spanish/Hispanic/Latino in favor of asking “Are any of the persons that I have listed Mexican, Puerto Rican, Cuban, or of another Hispanic or Latino group?” The latter changes the concept. First, it entirely excludes the concept of “Spanish,” which has been included as a way of preserving the generality of the concept. Some respondents who do not identify with either of the terms “Hispanic” or “Latino” may be able to identify with “Spanish.” Second, the question may create additional stress on the category of “Mexican” since it is in first place and thus is likely to draw respondent attention. The 2004 NRFU question reinstated the term “Spanish.” We recommend that the same terms/concepts be used in all modes.

As opposed to other iterations, the 2000 ACE and the 2004 NRFU forms use a branching approach to decompose the question into two parts for interviewer administration. First a global yes/no question is asked for the presence of any household member who is Spanish, Hispanic, or Latino. Then detailed categories are present only for yes answers. This version of the question was used in the Census Quality Survey as part of an evaluation of the race question in Census 2000. Results of behavior coding of the branching question (Davis et al., 2002) show that this question performed well. We recommend decomposing the question and using the flashcard in face-to-face interviews.

The alteration of the question wording in the U/E form (i.e., “Are any of the persons that I have listed. . .”), which changes the question from an individual-level question to a household-level question, is not acceptable.

*Guideline 2. Preambles and instructions on answering process actions require different wording to be appropriate to the individual mode. They should not vary within modes.*

Self-administered forms include a NOTE to please answer both questions 7 and 8. This is a process instruction and does not need to be included on interviewer-administered forms. However, it should be included or excluded consistently within a mode.

*Guideline 8. Question wording may be simplified for questions to be repeated for multiple household members.*

In the topic-based NRFU question used in the 2004 census test, interviewers are required to read the example set to the respondent during the first iteration of the question. It is not required to read the examples in subsequent iterations—interviewers should read them as necessary (e.g., when the respondent is answering questions about an unrelated household member). This is also true for examples that are attached to particular categories.

*Guideline 9. The same examples, in the same order, should be presented in a question in all modes. Exceptions may be made if evidence exists that adding or deleting examples in one mode improves data quality overall while not causing bias in response distributions. Unless such evidence exists, examples should not be introduced into (or eliminated from) a single mode.*

The inclusion of examples in the 2008 DR presumed content is the result of prior research in 2003 (Martin et al., 2004), which showed that when examples were included in the Hispanic origin question, fewer generic Hispanic origin responses were reported and there were fewer “Some Other Race” reports by Hispanics. Examples were included in 2004 NRFU form; however, they were not read. Reading all the current examples would make the interviewer administration of the Hispanic origin question somewhat difficult, since six examples are included: “Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.” We recommend that research should be conducted to investigate the feasibility of shortening this list of examples. Presenting examples of a flashcard in a personal visit interview is acceptable.

*Guideline 17. Maintain the check box/radio button distinction on the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes or multiple responses.*

The difference between radio buttons on the Internet form and check boxes on other forms is an acceptable mode difference.

*Guideline 24. When used, the content and design of a flashcard should be developed to best achieve the objectives of the question.*

Because of the complicated nature of the concepts contained in this question, respondents would benefit from being able to read the examples on the flashcard. The differences between the ACS and census should be considered in designing the flashcard, but it should be the same for both data collections.

*Guideline 25. When flashcards are used, their use should be scripted for the interviewer.*

The U/E form does not include an instruction for the interviewer to hand the flashcard to the respondent. The 2004 NRFU instrument contains such an instruction. Neither one, however, scripts the wording for interviewers to use in giving the card to respondents. Such wording (e.g., “Please look at this card”) will increase the likelihood of flashcard use and ensure that it happens at the same time across interviewer-administered forms.

## **Race**

### **Summary of Differences** (see p. 111 in the Appendix)

- **Question wording.** The 2000 decennial mail-out form asked the following question: “What is Person X’s race?” The enumerator form contained a preamble followed by the question: “Which race or races does each person consider himself/herself to be?” The 2000 ACE question is a branching question that first asked “I’m going to read a list of race categories. Please choose one or more categories that best describe [your/NAME’s] race.” Follow-up questions are asked for “American Indian or Alaska Native,” “Asian,” and “Pacific Islander” responses. The 2005 ACS CAPI reads “Using this list, please choose one or more races that you consider yourself to be.” The ACS CATI form states “I’m going to read a list of race categories. Please choose one or more races that you consider yourself to be.” The 2004 NRFU asked respondents to “choose one or more races that you consider yourself to be.” The 2008 presumed DR content is the same as the Census 2000 mail-out question wording.
- **Preamble and instructions.** The Census 2000 mail-out form contained an instruction to “Mark (X) one or more races to indicate what this person considers himself/herself to be.” The Census 2000 enumerator form included the multiple race instruction as part of a preamble: “Now choose one or more races for each person.” There were no

instructions for the 2000 CCM instrument, but it did contain a preamble: “I’m going to read a list of race categories.” The 2008 presumed DR content is the same as the Census 2000 mail-out instruction. The 2005 ACS CATI question contains a preamble (“I’m going to read a list of race categories. Please choose one or more races that you consider yourself to be.”) that is not present in other interviewer-administered versions used on the telephone. The 2005 ACS paper does not have either instructions or a preamble; neither does the 2004 NRFU.

- Response categories. All of the forms contain the same response categories: White; Black, African Am, or Negro; American Indian or Alaska Native; Asian Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander; and Some other race. Instruments using a branching structure, such as the 2000 CCM, use the category “Asian” in the first iteration and then follow up with the more specific categories later. In some interviewer-administered forms (2005 ACS CATI, 2000 ACE) the categories are read, while in others (2000 U/E form, 2005 ACS CAPI) there is a flashcard.
- Banking. Response categories are triple-banked on all self-administered forms. The same response categories are not always in the second and third columns, however. In the 2000 decennial mail-out and 2008 DR forms, Asian and Native Hawaiian and Other Pacific Islander (NHOPI) categories are triple-banked, with some appearing in each column. On the ACS paper form, these categories appear only in the second and third columns. In some forms, Some Other Race is in column 1, while in others it is in column 3. The result is a different visual grouping of response categories across forms.
- Examples. The 2008 presumed DR form is the only one of the forms reviewed for this document to include examples, which are provided for the other Asian and Other Pacific Islander categories.
- Write-in. The 2000 mail-out form and 2008 presumed DR form both contain three write-in lines, one of which is shared between two response categories (Other Asian and Other Pacific Islander). The 2000 enumerator questionnaire contained a single write-in line, which was shared between four response categories (enrolled or principal tribe, Other Asian, Other Pacific Islander, Some Other Race). The 2005 ACS paper form includes two write-in spaces: one is for name of enrolled or principal tribe, and the other is shared by the Other Asian, Other Pacific Islander, and Some Other Race categories.
- Flashcard. The Census 2000 U/E, 2000 ACE, 2004 NRFU, and 2005 ACS CAPI forms used a flashcard. They generally contained the same information; however, the 2004 NRFU flashcard contained examples for the Other Asian and Other Pacific Islander categories; the 2000 ACE flashcard contained numbers preceding some categories and indentations of specific examples of Asian and Other Pacific Islander categories.

## Issues

This question performed very poorly in 2004 NRFU (Hunter and Landreth, 2005). It was asked as worded or with only minor changes only 36 percent of the time for Person 1, and even less for later people. Interviewers commonly offered response options that were not on the list, including Hispanic origins. It was skipped 40 percent of the time, and most often for persons 2 and higher.

## Applying the Guidelines

*Guideline 1. Every effort should be made to maintain the same wording of questions across modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

For the most part, the wording of the race question is the same across forms. The one exception is the 2000 ACE, which asked for “one or more categories that best describe this person’s race.” This is a very different question, as was evidenced by differences in response distributions between the 2000 Census and ACE (Farber, 2001). The same question wording/concepts should be used across all modes.

The large number of categories in the two-part race question makes this question very difficult to administer effectively in interviewer-administered formats. In general, a flashcard has been favored where possible, except in telephone administration mode. Thus, ACS CATI reads the list of categories, preceded by a preamble sentence: “I’m going to read a list of race categories.” However, some iterations (such as 2000 CCM and ACS CATI) have used a branching structure, in which a short list of categories is read, and then follow-up questions are asked for the Asian, Pacific Islander, and Some Other Race categories, and to collect American Indian or Alaska Native (AIAN) Tribe.

Although a flashcard can be laid out the same as a paper version of the questionnaire, the length of the question may make it difficult for respondents to completely process the card during the short time that is available to them in the course of a live interview. In addition, there are other elements of information besides the actual race categories that we want them to absorb during this interchange. That is, we want them to understand that they can give more than one response, to process examples, and to remember that we do not consider Hispanic origins to be races. It can be argued that in self-administration, respondents have the leisure to process all of this, but cannot in the few seconds that they are afforded in interviewer administration. There is the additional problem that the flashcard may not in fact be used.

Another option would be a branching structure, which simplifies the question in interviewer administration. This structure, which is necessary in telephone administration, could be adopted in personal interviews as well. An advantage is that it allows the basic categories to be read to

the respondent, which ensures equivalent exposure for respondents who cannot or who do not choose to read the card. Supporting this argument is that there is already a branching structure to collect race, “Other Asian” and “Other Pacific Islander,” so the administration of the question would not in fact become substantially more complicated. Results of using this branching structure in the Census Quality Survey telephone interviews show that it was correctly administered by interviewers the vast majority of the time—between 92 and 99 percent, depending on the specific branching question (Davis et al., 2002).

The issues raised by this may require research to resolve; a recommendation may be premature. The central research question is whether or not respondents receive a more equivalent stimulus from a brief exposure to a flashcard or by hearing a branched question.

*Guideline 8. Question wording may be simplified for questions to be repeated for multiple household members.*

Interviewers need not read the examples contained in the race question for each person in the household for a topic-based instrument. It is acceptable to read them when they feel it is necessary during the interview (for example, if the interviewer asks about a household member who is unrelated to the respondent).

*Guideline 10. Placement and presentation of examples may vary by mode, consistent with the principle of universal presentation.*

When examples are used, respondents must be exposed to them in all modes. Thus, it is acceptable to include examples on a flashcard in CAPI or have the interviewer read them in CATI. If examples are included on a flashcard in one questionnaire in a mode, they should be included on all flashcards in the same mode.

*Guideline 16. Formats for answer spaces should be applied consistently within mode.*

Although both the 2005 ACS and the 2008 DR mail-out formats triple-bank the Asian and Pacific Islander categories, it is done somewhat differently. In the ACS, all of the categories are banked, including the White, African American, and AIAN categories in the first bank. As a result, all of the Asian categories appear in the second bank. The 2008 DR mail-out form begins as a vertical structure (with White, Black African American, and AIAN and their write-in lines), and then uses banking only for the Asian and Pacific Islander categories. As a result, the Asian categories appear in different groupings in the two instruments. These visual groupings may differentially affect the ability of respondents to find or interpret their categories. We recommend that, if feasible, a consistent banking should be created for visual administration of the question.

*Guideline 18. The amount and arrangement of space for write-in boxes should be consistent across all modes and appropriate for the required response (use of shared write-in spaces is an exception by necessity). Other aspects of visual layout and design differences should be carefully reviewed and tested if possible for their impacts on responses.*

The placement and use of the write-in lines is different in the 2005 ACS paper and the 2008 DR mail-out format. In the ACS format, all the write-in lines appear at the bottom of the question. There are two short write-in lines for the AIAN category at the bottom of the first bank. The other write-ins all occur at the bottom of the third bank. The “Other Asian” category has a horizontal arrow leading to a box to the right. The Other Pacific Islander and Some Other Race categories both have down arrows leading to a single shared write-in line above the Other Asian write-in line. In the DR format, a single American Indian write-in line bisects the question after the third category. A single write-in line is shared by Other Asian and Other Pacific Islander, and the last write-in line is exclusive to Some Other Race. These should be made consistent.

The sharing of write-in lines may be problematic particularly for respondents who have little experience filling out surveys. It may create a sense of confusion, or create an impression that the two combined categories are somehow officially considered “the same.” These issues have not been researched (as far as we know). However, this may create differences in response from interviewer-administered formats. Therefore, the placement is a cross-mode, as well as a within-mode issue. If write-ins must be shared, the groupings created should be kept the same in all visual iterations for respondents.

*Guideline 24. When used, the content and design of a flashcard should be developed to best achieve the objectives of the question.*

Because of the complicated nature of the concepts contained in this question and the examples included in some response categories, respondents in face-to-face interviewer modes would benefit from being able to see the response categories.

*Guideline 25. When flashcards are used, their use should be scripted for the interviewer.*

The 2004 NRFU and 2005 ACS CAPI instruments contain a script for the interviewer to use when handing out the flashcard (“Using this list, please choose. . .”) This is also recommended for 2008 NRFU.

*Guideline 26. If more than five response options are presented to the respondent, the question should, if possible, be adapted for interviewer administration (by use of a flashcard, a branching question, or other adaptation).*

Since this question contains 15 response categories, we recommend that either a flashcard or a branching question, or both, be used.

## **Overcount**

### **Summary of Differences** (see p. 118 in the Appendix)

- **The order and structure of response categories.** The census test mail-out form and the 2005 Internet form begin with “No” and “Yes” then list the substantive categories below the “Yes.” This is a two-question series, with the first being a yes/no and the second being a mark-all-that-apply. In the NRFU and the U/E, the yes/no filter question does not exist, but instead it is a mark-all-that-apply with “No” as one of the options at the end of the list.
- **Question wording.** U/E has adapted the question to provide a transition and to incorporate the response options as part of the question: “Does . . . sometimes live or stay somewhere else *for any of these reasons.*”
- **Instructions.** A “Mark-all-that-apply” instruction appears in all self-administered modes except Internet.
- **Punctuation.** Punctuation varies in a way that is likely to create differences in interviewer administration. The NRFU adds question marks after each response category to produce a pause, but U/E does not do this. The self-administered forms (i.e., decennial mail-out and Internet) have no question marks after each response category. The U/E form has a hyphen after the opening phrase (“Does . . . sometimes live or stay somewhere else for any of these reasons—”); none of the other forms have the hyphen.
- **Response Formats.** The Internet uses radio buttons rather than checkboxes for the response categories. The ACS CATI and CAPI questionnaires have numbers in front of response categories.
- **Applicability.** This question does not apply to the CCM or CFU instruments because of their specialized goals. It is not directly applicable to the Be Counted form. The ACS has different residence rules and is also exempt from consistency on the coverage items.

### **Issues**

This question performed very poorly in NRFU, according to behavior coding results (Hunter and Landreth, 2005). It was skipped in 18 percent of cases, and read with major changes two-thirds of the time. Most of the major changes (70 percent) were due to interviewers omitting the response categories altogether, and the rest of the time they read one or two response options (28 percent). Another problem was a high rate of respondent interruption, probably because the question stem is a fully-formed question, so respondents answered it without waiting for the categories to be read. However, in the 2004 census test, the question did flag cases that turned out to be nonresidents in CFU (Krejsa et al., 2005).

In cognitive testing of the NRFU, it was noted that respondents often interrupted the question reading and demonstrated fatigue in listening to all the response options being read. When the response options were read for only the first person in the household, respondents often forgot what they were when they needed to report another household member stayed away for some reason (Hunter, 2005, and Childs et al., 2006).

This question is not comparable across modes without exposure to the response categories, because the question stem is too vague to be meaningful without the context provided by the categories. Too many respondents in interviewer-administered modes are not exposed to the response categories at all (see Hunter and Landreth, 2005).

### **Applying the Guidelines**

*Guideline 1. Every effort should be made to maintain the same wording of questions across survey modes. When variant wording for a particular mode is proposed, the decision to change wording should be based upon evidence (from Census Bureau tests or other sources) that a difference in wording is more likely than the same wording to produce consistent meaning and equivalent answers.*

We have evidence, cited above, that this question does not perform adequately or equivalently in the interviewer-administered modes. Keeping in mind that the current goal of this question is to set flags for follow-up by CFU, not for gathering specific pieces of demographic or residency data, there are several options for this question that should be investigated and pretested. Some of these options are:

1. Create a series of questions for interviewer-administered instruments that combines information collected in this question with information collected and presented in the residence rules and undercoverage questions. This is allowable based on the accumulated pretesting evidence that the residence rules presentation and the coverage questions are not working in interviewer-administered modes.
2. Modify the application of this question, which could be done in a number of ways:
  - a. Make it a series of yes/no questions in all instruments. This would make the response task the same across modes, though it may increase the burden.
  - b. Use the wording in the U/E questionnaire (“Does . . . sometimes live or stay somewhere else for any of these reasons—”) in all interviewer-administered instruments. This phrase introduces the response options, unlike the NRFU script, and might make interviewers more likely to at least read some of them.
  - c. Use a flashcard for interviewer-administered in-person modes.

Note that none of these options have been pretested, and should be researched prior to implementation.

*Guideline 6. The underlying response task posed by a question should be consistent across modes, even if the implementation differs.*

If the question remains the same between modes, we recommend a consistent response format. If mark-all-that-apply is to be used in the interviewer-administered modes, it should be used in the self-administered modes as well (instead of having a filter “yes/no” question proceeding it; see Rasinski et al., 1994, and Smyth et al., 2006). However, this recommendation has not yet been tested either.

An alternative for consistency would be to create the yes/no filter in interviewer-administered modes, but this is not desirable since exposure to the response categories is critical in understanding the question’s content.

*Guideline 7. Question punctuation should be consistent and appropriate for the response task.*

If the task is for the interviewer to read the entire list, then to wait for a response, the punctuation should be commas after each response option, then a question mark at the end. If the interviewer is to wait for a response after each option, then each response option should end with a question mark and have a yes/no response at the end.

*Guideline 8. Question wording may be simplified for questions to be repeated for multiple household members.*

In instruments designed for topic-based administration, the same question is asked for all household members before proceeding to the next question. In such designs, it is accepted survey practice to ask the full question on its first asking, then reword the question for additional people. However, the problem with this in its current design is that respondents forget the long list of options after they have heard them once (Childs et al., 2006). A flashcard (or series of shorter questions) may be a solution.

*Guideline 13. For closed questions (i.e., those with fixed categories), instruments in all modes should be designed and administered to expose respondents to the response categories, in the same order, and to present response categories with the question.*

This is the general problem found with this question. The list of response options are so long, it is difficult to administer it by an interviewer. See recommendations under Guideline 1 for this question.

*Guideline 17. Maintain the check box/radio button distinction in the Internet form. Use verbal instructions, which do not have to be the same across modes, to reinforce the use of check boxes for multiple responses.*

Instruct respondents on the Internet form to mark all that apply if it remains a mark-all-that-apply task.

*Guideline 26. If more than five response options are presented to the respondent, the question should, if possible, be adapted for interviewer administration (by use of a flashcard, a branching question or other adaptation).*

A respondent can only store four to five pieces of information while trying to process the survey question (see citations in Chapter 2 Guidelines). For this reason, if more than five response options are used in this question, a flashcard should be given or shown to the respondent for in-person interviews. Survey designers should beware that administering more than five response options over the phone may cause the respondent to have difficulty remembering all of them while processing the survey question.

### **Other Content Recommendations**

- Consider incorporating a reference period into the question.

### **Respondent's Name**

#### **Summary of Differences**

- Placement. Respondent name is not currently gathered on the 2000–2006 versions of the decennial mail-out form, although a version of the form that includes respondent name on the back page was tested in 2006 (Martin, 2006b). In 1990, respondent name was gathered on the back cover of the questionnaire. On paper, ACS collects respondent name on the front cover. In non proxy interviews, NRFU verifies respondent's name after gathering the roster. CFU and ACS gather the respondent's name in the beginning. CCM PI gathers the respondent's name first in a non proxy interview and at the end in a proxy interview. The U/E gathers respondent's name at the end.

#### **Issues**

The respondent's name is not necessarily the same as Person 1's name. In an interviewer-administered computer-assisted instrument in a non proxy interview, it is necessary to gather the respondent's name early to use the appropriate fills and to address the respondent as "you." On a paper form, the respondent's name is sometimes collected for follow-up, reinterview, or Quality Assurance (QA). However, on a paper form, if the respondent's name is gathered up front, the person may not then list him/herself on the roster (Gerber and Landreth, 2005).

## **Applying the Guidelines**

*Guideline 23. Extra questions (asked in some modes but not others) should, if possible, be asked after rather than before the core short-form questions, to avoid introducing order effects. When this is not possible, they should be carefully reviewed to ensure that they do not introduce new concepts, terms, or meanings that might influence answers to subsequent, core questions.*

Since respondent name is not a critical data item, it should be gathered where it is necessary and where it has the least negative impact on the data quality of other items in the questionnaire. Placement may vary by questionnaire.

## 4. Recommended Research

In developing these Guidelines, the Working Group noted the paucity of applicable mode effects literature. Accordingly, the following is the group's attempt to provide input into the creation of a research agenda. Some of the suggested research could be done now, using existing data; other research might be applicable for the 2010 Census Program for Evaluations and Experiment (CPEX) or be a separate testing effort in connection with the 2020 research agenda. Note that we are considering the Internet mode in scope for suggested research since methodological decisions on data collection for both decennial and ACS may change over time.

### **1. The Magnitude of Mode Effects for Questions of Different Types**

Much of the impetus for establishing guidelines for adapting survey instruments across modes comes from instances of substantial differences in data collected in different modes. One example is race distributions produced by Census 2000 and the ACS (Bennett and Griffin, 2002). Hispanics were much more likely to report themselves as Some Other Race in the census than in ACS. Taking into consideration the essential survey differences, the most likely causes identified were differences in interviewer behavior and mode. Yet, because respondents self-select into different modes, apparent differences in data obtained by different modes cannot unambiguously be attributed to the effects of mode, itself. By knowing how large mode effects are, and what kinds of questions are most vulnerable, we can focus our efforts accordingly.

- 1.1 Research is needed to investigate the magnitude of the effects of mode on responses to census questions. This would require a field experiment in which respondents were randomly assigned to different modes, rather than being allowed to choose their mode of response. The research should also be designed to assess mode effects for different types of questions including those with many versus few response categories, those with and without examples, those with and without auxiliary instructions, and those topics thought to be more susceptible to mode differences (e.g., race or ancestry). Note that the discussion of Guideline 1 provides additional information on mode effect research.
- 1.2 Research on this topic should also investigate whether questions adapted for administration in different modes do in fact produce comparable data. For example, a "mark all that apply" question is frequently turned into a series of "yes/no" questions when adapted from a self-administered mode to an interviewer-administered mode. Yet, the "mark all that apply" has been shown to produce fewer affirmative responses than a series of "yes/no" questions (Smyth et al., 2006). By experimentally evaluating the comparability of questions adapted for use in different modes, we can evaluate many of the guidelines we have developed.
- 1.3 Additionally, it may be useful to compare selected guidelines which we have recommended in this paper with the alternative recommendations that we had discussed. For example, research could focus on alternative wording for a simplified version of a question that is repeated for multiple household members (See Guideline 8). Is reading a

shortened version effective specifically for select questions, topic-based formats, and/or for certain situations (e.g., households with related members)? One evaluation possibility is comparisons across approaches and across modes to determine which lead to more consistent reporting of factual, demographic data.

## **2. Reading and Response Behavior in Self-Administered Modes**

Our efforts to develop guidelines for adapting questions, instructions, and response categories from the mail form to other modes are made more difficult because basic information is often lacking about how respondents use the information we provide on the paper questionnaire. Research on reading behavior and navigation in both mail and Internet questionnaires could help inform research to support better use of visual design principles to improve data quality, and make questionnaires more comparable across modes.

- 2.1 We lack basic information about how respondents use the roster instructions in the mail mode; we have limited information from cognitive interview results. It would be useful to know if respondents read the list of roster instructions, skim it, skip it, or refer back to it when they have questions.
- 2.2 We have some information that speaks to the effect of double-banking the Hispanic Origin item from the 2005 National Census Test, but the comparison is confounded by differing instructions, question wording, and response category wording. To investigate potential effects of double-banking on the self-administered paper, we may be able to compare the Census 2000 short-form race distribution (double-banked) to the long-form race distribution (single-banked) to see if the categories in the second column have a lower than expected level of reporting.<sup>5</sup> In addition to looking at existing data, a randomized experiment as part of the 2010 CPEX would provide a clean comparison. Since double-banking is likely a reality for certain items on the 2010 paper instrument due to space constraints, the proposed research and analysis would shed some light on whether corresponding Internet items would have comparable distributions, given that single-banking would be the preferred format in the absence of space restrictions.
- 2.3 Conduct research to evaluate the effect of shared write-ins on distributions and the quality of respondents' answers. This would include a comparison to the electronic modes where the write-in spaces were separated but each of the same length. Similarly, evaluation is needed in the area of response category formats (e.g., number of ancestry item write-in lines, which imparts to the respondent that multiple ancestries are acceptable).

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<sup>5</sup> Note that a limitation to this comparison is greater respondent self-selection to the paper long form compared to short form. The extent to which the comparison is compromised by this limitation also depends on the characteristics of the self selection and how they are correlated with the hypothesized drop in response for the "flush right" race categories. This issue requires further examination.

- 2.4 A specific aspect of response behavior that came up in our deliberations was the question of whether Internet respondents use the mail questionnaire as a guide to help them fill out the Internet version. If so, then the questionnaires need to be more closely similar than if respondents do not use it. A debriefing study with Internet respondents could shed useful information on their response processes.
- 2.5 More information is needed on how to provide help to respondents (for mail and Internet) and the content of the help we provide (for mail, Internet, and telephone questionnaire assistance). Within the 2005 National Census Test, the Internet experiment will provide data on how often the respondents clicked on hyperlinks that lead to help, which identifies the items that more frequently inspire the need for assistance. However, in Census 2000, customer surveys indicated that respondents who sought help on the Internet did not find what they were looking for (Stapleton and Irwin, 2002). Thus, research is needed to learn more about the kinds of questions respondents want answered, and the kind of information and level of detail they find helpful. Issues of how to increase respondent awareness and provide access to help also need research. We should also consider the results of removing the question guide from the ACS mail forms, which is being tested in the 2006 Content Test. In general, the research on how to provide help may yield gains in response accuracy, as well as customer satisfaction.
- 2.6 We recommend empirical research to determine a sufficient character length for each of the first name and last name fields on the household roster for the paper and Internet modes. Length for these fields varies from 12 to 15 characters. Research should focus on data from prior censuses or surveys where these fields were longer or unrestricted in length.
- 2.7 Additionally, experimentation with collecting more name information (middle name and suffix) on some or all forms should be conducted.<sup>6</sup> Matching and unduplication could be the assessment method (i.e., determine whether we could do a better job of unduplication and matching if we collect middle name and suffix). Some information currently exists that describes the high discriminating power of middle initials for identifying duplicate persons (Lynch, 2005). This would help us determine whether any benefit to matching and unduplication was worth the cost in space on the forms.
- 2.8 Research is needed to understand the literacy requirements posed by the decennial self-administered paper questionnaire. Specifically, we need to know more about the literacy demands made by this questionnaire in terms of prose, document, and quantitative literacy, as defined by the National Assessment of Adult Literacy.

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<sup>6</sup> The results of format changes in the 2005 National Census Test provide some beneficial results for spelling out and repositioning middle initial for Person 1, although results did not hold for Persons 2 through 6 (Martin, 2006a).

### **3. Memory and Response Behavior in Interviewer-Administered Modes**

We do not currently have information on how many response options necessitate a flashcard for interviewer-administered modes. What exists is based on some very basic memory research, which may, or may not, apply to surveys.

- 3.1 For our recommendation on when a flashcard is needed in interviewer-administered modes, we have used memory literature that suggests no more than four or five pieces of information can be processed in working memory concurrently. We have evidence from cognitive testing that eight is too many (e.g., Hunter, 2005), but we lack evidence on the number that is suitable for a survey environment. However, we have difficulty determining what defines a ‘piece’ or ‘chunk’ of information. Additional research should be conducted on this topic within a survey environment where respondents are given a question (e.g., the overcount question) or instruction (e.g., residence rules) and then given differing numbers of response options to test the limits of their memory. This research should also include different types of response categories such as the race item (as it is possible that if categories are more closely related, one can remember them more easily than if they are more distinct). Finally, the research should also focus on how different topics interact with the number of response options provided. For example, topics such as relationship, which might be easier to cognitively process than tenure because it is culturally based and more familiar, may be able to support a higher number of response categories. A possible research approach might be to ask respondents to paraphrase or recall the question/categories and measure omissions and distortions.
- 3.2 Additional research is needed with regard to the most effective way to design and administer flashcards. One suggestion is to include a facsimile of each self-administered question on a corresponding flashcard. Another suggestion includes providing a ‘flashcard packet’ to the respondent one time, rather than handing the respondent a succession of different flashcards. Also, we suggest collecting data on the effect of the interviewer reading the question while the respondent is trying to comprehend response categories. The audio cues may be a distraction rather than assisting the respondent.

### **4. Technological Advantages Within Electronic Modes and Comparability**

Electronic modes have advantages that could improve the quality of the response data such as automated, real-time, soft edits. However, the comparability of the data must be considered when paper modes do not have the same benefits.

#### **Pre filling Roster Last Names**

- 4.1 Pre filling household roster last name is an acceptable practice in automated instruments used by experienced interviewers. Pre-filling last name in the Internet self-administered instrument requires further research. We recommend research to look at the distribution of 2005 Internet households that have the same last name compared to the distributions

from 2005 Paper Control or the 2003 Internet, where such a question was not presented. This research could assist in our decision on allowing last name pre fills in the Internet instrument.

- 4.2 In addition, we discussed looking into alternate designs that would make it clearer to the respondent that changes may be made and/or designs that would still take advantage of the technology but would deter respondents from saying everyone had the same last name simply to save time. One potential design would be to eliminate the current same last name question but offer a ‘same as above’ checkbox option next to the last name box, for each household member (however, this may not be possible to implement without javascript.) An additional way of implementing this in the Internet and/or interviewer instruments used by inexperienced interviewers (e.g., NRFU) might be to fill the last name only if the interviewer/respondent begins typing the same last name as the previous person. Another implementation alternative is to use the down arrow to select an existing last name, which is the method used in the 2006 Census Test. Enumerator debriefings, which are conducted after the Test, should shed some light on the effectiveness of this method.

### **Question Order**

- 4.3 Our Guidelines recommend that the ordering of questions should be the same between modes unless there is empirical evidence to show data quality is improved in one mode by using a different order. We recommend research that investigates changing the order of sex, age, and relationship items across all modes with a real-time electronic edit with confirmation by the respondent of inconsistencies in automated modes. If different orders/groupings are tested in the electronic modes, we should also test how that order works in the paper self-administered mode.

In addition, we recommend researching the most effective placement of the tenure and undercount questions across modes.

### **Tenure**

- 4.4 In self-administered modes, this passive-voice question often has to be reread before it is understood. Initially it is often read as “Is this a house, apartment, or mobile home” or “in this house, apartment, or mobile home” (Hunter and DeMaio, 2004; Dillman et al., 2004). It also performs poorly in behavior coding (Hunter and Landreth, 2005) because the response options are so wordy that interviewers tend to rephrase or omit them. Tenure was asked with major changes in two-thirds of cases. We recommend developing a branching question for interviewer-administered modes (e.g., NRFU) along the lines suggested by Hunter and Landreth (2005), which is an alternative to implementing ACS version. This testing alternative would apply to both NRFU and ACS. Specifically, the question could have been worded differently to take advantage of the computer-administered mode by unfolding (i.e., creating a series of shorter questions with tailored

follow-up probes), as well as providing an opportunity to fill “house,” “apartment,” or “mobile home” electronically, thereby reducing clutter on the screen. Such a question could look like this (note that Dillman and Christian, 2005, had a very similar suggestion):

*Is this house owned by you or someone in the household?  
Yes - Is it owned with a mortgage or owned free and clear?  
No - Is it rented?*

In addition, we recommend developing and testing a shortened version for the paper questionnaire. This study could be conducted as part of the 2010 CPEX.

### **Review Screen, Real-time Edits, and Reconciliation Prompts**

- 4.5 Errors can come from the stylus on the handheld device, keying, and respondent information. In an effort to reduce these errors, research should focus on the effectiveness and implementation of review screens at the end of the interview, as well as real-time, instrument-generated caution flags. In cases where review screens or flags require that the interviewer gain more information from the respondent, research is needed on what questions to ask in order to reconcile potential inconsistencies without negatively affecting the interaction with the respondent (e.g., sensitivity issues related to direct probes).

## **5. Conceptual Changes to Items Across Modes**

Changes to an item’s underlying concept or consideration of alternative concepts, such as listing the respondent instead of the “householder” as the reference person (i.e., Person 1), may make data collection easier or more effective in some modes compared to others. However, the effect of the alternative must be tested across all modes to determine if a proposed conceptual difference substantially affects the resulting data from a particular mode.

### **Question Grouping**

- 5.1 We contend that the format design for an instrument (i.e, formatted in a person-based, topic-based, matrix, or other style) should be a decision that takes into account both the empirical performance within that mode and comparability across modes. In this vein, we recommend conducting research on matrix versus sequential question ordering in the self-enumeration paper mode, as well as various formats in the Internet application, with the actual questions (race, Hispanic origin, and ancestry) to be used in the 2010 census. We should have results in 2006 for the matrix format versus sequential question ordering on the ACS paper instrument. It should be noted that the 2005 Internet person- versus topic-based comparison used the shortened three-part Hispanic origin and race questions

(the 2003 test was the extended, two-part question, but was person-based) and findings may not easily apply if the format of the race question is changed.

## **Examples**

Examples are currently used in questions (and response categories) to illustrate for the respondent the kind of information being requested. While they may improve specificity of responses, they may lead to respondents' selecting the particular examples shown due to confusion. Additionally, they may be difficult for interviewers to administer properly. We are not aware of any systematic research comparing the effects of example use in different modes. That is the major reason that we propose only provisional guidelines for examples. The following are a list of topics that should be researched:

- 5.2 How do respondents process examples conceptually in different modes? Issues to be examined include how to best present examples to encourage their interpretation as a set of suggestions rather than a pick list, how the length and content of example sets affect their retention and comprehension by respondents in different modes, and whether examples are processed differently if attached to the question stem or the answer categories.
- 5.3 What is the best way to present examples visually? Are there differences in the way that respondents process examples in Internet, in paper questionnaires, and on flashcards? What design elements increase the likelihood that respondents will look at examples on paper and for Internet applications?
- 5.4 How can examples best be adapted for use by interviewers in person and on the telephone? Issues include what length a list of examples is manageable for interviewers to read, whether it is effective to read only a subset of the examples available on a flashcard, and whether data quality is affected positively or negatively by providing additional "read if necessary" examples.

## **Person 1 Instruction**

- 5.5 Currently, the instruction for whom to list as Person 1 causes confusion (and may cause coverage errors) on the mail-back form, and enumerators frequently ignore the instruction in nonresponse follow-up interviews. Correct identification of the householder is critical for obtaining accurate data about relationship. In addition, new methods must work well in different modes. In terms of mode consistency for decennial interviewer-administered modes, new methods should be tested in NRFU, and for self-administered modes as well.

Possible alternative solutions include instructing the respondent to list themselves first, improving the Person 1 instruction, developing new procedures in one or more modes, or

revising the concept. Research is needed in this area beyond the 2010 census starting with the 2010 CPEX.

Previous research supports the need to test the concept of instructing the respondents to list themselves as Person 1. Conrad and Couper (2004) state that the instructions for who to list as Person 1 are “fairly unclear.” They recommend, for the mail form, starting with the person who has provided answers to the initial questions. In addition, Hunter and Landreth (2005) state that behavior coding results from 2004 Census Test NRFU indicate that a good portion of enumerators asked the respondent to start with him or herself, regardless of the Person 1 instructions. Finally, Dillman feels that a lot of complexity has to do with “having to work around starting with someone other than the person who fills out the form.” Respondent confusion is evidenced by cognitive testing results (Parsons et al., 2005).

The concept of asking the non proxy respondents to list themselves as Person 1 rather than the householder for all decennial data collection modes is challenging. This concept may work well in the interviewer-administered modes but needs to be assessed across all modes. Currently, the ACS CATI and CAPI take the respondent as Person 1 and assign the ‘reference’ person based on the householder question.

In addition to the potential for simplifying data collection, evaluations of census data collection and coverage would benefit by more confidence with the assumption that Person 1 is the respondent.

The major concern for how this change would affect historical comparability is focused on the relationship question. One research study, which examined the 1990 census paper returns, found that the respondent or spouse was Person 1 in the vast majority of cases, which may imply that the relationship data would not be substantially affected (Sweet, 1994). Further, if we instructed the respondent to be first, we may have fewer errors in the relationship question for cases where the householder does not equal the respondent. The impact of this change on relationship data would require experimental evaluation; implementation of this conceptual change would require extensive research.

## **Relationship**

- 5.6 For the relationship item, there is evidence that we may incur more error with the “Yes, Related/No, Not Related” branching question. However, we have no evidence that the branching question helps respondents choose the appropriate relationship category given the relatively long list of relationship response categories (i.e., currently 15 categories for the decennial form). Presumably, the branching was used to alleviate problems with the long response list in non visual modes. We recommend testing methods of helping the respondent choose the appropriate category in various modes.

5.7 An additional area of research includes a study to reduce relationship reversal errors and other problems associated with the perspective of the reference person. Several problems were identified with the relationship data collected using the handheld computers during the NRFU interview in the 2004 Census Test. For instance, 6.2 percent of the NRFU households with nonmissing relationship data contained more than two parents.<sup>7</sup> Another relationship problem existed in the 2004 NRFU data. When the reference person reported another individual as a "parent," 63.6 percent of the time, the parent's age was more than 10 years younger than the "child" reference person. When examining this apparent misclassification in the other direction, that is, for reference persons reporting an older individual as a "child," the misclassification was lower.<sup>8</sup> In addition to the cases with a 10-year age difference, the 2004 NRFU also had a substantially higher rate of children within 10 years of the reference person parent's age and a higher rate of parents within 10 years of the reference person child's age. We recommend conducting research on interviewer administration of the relationship question with automated instruments. Because these problems also existed to a lesser degree in the 2000 A.C.E. P-sample (laptop administered), this suggests a problem with interviewer administration of the relationship question and mode effects of the handheld versus laptop (Love and Byrne, 2005). Note that question design is also a factor in problems associated with the perspective of the reference person.

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<sup>7</sup> In the 2000 A.C.E. P-Sample, 1.0 percent of households contained more than 2 parents and in the 2000 A.C.E. Census E-Sample, 0.7 percent of households reported more than two parents.

<sup>8</sup> In the 2004 NRFU, 7.2 percent of the children were more than 10 years older than the reference person parent.

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## Appendix: Questionnaire Facsimiles

This appendix contains the questionnaire facsimiles that comprised the basis of the group's work. It contains a separate section for each of the following content areas:

- Population Count Question
- Undercount Coverage Question
- Tenure Question
- Telephone Number Question
- Person 1 instructions/Name Question
- Relationship Question
- Sex Question
- Age and Date of Birth Question
- Hispanic Origin Question
- Race Question
- Overcount Coverage Question

The questionnaires for which question facsimiles are presented include the following:

- 2006 Census Test mail-out/mail-back paper form (2006 MO/MB)
- 2006 Census Test Update/Enumerate paper form (2006 U/E)
- 2006 Census Test Update/Enumerate Reinterview paper form (2006 U/E Reinterview)
- 2006 Census Test Nonresponse Follow-up Handheld Computer instrument (2006 NRFU)
- 2006 Group Quarters Individual Census Report (2006 GQ ICR)
- 2005 NCT topic-based and person-based Internet applications (2005 Internet)
- 2000 Census mail-out/mail-back paper form (2000 MO/MB)
- 2000 Update/Enumerate paper form (2006 U/E)
- 2000 Be Counted paper form (2000 Be Counted)
- 2000 Accuracy and Coverage Evaluation paper questionnaire (2000 ACS)
- 2004 Census Test Nonresponse Follow-up Handheld Computer instrument (2004 NRFU)
- 2005 ACS mail-out/mail-back paper questionnaire (2005 ACS paper)
- 2005 ACS Computer-Assisted Telephone Interviewing instrument (2005 ACS CATI)
- 2005 ACS Computer-Assisted Personal Interviewing instrument (2005 ACS CAPI)
- 2006 ACS mail-out/mail-back paper questionnaire (2006 ACS paper)
- 2006 ACS Computer-Assisted Telephone Interviewing instrument (2006 ACS CATI)
- 2006 ACS Computer-Assisted Personal Interviewing instrument (2006 ACS CAPI)
- 2006 Census Coverage Measurement Person Interview Computer-Assisted Personal Interviewing Instrument (2006 CCM PI )
- 2005 National Census Test DC-1A—Dress Rehearsal presumed content paper form (DR presumed content)

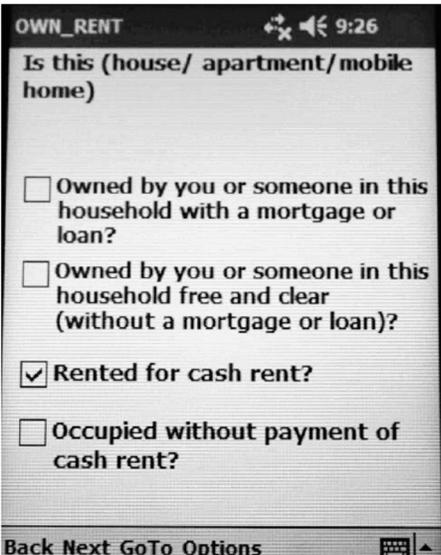
Instrument	Pop count Question
2006 MO/MB	<p style="text-align: center;"><b>Start here</b></p> <p>Please use a blue or black pen.</p> <p>Before you answer Question 1, count the people living in this house, apartment, or mobile home using our guidelines.</p> <ul style="list-style-type: none"> <li>• We want to count people where they usually live and sleep.</li> <li>• For people with more than one place to live, this is the place where they sleep most of the time.</li> </ul> <p><b>EXCLUDE these people</b> (They will be counted at the other place):</p> <ul style="list-style-type: none"> <li>• College students who live away from this address most of the year</li> <li>• Armed Forces personnel who live away</li> <li>• People who, on April 1, 2006, were in a: <ul style="list-style-type: none"> <li>– Nursing home, mental hospital, etc.</li> <li>– Jail, prison, detention facility, etc.</li> </ul> </li> </ul> <p><b>INCLUDE these people:</b></p> <ul style="list-style-type: none"> <li>• Babies and children living here, including foster children</li> <li>• Roommates or boarders</li> <li>• People staying here on April 1, 2006 who have no other permanent place to live</li> </ul> <p><b>1. How many people were living or staying in this house, apartment, or mobile home on April 1, 2006?</b></p> <p>Number of people = <input type="text"/> <input type="text"/></p>
2006 U/E	<p style="text-align: center;"><i>Census Day household.</i></p> <p><b>S5. Before you answer the next question, please refer to this card. (Hand Residence Rules Flashcard to respondent.)</b></p> <ul style="list-style-type: none"> <li>• We want to count people where they usually live and sleep.</li> <li>• For people with more than one place to live, this is the place where they sleep most of the time.</li> </ul> <p>How many people were living or staying in this (house/apartment/mobile home) on April 1, 2006?</p> <p><input type="text"/> <input type="text"/> Number of people</p>
2006 U/E Reinterview	<p><b>S6. Before you answer the next question, please refer to this card. (Hand Residence Rules Flashcard to respondent.)</b></p> <ul style="list-style-type: none"> <li>• We want to count people where they usually live and sleep.</li> <li>• For people with more than one place to live, this is the place where they sleep most of the time.</li> </ul> <p>How many people were living or staying in (this/that) (house/apartment/mobile home) on April 1, 2006?</p> <p><input type="text"/> <input type="text"/> Number of people</p>
2006 GQ ICR	N/A

2006 NRFU	
2006 CCM PI	N/A
2005 Internet	
2000 Be Counted	<p>Are you filling out this form for ALL of the people who were living or staying at this address on April 1, 2000?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If other people who live at this place were not counted, please answer the questions on the next page(s) for each of them. Include family members, nonrelatives, or anyone else who lives here most of the time. Do not include people living away at college, in the Armed Forces, or in a nursing home, correctional facility, or other institution.</p>
2005 ACS paper	<p><b>READ THESE INSTRUCTIONS FIRST</b></p> <p>Please fill out this form as soon as possible after receiving it in the mail.</p> <ul style="list-style-type: none"> <li>• <b>LIST</b> everyone who is living or staying here for more than 2 months.</li> <li>• <b>LIST</b> anyone else staying here who does not have another usual place to stay.</li> <li>• <b>DO NOT LIST</b> anyone who is living somewhere else for more than 2 months, such as a <u>college student</u> living away.</li> </ul> <p>If this place is a <b>vacation home</b> or a <b>temporary residence</b> where no one in this household stays for more than 2 months, do not list any names in the List of Residents. <b>Complete only pages 4, 5, and 6 and return the form.</b></p> <p>How many people are living or staying at this address?</p> <p>Number of people</p> <p>Please turn to the next page to continue.</p>

<p>2005 ACS CAPI/CATI</p>	<p>American Community Survey - Puerto Rico Community Survey ver 2.26</p> <p>Forms Answer Navigate Options Help</p> <p>Main Path ADDR HHRos FAQ Exit</p> <p>I am going to be asking some questions about everyone who is living or staying at this address. First let's create a list of the people, starting with you. What is your name?</p> <ul style="list-style-type: none"> <li>• Enter first name. If there are no additional people to list, enter 999 to continue.</li> </ul>		
<p>2006 Test Flash Card</p>	<p style="text-align: center;"><b>WHO TO COUNT</b></p> <ul style="list-style-type: none"> <li>• We want to count people <u>where they usually live and sleep</u>.</li> <li>• For people with more than one place to live, this is the place where they sleep most of the time.</li> </ul> <table border="0"> <tr> <td style="vertical-align: top;"> <p><b>EXCLUDE these people</b> (They will be counted at the other place):</p> <ul style="list-style-type: none"> <li>• College students who live away from this address most of the year</li> <li>• Armed Forces personnel who live away</li> <li>• People who, on April 1, 2006, were in a: <ul style="list-style-type: none"> <li>- Nursing home, mental hospital, etc.</li> <li>- Jail, prison, detention facility, etc.</li> </ul> </li> </ul> </td> <td style="vertical-align: top;"> <p><b>INCLUDE these people:</b></p> <ul style="list-style-type: none"> <li>• Babies and children living here, including foster children</li> <li>• Roommates or boarders</li> <li>• People staying here on April 1, 2006 who have no other permanent place to live</li> </ul> </td> </tr> </table> <p style="text-align: center;"><b>RESIDENCE RULES</b></p>	<p><b>EXCLUDE these people</b> (They will be counted at the other place):</p> <ul style="list-style-type: none"> <li>• College students who live away from this address most of the year</li> <li>• Armed Forces personnel who live away</li> <li>• People who, on April 1, 2006, were in a: <ul style="list-style-type: none"> <li>- Nursing home, mental hospital, etc.</li> <li>- Jail, prison, detention facility, etc.</li> </ul> </li> </ul>	<p><b>INCLUDE these people:</b></p> <ul style="list-style-type: none"> <li>• Babies and children living here, including foster children</li> <li>• Roommates or boarders</li> <li>• People staying here on April 1, 2006 who have no other permanent place to live</li> </ul>
<p><b>EXCLUDE these people</b> (They will be counted at the other place):</p> <ul style="list-style-type: none"> <li>• College students who live away from this address most of the year</li> <li>• Armed Forces personnel who live away</li> <li>• People who, on April 1, 2006, were in a: <ul style="list-style-type: none"> <li>- Nursing home, mental hospital, etc.</li> <li>- Jail, prison, detention facility, etc.</li> </ul> </li> </ul>	<p><b>INCLUDE these people:</b></p> <ul style="list-style-type: none"> <li>• Babies and children living here, including foster children</li> <li>• Roommates or boarders</li> <li>• People staying here on April 1, 2006 who have no other permanent place to live</li> </ul>		

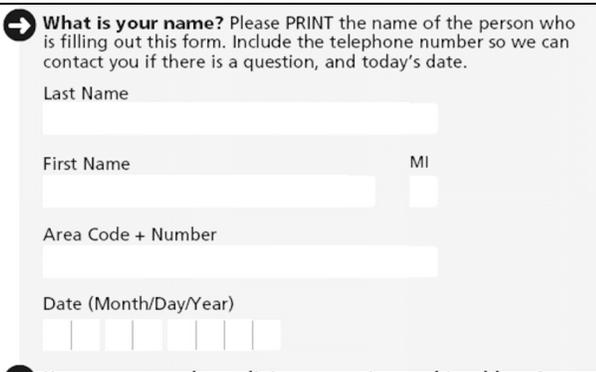
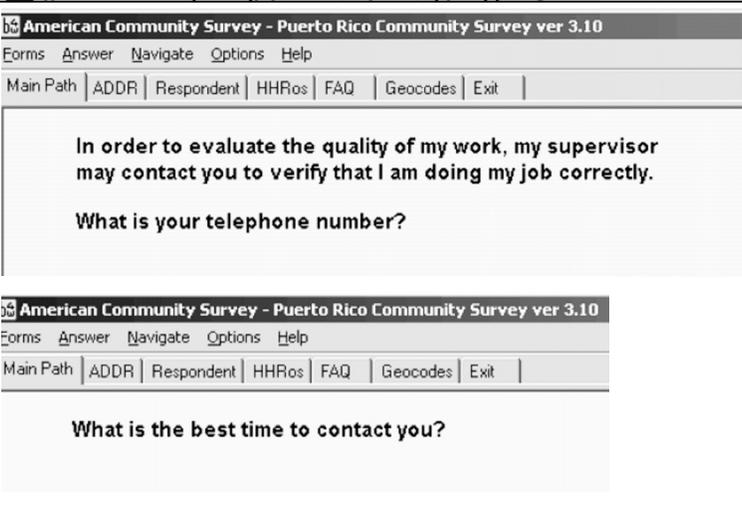
Instrument	Undercount Coverage question
2006 MO/MB	<p><b>2. Were there any additional people staying here April 1, 2006 that you did not include in Question 1?</b>  Mark <input checked="" type="checkbox"/> all that apply.</p> <p><input type="checkbox"/> Children, such as newborn babies or foster children  <input type="checkbox"/> Relatives, such as adult children, cousins, or in-laws  <input type="checkbox"/> Nonrelatives, such as roommates or live-in baby sitters  <input type="checkbox"/> People staying here temporarily  <input type="checkbox"/> No additional people</p>
2006 U/E	<p style="text-align: center;"><b>COVERAGE</b></p> <p><b>C1. We do not want to miss any people who might have been staying here on April 1, 2006. Were there any additional people staying here that you did not include, for example:</b></p> <p>Children, such as newborn babies or foster children? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Relatives, such as adult children, cousins, or in-laws? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Nonrelatives, such as roommates or live-in baby sitters? . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Other individuals or families staying here? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  People staying here temporarily? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
2006 U/E Reinterview	<p style="text-align: center;"><b>COVERAGE</b></p> <p><b>C1. We do not want to miss any people who might have been staying here on April 1, 2006. Were there any additional people staying here that you did not include, for example:</b></p> <p>Children, such as newborn babies or foster children? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Relatives, such as adult children, cousins, or in-laws? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Nonrelatives, such as roommates or live-in baby sitters? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  Other individuals or families staying here? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No  People staying here temporarily? . . . . . <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
2006 GQ ICR	N/A
2006 NRFU	 <p style="text-align: center;"><b>Not Listed</b></p>
2006 CCM PI	N/A

<p>2005 Internet</p>	<p><b>?</b> Were there any additional people staying here September 15, 2005 that you did NOT include in the question above?</p> <p><input type="radio"/> No <input type="radio"/> Yes</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Children, such as newborn babies or foster children</li> <li><input type="checkbox"/> Relatives, such as adult children, cousins, or in-laws</li> <li><input type="checkbox"/> Nonrelatives, such as roommates or live-in baby sitters</li> <li><input type="checkbox"/> People staying here temporarily</li> </ul>
<p>2000 Be Counted</p>	<p><b>!</b> Are you filling out this form for ALL of the people who were living or staying at this address on April 1, 2000?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>→</b> If other people who live at this place were not counted, please answer the questions on the next page(s) for each of them. Include family members, nonrelatives, or anyone else who lives here most of the time. Do not include people living away at college, in the Armed Forces, or in a nursing home, correctional facility, or other institution.</p>
<p>2005 ACS Paper</p>	<p><b>25</b> a. Do you or any member of this household live or stay at this address year round?</p> <p><input type="checkbox"/> Yes → SKIP to the questions for Person 1 on the next page</p> <p><input type="checkbox"/> No</p> <p>b. How many months a year do members of this household stay at this address?</p> <p>Months</p> <p><input type="text"/> <input type="text"/></p> <p>c. What is the main reason members of this household are staying at this address?</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> This is their permanent address</li> <li><input type="checkbox"/> This is their seasonal or vacation address</li> <li><input type="checkbox"/> To be close to work</li> <li><input type="checkbox"/> To attend school or college</li> <li><input type="checkbox"/> Looking for permanent housing</li> <li><input type="checkbox"/> Other reason(s)– Specify <input type="text"/></li> </ul>
<p>2005 ACS CAPI/CATI</p>	<p>American Community Survey - Puerto Rico Community Survey ver 2.26</p> <p>Forms Answer Navigate Options Help</p> <p>Main Path   ADDR   HHRos   FAQ   Exit  </p> <p><b>The following questions are to make sure this list is as complete as possible... Does anyone else live or stay here, such as roommates, foster children, boarders, or live-in employees?</b></p> <ul style="list-style-type: none"> <li>♦ Enter first name. If there are no additional people to list, enter 999 to continue.</li> </ul> <p>American Community Survey - Puerto Rico Community Survey ver 2.26</p> <p>Forms Answer Navigate Options Help</p> <p>Main Path   ADDR   HHRos   FAQ   Exit  </p> <p><b>Is there anyone else staying here even for a short time, such as a friend or relative?</b></p> <ul style="list-style-type: none"> <li>♦ Do not include overnight or weekend guests who have a residence somewhere else.</li> <li>♦ Enter first name. If there are no additional people to list, enter 999 to continue.</li> </ul>

Instrument	Tenure Question
2006 MO/MB	<p><b>3. Is this house, apartment, or mobile home —</b>  <i>Mark <input checked="" type="checkbox"/> ONE box.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan?</li> <li><input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage or loan)?</li> <li><input type="checkbox"/> Rented for cash rent?</li> <li><input type="checkbox"/> Occupied without payment of cash rent?</li> </ul>
2006 U/E	<p style="text-align: right;"><b>HOUSING</b></p> <p><b>H1. Is this (house/apartment/mobile home) –</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan,</li> <li><input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage or loan),</li> <li><input type="checkbox"/> Rented for cash rent, or</li> <li><input type="checkbox"/> Occupied without payment of cash rent?</li> </ul>
2006 U/E Reinterview	<p style="text-align: right;"><b>HOUSING</b></p> <p><b>H1. Is this (house/apartment/mobile home) –</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan,</li> <li><input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage or loan),</li> <li><input type="checkbox"/> Rented for cash rent, or</li> <li><input type="checkbox"/> Occupied without payment of cash rent?</li> </ul>
2006 GQ ICR	N/A
2006 NRFU	

<p>2006 CCM PI</p>	<p>? [F1]</p> <p><b>Is this (house/apartment/mobile home)</b>  <b>Owned by you or someone in this household with a mortgage or loan?</b>  <b>Owned by you or someone in this household free and clear (without a mortgage or loan)?</b>  <b>Rented for cash rent?</b>  <b>Occupied without payment of cash rent?</b></p> <ul style="list-style-type: none"> <li>• Include home equity loans as owned with a mortgage or loan</li> <li>• Ctrl+D for Don't Know or Ctrl+R for Refused</li> </ul> <p>1. Owned by you or someone in this household with a mortgage or loan  2. Owned by you or someone in this household free and clear (without a mortgage or loan)  3. Rented for cash rent  4. Occupied without payment of cash rent</p>
<p>2005 Internet</p>	<p>? <b>Is this house, apartment, or mobile home –</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Owned by you or someone in this household with a mortgage or loan?</li> <li><input type="radio"/> Owned by you or someone in this household free and clear (without a mortgage or loan)?</li> <li><input type="radio"/> Rented for cash rent?</li> <li><input type="radio"/> Occupied without payment of cash rent?</li> </ul>
<p>2000 Be Counted</p>	<p>10 <b>Is this house, apartment, or mobile home — Mark <input checked="" type="checkbox"/> ONE box.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan?</li> <li><input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage or loan)?</li> <li><input type="checkbox"/> Rented for cash rent?</li> <li><input type="checkbox"/> Occupied without payment of cash rent?</li> </ul>
<p>2005 ACS paper</p>	<p>17 <b>Is this house, apartment, or mobile home –</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Owned by you or someone in this household with a mortgage or loan?</li> <li><input type="checkbox"/> Owned by you or someone in this household free and clear (without a mortgage or loan)?</li> <li><input type="checkbox"/> Rented for cash rent?</li> <li><input type="checkbox"/> Occupied without payment of cash rent? → SKIP to G</li> </ul>
<p>2005 ACS CAPI/CATI</p>	<p>American Community Survey - Puerto Rico Community Survey ver 2.29</p> <p>Forms Answer Navigate Options Help</p> <p>Main Path ADDR   Respondent   HHRos   FAQ   Exit  </p> <p>? [F1]</p> <p><b>Do you or someone in this household own this house with a mortgage or loan, own it free and clear, rent it, or occupy it without having to pay rent?</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> 1. Owned by someone in this household with a mortgage or loan</li> <li><input type="radio"/> 2. Owned by someone in this household free and clear (without a mortgage)</li> <li><input type="radio"/> 3. Rented for cash rent</li> <li><input type="radio"/> 4. Occupied without payment of cash rent</li> </ul>

Instrument	Telephone Number Question
2006 MO/MB	<p><b>4. What is your telephone number?</b> <i>We may call if we don't understand an answer.</i></p> <p>Area Code + Number</p> <p><input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/></p>
2006 U/E	<p><b>R2. In case we need to contact you, what is your telephone number and the best time to call?</b></p> <p>Area code    Phone number</p> <p><input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/></p> <p><input type="checkbox"/> Day   <input type="checkbox"/> Evening   <input type="checkbox"/> Either</p>
2006 U/E Reinterview	<p><b>R2. In case we need to contact you, what is your telephone number and the best time to call?</b></p> <p>Area code    Phone number</p> <p><input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/></p> <p><input type="checkbox"/> Day   <input type="checkbox"/> Evening   <input type="checkbox"/> Either</p>
2006 GQ ICR	n/a
2006 NRFU	<div style="display: flex; justify-content: space-around;"> <div data-bbox="472 856 906 1409"> <p><b>PHONE_RESP</b> 9:32</p> <p><b>In case we need to contact you again, may I please have your telephone number?</b></p> <p>Enumerator: you may verify the number if it is already filled in below.</p> <p>(<input type="text"/>) <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Phone Number (area code first) (Allow 3) Allow 3-Allow 4</p> <p><input checked="" type="checkbox"/> No Phone</p> <p>Back Next GoTo Options</p> </div> <div data-bbox="938 856 1372 1409"> <p><b>BEST_TIME</b> 9:32</p> <p><b>What is the best time to reach you?</b></p> <p><input type="checkbox"/> Day</p> <p><input type="checkbox"/> Evening</p> <p><input checked="" type="checkbox"/> Either</p> <p>Back Next GoTo Options</p> </div> </div>
2006 CCM PI	<p><b>In case we need to contact you again, may I please have your telephone number?</b></p> <p><b>In case we need to contact you again, what is the best time to reach you?</b></p>
2005 Internet	<p><b>? What is Person 1's telephone number?</b></p> <p>Area Code + Number</p> <p>(<input type="text"/>) - <input type="text"/> - <input type="text"/></p>
2000 Be Counted	<p><b>5 What is Person 1's telephone number?</b> <i>We may call this person if we don't understand an answer.</i></p> <p>Area Code + Number</p> <p><input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/></p>

2005ACS paper	 <p><b>What is your name?</b> Please PRINT the name of the person who is filling out this form. Include the telephone number so we can contact you if there is a question, and today's date.</p> <p>Last Name <input type="text"/></p> <p>First Name <input type="text"/> MI <input type="text"/></p> <p>Area Code + Number <input type="text"/></p> <p>Date (Month/Day/Year) <input type="text"/></p>
2005 ACS CAPI	 <p><b>American Community Survey - Puerto Rico Community Survey ver 3.10</b> Forms Answer Navigate Options Help Main Path   ADDR   Respondent   HHRos   FAQ   Geocodes   Exit</p> <p><b>In order to evaluate the quality of my work, my supervisor may contact you to verify that I am doing my job correctly.</b></p> <p><b>What is your telephone number?</b></p> <hr/> <p><b>American Community Survey - Puerto Rico Community Survey ver 3.10</b> Forms Answer Navigate Options Help Main Path   ADDR   Respondent   HHRos   FAQ   Geocodes   Exit</p> <p><b>What is the best time to contact you?</b></p>
2005 ACS CATI	N/A

Instrument	Person 1 instructions/Name Question
2006 MO/MB	<p>5. Next, if an owner or renter of this house or apartment lives here, print the person's name below. If an owner or renter does not live here, print the name of any adult living here. This is Person 1. (On the next page, we will ask about the other people you counted in Question 1.)</p> <p>What is Person 1's name? Print name below.</p> <p>Last Name <input type="text"/></p> <p>First Name <input type="text"/> MI <input type="text"/></p>
2006 U/E	<p>1. I have a few questions about each of the people who lived or stayed here on April 1, 2006, starting with their names. If an owner or renter of this (house/apartment/mobile home) lives here, can I have that person's name first? If an owner or renter does not live here, print the name of any adult living here.</p> <p><b>Person 1</b></p> <p>Last Name <input type="text"/></p> <p>First Name <input type="text"/> MI <input type="text"/></p>
2006 U/E Reinterview	<p>1. I have a few questions about each of the people who lived or stayed here on April 1, 2006, starting with their names. If an owner or renter of this (house/apartment/mobile home) lives here, can I have that person's name first. If an owner or renter does not live here, print the name of any adult living here.</p> <p><b>Person 1</b></p> <p>Last Name <input type="text"/></p> <p>First Name <input type="text"/> MI <input type="text"/></p>
2006 GQ ICR	<p>1. What is your name?</p> <p>Last Name <input type="text"/></p> <p>First Name <input type="text"/> MI <input type="text"/></p>

<p>2006 NRFU</p>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p style="text-align: center;">NAME_LIST_1 <span style="float: right;">9:22</span></p> <p><b>What is the name of each person who lived or stayed at this (house/apartment/mobile home) on April 1, 2006?</b></p> <p><b>Start with the name of one person who owned or rented this (house/apartment/mobile home).</b></p> <p><input checked="" type="checkbox"/> Continue</p> <p style="text-align: center;">Back Next GoTo Options</p> </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p style="text-align: center;">NAME_LIST_2(1) <span style="float: right;">9:24</span></p> <p>First Name <input type="text" value="TONY"/></p> <p>Middle Initial <input type="text" value="Y"/></p> <p>Last Name <input type="text" value="DANZA"/></p> <p>Anyone else? <input type="text"/></p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know <b>THIS</b> person's name.</p> <p><input type="checkbox"/> Refused <b>THIS</b> person's name.</p> <p><input type="checkbox"/> Don't know <b>ANY</b> (more) names.</p> <p><input type="checkbox"/> Refused <b>ALL</b> (additional) names.</p> <p style="text-align: center;">Back Next GoTo Options</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <p><b>Name 1</b></p> <p><b>Name 1 (2)</b></p> </div>
<p>2006 CCM PI</p>	<p>We'll start by making a list of people. We want to include people who live here all the time and people who stay here often, even if you don't think of them as members of your household. First, please tell me the names of everyone who lives here now. Let's start with you. What is your name? Anyone else?</p> <hr/> <p><b>What is the name of the person or one of the persons who &lt;owns/rents&gt; &lt;this/that&gt; home?</b></p>

2005  
Internet

**Both:**

name | sex/date of birth/age | origin | race | ancestry | residence

? If an owner or renter of this house or apartment lives here, enter the person's name below. If an owner or renter does not live here, enter the name of any adult living here. This is Person 1. What is Person 1's name?

First Name MI Last Name

\_\_\_\_\_ | | \_\_\_\_\_

? Does everyone in this household have the same last name?

Yes  
 No

topic

Household Names Relationship Sex/Date of Birth/Age Origin Race Ancestry Residence Review/Submit

? What is the name of each person living or staying in this house, apartment or mobile home?

	First Name	MI	Last Name
Person 1	_____		_____
Person 2	_____		_____
Person 3	_____		_____
Person 4	_____		_____

person

? What is Person 2's name?

First Name MI Last Name

\_\_\_\_\_ | \_\_\_\_\_

2000 Be  
Counted

**Start Here** PROCESSES CANNOT BE ACCEPTED.

Please use a black or blue pen.

1 Please fill out this form if you – or people who live with you – have not been counted in the United States Census 2000. If your whole household was not counted, start with the name of a person who owns, is buying, or rents this house or apartment. Otherwise, start with yourself or a person living with you who was not counted. We will refer to this person as Person 1.

2 What is this person's name? Print name below.

Last Name

\_\_\_\_\_

First Name MI

\_\_\_\_\_ | \_\_\_\_\_

3 What is this person's mailing address? This should be the place where this

2005ACS  
paper

**Person 1**

Last Name (Please print)

\_\_\_\_\_

First Name MI

\_\_\_\_\_ | \_\_\_\_\_

2005 ACS  
CAPI/CATI

American Community Survey – Puerto Rico Community Survey ver 2.26

Forms Answer Navigate Options Help

Main Path ADDR | HHRos | FAQ | Exit

I am going to be asking some questions about everyone who is living or staying at this address. First let's create a list of the people, starting with you. What is your name?

- Enter first name. If there are no additional people to list, enter 999 to continue.

Instrument	Relationship Question																
2006 MO/MB	<p><b>2. How is this person related to Person 1? Mark <input checked="" type="checkbox"/> ONE box.</b></p> <table border="0"> <tr> <td><input type="checkbox"/> Husband or wife</td> <td><input type="checkbox"/> Son-in-law or daughter-in-law</td> </tr> <tr> <td><input type="checkbox"/> Biological son or daughter</td> <td><input type="checkbox"/> Other relative</td> </tr> <tr> <td><input type="checkbox"/> Adopted son or daughter</td> <td><input type="checkbox"/> Roomer or boarder</td> </tr> <tr> <td><input type="checkbox"/> Stepson or stepdaughter</td> <td><input type="checkbox"/> Housemate or roommate</td> </tr> <tr> <td><input type="checkbox"/> Brother or sister</td> <td><input type="checkbox"/> Unmarried partner</td> </tr> <tr> <td><input type="checkbox"/> Father or mother</td> <td><input type="checkbox"/> Foster child or foster adult</td> </tr> <tr> <td><input type="checkbox"/> Grandchild</td> <td><input type="checkbox"/> Other nonrelative</td> </tr> <tr> <td><input type="checkbox"/> Parent-in-law</td> <td></td> </tr> </table>	<input type="checkbox"/> Husband or wife	<input type="checkbox"/> Son-in-law or daughter-in-law	<input type="checkbox"/> Biological son or daughter	<input type="checkbox"/> Other relative	<input type="checkbox"/> Adopted son or daughter	<input type="checkbox"/> Roomer or boarder	<input type="checkbox"/> Stepson or stepdaughter	<input type="checkbox"/> Housemate or roommate	<input type="checkbox"/> Brother or sister	<input type="checkbox"/> Unmarried partner	<input type="checkbox"/> Father or mother	<input type="checkbox"/> Foster child or foster adult	<input type="checkbox"/> Grandchild	<input type="checkbox"/> Other nonrelative	<input type="checkbox"/> Parent-in-law	
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2006 U/E	<p><i>Items 2 through 8, prompt respondent with names if needed</i></p> <p><b>2. How is each person related to (Read name of Person 1)?</b></p> <p>Show Card A, Relationship.</p> <p>Mark <input checked="" type="checkbox"/> ONE box.</p> <table border="0"> <tr> <td><input type="checkbox"/> Husband or wife</td> <td><input type="checkbox"/> Son-in-law or daughter-in-law</td> </tr> <tr> <td><input type="checkbox"/> Biological son or daughter</td> <td><input type="checkbox"/> Other relative</td> </tr> <tr> <td><input type="checkbox"/> Adopted son or daughter</td> <td><input type="checkbox"/> Roomer or boarder</td> </tr> <tr> <td><input type="checkbox"/> Stepson or stepdaughter</td> <td><input type="checkbox"/> Housemate or roommate</td> </tr> <tr> <td><input type="checkbox"/> Brother or sister</td> <td><input type="checkbox"/> Unmarried partner</td> </tr> <tr> <td><input type="checkbox"/> Father or mother</td> <td><input type="checkbox"/> Foster child or foster adult</td> </tr> <tr> <td><input type="checkbox"/> Grandchild</td> <td><input type="checkbox"/> Other nonrelative</td> </tr> <tr> <td><input type="checkbox"/> Parent-in-law</td> <td></td> </tr> </table>	<input type="checkbox"/> Husband or wife	<input type="checkbox"/> Son-in-law or daughter-in-law	<input type="checkbox"/> Biological son or daughter	<input type="checkbox"/> Other relative	<input type="checkbox"/> Adopted son or daughter	<input type="checkbox"/> Roomer or boarder	<input type="checkbox"/> Stepson or stepdaughter	<input type="checkbox"/> Housemate or roommate	<input type="checkbox"/> Brother or sister	<input type="checkbox"/> Unmarried partner	<input type="checkbox"/> Father or mother	<input type="checkbox"/> Foster child or foster adult	<input type="checkbox"/> Grandchild	<input type="checkbox"/> Other nonrelative	<input type="checkbox"/> Parent-in-law	
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<input type="checkbox"/> Grandchild	<input type="checkbox"/> Other nonrelative																
<input type="checkbox"/> Parent-in-law																	
2006 GQ ICR	N/A																

2006  
NRFU

### Yes, related

RELATION(2)	RELATION(2)	RELATION(2)
<a href="#">More &gt;&gt;</a>	<a href="#">&lt;&lt;</a> <a href="#">More &gt;&gt;</a>	<a href="#">&lt;&lt;</a> <a href="#">More &gt;&gt;</a>
<i>Show respondent Card A, Relationship</i>	Read selections aloud if necessary	
<b>Is WANDER SMITHERSON related to you?</b>	<b>Which one of these categories best describes how WANDER SMITHERSON is related to you?</b>	<input type="checkbox"/> Husband or wife
<input checked="" type="checkbox"/> Yes, Related	<input checked="" type="checkbox"/> Go to the answers panel	<input type="checkbox"/> Biological son or daughter
<input type="checkbox"/> No, Not Related		<input type="checkbox"/> Adopted son or daughter
		<input type="checkbox"/> Stepson or stepdaughter
		<input type="checkbox"/> Brother or sister
		<input type="checkbox"/> Father or mother
		<input type="checkbox"/> Grandchild
		<input type="checkbox"/> Parent-in-law
		<input type="checkbox"/> Son-in-law or daughter-in-law
		<input type="checkbox"/> Other relative
<b>Back</b> <a href="#">Next</a> <a href="#">GoTo</a> <a href="#">Options</a>	<b>Back</b> <a href="#">Next</a> <a href="#">GoTo</a> <a href="#">Options</a>	<b>Back</b> <a href="#">Next</a> <a href="#">GoTo</a> <a href="#">Options</a>

### No, not related

RELATION(2)
<a href="#">&lt;&lt;</a> <a href="#">More &gt;&gt;</a>
Read selections aloud if necessary
<b>Which one of these categories best describes WANDER SMITHERSON's relationship to you?</b>
<input type="checkbox"/> Roomer or boarder
<input type="checkbox"/> Housemate or roommate
<input type="checkbox"/> Unmarried partner
<input type="checkbox"/> Foster child or foster adult
<input type="checkbox"/> Other nonrelative
<b>Back</b> <a href="#">Next</a> <a href="#">GoTo</a> <a href="#">Options</a>

2006 CCM PI

**Are you related to Lee Childs?**

•Ctrl+D for Don't Know or Ctrl+R for Refused

- 1. Yes, Related
- 2. No, Not Related

**Which one of these categories best describes how you are related to Lee Childs?**

•Ctrl+D for Don't Know or Ctrl+R for Refused

- 11. Husband or wife
- 12. Biological son or daughter
- 13. Adopted son or daughter
- 14. Stepson or stepdaughter
- 15. Brother or sister
- 16. Father or mother
- 17. Grandchild
- 18. Parent-in-law
- 19. Son-in-law or daughter-in-law
- 20. Other relative

•Read selection aloud if necessary

**Which one of these categories best describes your relationship to Lee Childs?**

•Ctrl+D for Don't Know or Ctrl+R for Refused

- 21. Roomer or boarder
- 22. Housemate or roommate
- 23. Unmarried partner
- 24. Foster child or foster adult
- 25. Other non-relative

2005 Internet

**Topic-based:**

**2 How is each person related to Person 1?**

	Related	Not Related
<b>Person 2</b>	<input type="radio"/> Husband or wife <input type="radio"/> Biological son or daughter <input type="radio"/> Adopted son or daughter <input type="radio"/> Stepson or stepdaughter <input type="radio"/> Brother or sister <input type="radio"/> Father or mother <input type="radio"/> Grandchild <input type="radio"/> Parent-in-law <input type="radio"/> Son-in-law or daughter-in-law <input type="radio"/> Other relative	<input type="radio"/> Roomer or boarder <input type="radio"/> Housemate or roommate <input type="radio"/> Unmarried partner <input type="radio"/> Foster child or foster adult <input type="radio"/> Other nonrelative
<b>Person 3</b>	<input type="radio"/> Husband or wife <input type="radio"/> Biological son or daughter <input type="radio"/> Adopted son or daughter <input type="radio"/> Stepson or stepdaughter <input type="radio"/> Brother or sister <input type="radio"/> Father or mother <input type="radio"/> Grandchild <input type="radio"/> Parent-in-law <input type="radio"/> Son-in-law or daughter-in-law <input type="radio"/> Other relative	<input type="radio"/> Roomer or boarder <input type="radio"/> Housemate or roommate <input type="radio"/> Unmarried partner <input type="radio"/> Foster child or foster adult <input type="radio"/> Other nonrelative

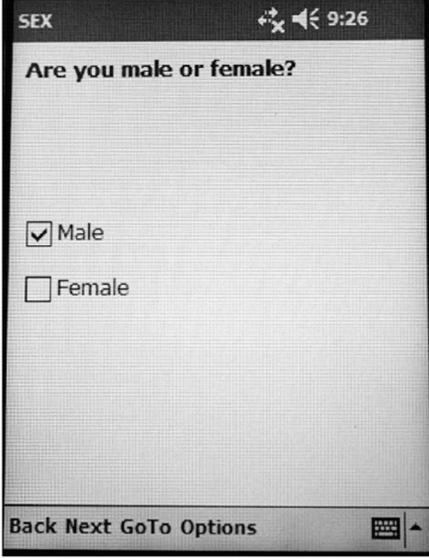
**Person-based:**

**2 How is this person related to Person 1?**

Related	Not Related
<input type="radio"/> Husband or wife <input type="radio"/> Biological son or daughter <input type="radio"/> Adopted son or daughter <input type="radio"/> Stepson or stepdaughter <input type="radio"/> Brother or sister <input type="radio"/> Father or mother <input type="radio"/> Grandchild <input type="radio"/> Parent-in-law <input type="radio"/> Son-in-law or daughter-in-law <input type="radio"/> Other relative	<input type="radio"/> Roomer or boarder <input type="radio"/> Housemate or roommate <input type="radio"/> Unmarried partner <input type="radio"/> Foster child or foster adult <input type="radio"/> Other nonrelative

<p>2000 Be Counted</p>	<p><b>2</b> How is this person related to Person 1? Mark <input checked="" type="checkbox"/> ONE box.</p> <table border="0"> <tr> <td><input type="checkbox"/> Husband/wife</td> <td>If NOT RELATED to Person 1:</td> </tr> <tr> <td><input type="checkbox"/> Natural-born son/daughter</td> <td><input type="checkbox"/> Roomer, boarder</td> </tr> <tr> <td><input type="checkbox"/> Adopted son/daughter</td> <td><input type="checkbox"/> Housemate, roommate</td> </tr> <tr> <td><input type="checkbox"/> Stepson/stepdaughter</td> <td><input type="checkbox"/> Unmarried partner</td> </tr> <tr> <td><input type="checkbox"/> Brother/sister</td> <td><input type="checkbox"/> Foster child</td> </tr> <tr> <td><input type="checkbox"/> Father/mother</td> <td><input type="checkbox"/> Other nonrelative</td> </tr> <tr> <td><input type="checkbox"/> Grandchild</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Parent-in-law</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Son-in-law/daughter-in-law</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other relative — <i>Print exact relationship.</i> →</td> <td></td> </tr> </table>	<input type="checkbox"/> Husband/wife	If NOT RELATED to Person 1:	<input type="checkbox"/> Natural-born son/daughter	<input type="checkbox"/> Roomer, boarder	<input type="checkbox"/> Adopted son/daughter	<input type="checkbox"/> Housemate, roommate	<input type="checkbox"/> Stepson/stepdaughter	<input type="checkbox"/> Unmarried partner	<input type="checkbox"/> Brother/sister	<input type="checkbox"/> Foster child	<input type="checkbox"/> Father/mother	<input type="checkbox"/> Other nonrelative	<input type="checkbox"/> Grandchild		<input type="checkbox"/> Parent-in-law		<input type="checkbox"/> Son-in-law/daughter-in-law		<input type="checkbox"/> Other relative — <i>Print exact relationship.</i> →	
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<input type="checkbox"/> Other relative — <i>Print exact relationship.</i> →																					
<p>2005ACS paper</p>	<p><b>3</b> How is this person related to Person 1?</p> <hr/> <p><i>Relationship of Person 2 to Person 1.</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Husband or wife</td> <td><input type="checkbox"/> Roomer, boarder</td> </tr> <tr> <td><input type="checkbox"/> Son or daughter</td> <td><input type="checkbox"/> Housemate, roommate</td> </tr> <tr> <td><input type="checkbox"/> Brother or sister</td> <td><input type="checkbox"/> Unmarried partner</td> </tr> <tr> <td><input type="checkbox"/> Father or mother</td> <td><input type="checkbox"/> Foster child</td> </tr> <tr> <td><input type="checkbox"/> Grandchild</td> <td><input type="checkbox"/> Other nonrelative</td> </tr> <tr> <td><input type="checkbox"/> In-law</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other relative</td> <td></td> </tr> </table>	<input type="checkbox"/> Husband or wife	<input type="checkbox"/> Roomer, boarder	<input type="checkbox"/> Son or daughter	<input type="checkbox"/> Housemate, roommate	<input type="checkbox"/> Brother or sister	<input type="checkbox"/> Unmarried partner	<input type="checkbox"/> Father or mother	<input type="checkbox"/> Foster child	<input type="checkbox"/> Grandchild	<input type="checkbox"/> Other nonrelative	<input type="checkbox"/> In-law		<input type="checkbox"/> Other relative							
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<p>2005 ACS CAPI/CATI</p>	<p>American Community Survey - Puerto Rico Community Survey ver 2.26</p> <p>Forms Answer Navigate Options Help</p> <p>Main Path   ADDR   Respondent   HHRos   FAQ   Exit</p> <p>A ? [F1]</p> <p>♦ Ask if not apparent</p> <p><b>How is Minnie Mouse related to you?</b></p> <table border="0"> <tr> <td><input checked="" type="radio"/> 1. Husband or wife</td> <td><input type="radio"/> 7. Other relative</td> </tr> <tr> <td><input type="radio"/> 2. Son or daughter</td> <td><input type="radio"/> 8. Roomer or boarder</td> </tr> <tr> <td><input type="radio"/> 3. Brother or sister</td> <td><input type="radio"/> 9. Housemate or Roommate</td> </tr> <tr> <td><input type="radio"/> 4. Father or mother</td> <td><input type="radio"/> 10. Unmarried partner</td> </tr> <tr> <td><input type="radio"/> 5. Grandchild</td> <td><input type="radio"/> 11. Foster child</td> </tr> <tr> <td><input type="radio"/> 6. In-law</td> <td><input type="radio"/> 12. Other non-relative</td> </tr> </table> <p style="text-align: center;"><b>Demographics</b></p>	<input checked="" type="radio"/> 1. Husband or wife	<input type="radio"/> 7. Other relative	<input type="radio"/> 2. Son or daughter	<input type="radio"/> 8. Roomer or boarder	<input type="radio"/> 3. Brother or sister	<input type="radio"/> 9. Housemate or Roommate	<input type="radio"/> 4. Father or mother	<input type="radio"/> 10. Unmarried partner	<input type="radio"/> 5. Grandchild	<input type="radio"/> 11. Foster child	<input type="radio"/> 6. In-law	<input type="radio"/> 12. Other non-relative								
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2006 Test Flashcard	<p style="text-align: center;"><b>CARD A</b></p> <p><b>Relationship to Person 1:</b></p> <table border="0"> <tr> <td style="vertical-align: top;"> <p><b>Related:</b></p> <ul style="list-style-type: none"> <li>• Husband or wife</li> <li>• Biological son or daughter</li> <li>• Adopted son or daughter</li> <li>• Stepson or stepdaughter</li> <li>• Brother or sister</li> <li>• Father or mother</li> <li>• Grandchild</li> <li>• Parent-in-law</li> <li>• Son-in-law or daughter-in-law</li> <li>• Other relative</li> </ul> </td> <td style="vertical-align: top; padding-left: 20px;"> <p><b>Not Related:</b></p> <ul style="list-style-type: none"> <li>• Roomer or boarder</li> <li>• Housemate or roommate</li> <li>• Unmarried partner</li> <li>• Foster child or foster adult</li> <li>• Other nonrelative</li> </ul> </td> </tr> </table> <p style="text-align: center;">RELATIONSHIP</p>	<p><b>Related:</b></p> <ul style="list-style-type: none"> <li>• Husband or wife</li> <li>• Biological son or daughter</li> <li>• Adopted son or daughter</li> <li>• Stepson or stepdaughter</li> <li>• Brother or sister</li> <li>• Father or mother</li> <li>• Grandchild</li> <li>• Parent-in-law</li> <li>• Son-in-law or daughter-in-law</li> <li>• Other relative</li> </ul>	<p><b>Not Related:</b></p> <ul style="list-style-type: none"> <li>• Roomer or boarder</li> <li>• Housemate or roommate</li> <li>• Unmarried partner</li> <li>• Foster child or foster adult</li> <li>• Other nonrelative</li> </ul>
<p><b>Related:</b></p> <ul style="list-style-type: none"> <li>• Husband or wife</li> <li>• Biological son or daughter</li> <li>• Adopted son or daughter</li> <li>• Stepson or stepdaughter</li> <li>• Brother or sister</li> <li>• Father or mother</li> <li>• Grandchild</li> <li>• Parent-in-law</li> <li>• Son-in-law or daughter-in-law</li> <li>• Other relative</li> </ul>	<p><b>Not Related:</b></p> <ul style="list-style-type: none"> <li>• Roomer or boarder</li> <li>• Housemate or roommate</li> <li>• Unmarried partner</li> <li>• Foster child or foster adult</li> <li>• Other nonrelative</li> </ul>		
2005 ACS Flashcard	<p style="text-align: center;"><b>CARD A</b></p> <p style="text-align: center;"><b>Relationship</b></p> <ol style="list-style-type: none"> <li>1. Husband or wife</li> <li>2. Son or daughter</li> <li>3. Brother or sister</li> <li>4. Father or mother</li> <li>5. Grandchild</li> <li>6. In-law</li> <li>7. Other relative</li> <li>8. Roomer or boarder</li> <li>9. Housemate or roommate</li> <li>10. Unmarried partner</li> <li>11. Foster child</li> <li>12. Other non-relative</li> </ol>		

Instrument	Sex Question
2006 MO/MB	<p>6. What is Person 1's sex? Mark <input checked="" type="checkbox"/> ONE box.</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>
2006 U/E	<p>3. What is each person's sex?</p> <p>Mark <input checked="" type="checkbox"/> ONE box.</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>
2006 U/E Reinterview	<p>3. What is each person's sex?</p> <p>Mark <input checked="" type="checkbox"/> ONE box.</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>
2006 GQ ICR	<p>2. What is your sex? Mark <input checked="" type="checkbox"/> ONE box.</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>
2006 NRFU	 <p>SEX 9:26</p> <p>Are you male or female?</p> <p><input checked="" type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>Back Next GoTo Options</p> <p>Sex</p>
2006 CCM PI	<p>Are you male or female?</p> <p>♦Ctrl+D for Don't Know or Ctrl+R for Refused</p> <p>1. Male 2. Female</p>

2005 Internet

topic

**2** What is each person's sex, date of birth, and age? *Please report babies as age 0 when the child is less than 1 year old.*

	Sex	Date of Birth (mm/dd/yyyy)	Age (on 09/16/2005)
Person 1	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 2	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 3	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 4	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years

person

**?** What is Mary's sex?

Male  
 Female

2000 Be Counted

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

Male  Female

2005 ACS paper

**1** What is this person's sex?

Male  
 Female

2005 ACS CAPI/CATI

**ACS American Community Survey - Puerto Rico Community Survey**

Forms Answer Navigate Options Help

Main Path | ADDR | Respondent | HHRos | FAQ | Exit

? [F1]

- If not obvious, ask

**Are you male or female?**

1. Male  
 2. Female

Instrument	Age and Date of Birth Question
2006 MO/MB	<p><b>7. What is Person 1's age and what is Person 1's date of birth?</b>  <i>Please report babies as age 0 when the child is less than 1 year old.</i></p> <p><i>Print numbers in boxes.</i></p> <p>Age on April 1, 2006    Month    Day    Year of birth</p> <p><input type="text"/> <input type="text"/> <input type="text"/>    <input type="text"/> <input type="text"/>    <input type="text"/> <input type="text"/>    <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
2006 U/E	<p><i>e, "Let's start with Bob."</i></p> <p><b>4. What was each person's age on April 1, 2006, and what is each person's date of birth? Please report babies as age 0 when the child is less than 1 year old.</b>  <i>Print numbers in boxes.</i></p> <p>Age <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DATE OF BIRTH:</p> <p>Month <input type="text"/> <input type="text"/></p> <p>Day <input type="text"/> <input type="text"/></p> <p>Year of birth <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
2006 U/E Reinterview	<p><b>4. What was each person's age on April 1, 2006, and what is each person's date of birth? Please report babies as age 0 when the child is less than 1 year old.</b>  <i>Print numbers in boxes.</i></p> <p>Age <input type="text"/> <input type="text"/> <input type="text"/></p> <p>DATE OF BIRTH:</p> <p>Month <input type="text"/> <input type="text"/></p> <p>Day <input type="text"/> <input type="text"/></p> <p>Year of birth <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
2006 GQ ICR	<p><b>3. What is your age and what is your date of birth?</b>  <i>Please report babies as age 0 when the child is less than 1 year old.</i></p> <p>Age on April 1, 2006</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p> <p><i>Print numbers in boxes.</i></p> <p>Month    Day    Year of birth</p> <p><input type="text"/> <input type="text"/>    <input type="text"/> <input type="text"/>    <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>

2006 NRFU

DOB 9:27

What is your date of birth?

Month Day Year

Oct 1 3 1 9 7 8

Back Next GoTo Options

AGECHECK 9:28

For the Census, we need to record age as of April 1, 2006. So, just to confirm – You were 27 on April 1, 2006?

Yes  
 No

Back Next GoTo Options

DOB AGECHECK(1) 10:41

For the Census, we need to record age as of April 1, 2006. So, just to confirm – You were 29 on April 1, 2006?

Yes  
 No

Enter correct age

3 0

Back Next GoTo Options

DOB AGECHECK(1) 10:42

Since your age as of April 1, 2006 was 30, can you help me correct your date of birth?

I have Oct/13/1976. What should it be?

Month Day Year

Oct 1 3 1 9 7 5

Date of Birth was changed - continue  
 Date of Birth was NOT changed - continue

Back Next GoTo Options

2006 CCM PI

**What is your date of birth?**

- Enter month, enter day, enter year
- If date of birth is unknown, probe for month
- Ctrl+D for Don't Know or Ctrl+R for Refused

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| <input type="radio"/> 1. January  | <input type="radio"/> 7. July      |
| <input type="radio"/> 2. February | <input type="radio"/> 8. August    |
| <input type="radio"/> 3. March    | <input type="radio"/> 9. September |
| <input type="radio"/> 4. April    | <input type="radio"/> 10. October  |
| <input type="radio"/> 5. May      | <input type="radio"/> 11. November |
| <input type="radio"/> 6. June     | <input type="radio"/> 12. December |

For the **Appointment** need to record age as of April 1, 2006.  
**So, just to confirm - you were 27 on April 1, 2006?**

- Ctrl+D for Don't Know or Ctrl+R for Refused

- 1. Yes
- 2. No (Correct date of birth)

2005 Internet

**Topic-based:**

**2** What is each person's sex, date of birth, and age? Please report babies as age 0 when the child is less than 1 year old.

	Sex	Date of Birth (mm/dd/yyyy)	Age (on 09/16/2005)
Person 1	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 2	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 3	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years
Person 4	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/> years

**Person-based:**

**2** What is Mary's date of birth? (mm/dd/yyyy)

Month Day Year of birth  
 /  /

**2** What is Mary's age? Please report babies as age 0 when the child is less than 1 year old.

Age (on 09/15/2005)  
 years

2000 Be Counted

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

Age on April 1, 2000      Month      Day      Year of birth

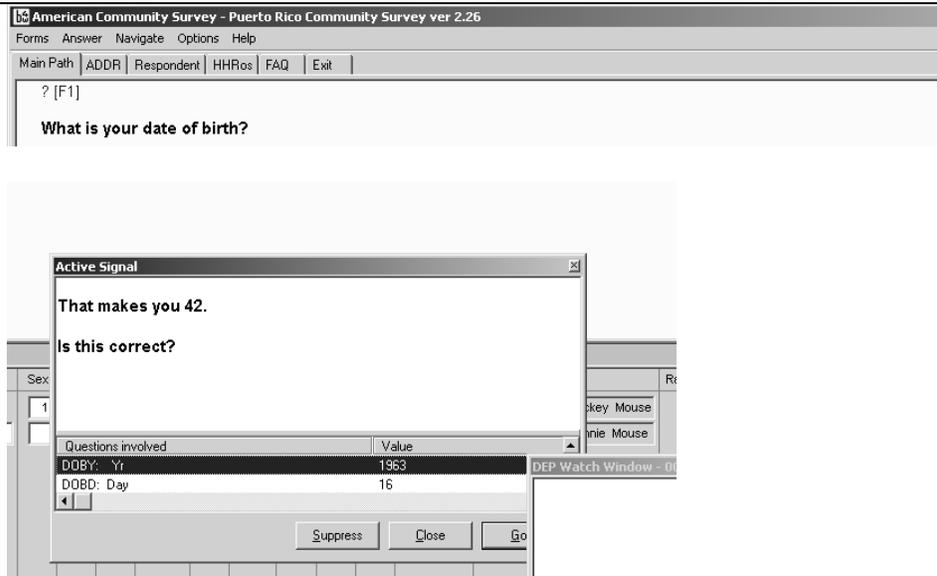
2005 ACS paper

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

Age (in years)

Month Day Year of birth

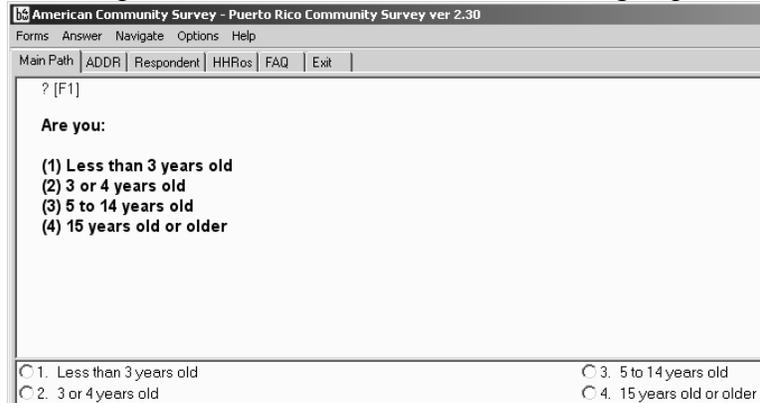
2005 ACS  
CAPI/CATI



if the respondent doesn't provide a date of birth:



if the respondent doesn't answer the 'estimate age' question either:



Instrument	Hispanic Origin Question																														
2000 MO/MB	<p>→ <b>NOTE: Please answer BOTH Questions 7 and 8.</b></p> <p><b>7. Is Person 1 Spanish/Hispanic/Latino? Mark <input checked="" type="checkbox"/> the "No" box if not Spanish/Hispanic/Latino.</b></p> <p><input type="checkbox"/> No, not Spanish/Hispanic/Latino      <input type="checkbox"/> Yes, Puerto Rican  <input type="checkbox"/> Yes, Mexican, Mexican Am., Chicano      <input type="checkbox"/> Yes, Cuban  <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino — Print group. <input type="checkbox"/></p>																														
2000 U/E	<p><i>ENUMERATOR NOTE: It is important</i></p> <p><b>5. Are any of the persons that I have listed Mexican, Puerto Rican, Cuban, or of another Hispanic or Latino group?</b></p> <p><input type="checkbox"/> No, not Spanish/Hispanic/Latino  <input type="checkbox"/> Yes, Mexican, Mexican Am., Chicano  <input type="checkbox"/> Yes, Puerto Rican  <input type="checkbox"/> Yes, Cuban  <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino — What is this group? <input type="checkbox"/></p>																														
2000 ACE	<p>[Is anyone]/[Are you] of Spanish, Hispanic, or Latino origin?</p> <p>[1] Yes  [2] No</p> <p>[D] Don't Know  [R] Refused</p> <p>Who is? Line No. or "X" [ ]  (IF EVERYONE LISTED IS OF SPANISH, HISPANIC, OR LATINO ORIGIN, ENTER "X")</p> <table border="0"> <thead> <tr> <th>LINE NO.</th> <th>FULL NAME</th> <th>STATUS</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>(etc.)</td><td></td><td></td></tr> </tbody> </table> <p>Is there anyone else of Spanish, Hispanic, or Latino origin? Line No: [ ] (N - No)  (RE-ENTER PERSON NUMBER TO CHANGE STATUS)</p> <table border="0"> <thead> <tr> <th>LINE NO.</th> <th>FULL NAME</th> <th>STATUS</th> </tr> </thead> <tbody> <tr><td>1.</td><td></td><td></td></tr> <tr><td>2.</td><td></td><td></td></tr> <tr><td>3.</td><td></td><td></td></tr> <tr><td>(etc.)</td><td></td><td></td></tr> </tbody> </table> <p>[Are you/Is [NAME]] of Mexican, Puerto Rican, Cuban, or some other Spanish origin?</p> <p>[1] Mexican, Mexican-American, Chicano  [2] Puerto Rican  [3] Cuban  [4] Other Spanish/Hispanic/Latino</p> <p>[D] Don't Know  [R] Refused</p>	LINE NO.	FULL NAME	STATUS	1.			2.			3.			(etc.)			LINE NO.	FULL NAME	STATUS	1.			2.			3.			(etc.)		
LINE NO.	FULL NAME	STATUS																													
1.																															
2.																															
3.																															
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1.																															
2.																															
3.																															
(etc.)																															

2000 Be Counted	<p>→ NOTE: Please answer BOTH Questions 8 and 9.</p> <p>8 Is this person Spanish/Hispanic/Latino? Mark (X) the "No" box if not Spanish/Hispanic/Latino.</p> <p><input type="checkbox"/> No, not Spanish/Hispanic/Latino      <input type="checkbox"/> Yes, Puerto Rican</p> <p><input type="checkbox"/> Yes, Mexican, Mexican Am., Chicano      <input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, other Spanish/Hispanic/Latino — Print group. ↵</p>
2004 NRFU	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>Hispanic</b> 2:26</p> <p>I am going to ask you two questions, one on Hispanic origin and one on race. Please answer both questions. Read the introduction above for the first person and as needed after that. <i>Show Card B, Spanish, Hispanic or Latino origin.</i> Are you of Spanish, Hispanic or Latino origin?</p> <p><input checked="" type="checkbox"/> No, not Spanish, Hispanic or Latino origin</p> <p><input type="checkbox"/> Yes</p> <p>Respondent may answer both yes and no.</p> <p>Back Next GoTo Options Testing</p> </div> <div style="width: 48%;"> <p><b>HispanicYes</b> 2:26</p> <p>Are you</p> <p><input type="checkbox"/> Mexican, Mexican American, Chicano?</p> <p><input type="checkbox"/> Puerto Rican?</p> <p><input type="checkbox"/> Cuban?</p> <p><input type="checkbox"/> Another Spanish, Hispanic or Latino origin? For example: Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.</p> <p>Back Next GoTo Options</p> </div> </div>
2005 NCT DC-1A (presumed DR content)	<p>→ NOTE: Please answer BOTH Questions 8 and 9.</p> <p>8. Is Person 1 of Spanish, Hispanic, or Latino origin? Mark (X) "No" if not of Spanish, Hispanic, or Latino origin.</p> <p><input type="checkbox"/> No, not of Spanish, Hispanic, or Latino origin      <input type="checkbox"/> Yes, Puerto Rican</p> <p><input type="checkbox"/> Yes, Mexican, Mexican Am., Chicano      <input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, another Spanish, Hispanic, or Latino origin — Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. ↵</p> <p>9. What is Person 1's race? Mark (X) one or more races to</p>
2005 ACS paper	<p>NOTE: Please answer BOTH Questions 5 and 6.</p> <div style="display: flex;"> <div style="width: 48%;"> <p>5 Is this person Spanish/Hispanic/Latino? Mark (X) the "No" box if not Spanish/Hispanic/Latino.</p> <p><input type="checkbox"/> No, not Spanish/Hispanic/Latino</p> <p><input type="checkbox"/> Yes, Mexican, Mexican Am., Chicano</p> <p><input type="checkbox"/> Yes, Puerto Rican</p> <p><input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, other Spanish/Hispanic/Latino — Print group. ↵</p> </div> <div style="width: 48%;"> <p>6 What is this person's race? Mark (X) one or more races to</p> <p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black or African American</p> <p><input type="checkbox"/> American Indian or Alaska Native — Print or principal race</p> </div> </div>

2005 ACS  
CAPI/CATI

American Community Survey - Puerto Rico Community Survey ver 2.26

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? [F1]

**Are you Spanish, Hispanic, or Latino?**

1. Yes  
 2. No

---

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Forms Answer Navigate Options Help

Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**Are you of Mexican origin, Puerto Rican, Cuban or some other Spanish/ Hispanic/ Latino group?**

- ◆ Enter all that apply, separate with commas.

1. Mexican, Mexican American, Chicano  
 2. Puerto Rican  
 3. Cuban  
 4. Other Spanish/Hispanic/Latino

2000 U/E  
Flashcard

United States  
**Census  
2000**

U.S. Department of Commerce  
Bureau of the Census

**CARD B**

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

**CARD B – SPANISH, HISPANIC OR  
LATINO ORIGIN**

- **No, not** of Spanish, Hispanic or Latino origin
- Yes, Mexican, Mexican Am., or Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Spanish, Hispanic or Latino origin  
*(for example, Argentinean, Colombian, Dominican,  
Nicaraguan, Salvadoran, Spaniard, and so on)*

Instrument	Race Question															
2000 MO/MB	<p><b>8. What is Person 1's race? Mark (X) one or more races to indicate what this person considers himself/herself to be.</b></p> <p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black, African Am., or Negro</p> <p><input type="checkbox"/> American Indian or Alaska Native — <i>Print name of enrolled or principal tribe.</i> <input type="checkbox"/></p> <p>_____</p> <p><input type="checkbox"/> Asian Indian    <input type="checkbox"/> Japanese    <input type="checkbox"/> Native Hawaiian</p> <p><input type="checkbox"/> Chinese    <input type="checkbox"/> Korean    <input type="checkbox"/> Guamanian or Chamorro</p> <p><input type="checkbox"/> Filipino    <input type="checkbox"/> Vietnamese    <input type="checkbox"/> Samoan</p> <p><input type="checkbox"/> Other Asian — <i>Print race.</i> <input type="checkbox"/>    <input type="checkbox"/> Other Pacific Islander — <i>Print race.</i> <input type="checkbox"/></p> <p>_____</p> <p><input type="checkbox"/> Some other race — <i>Print race.</i> <input type="checkbox"/></p> <p>_____</p> <p>→ <b>If more people live here, continue with Person 2.</b></p>															
2000 U/E	<p><i>to ask BOTH questions 5 and 6 and show Cards B and C.</i></p> <p><b>6. Now choose one or more races for each person. Which race or races does each person consider himself/herself to be?</b></p> <table border="0"> <tr> <td><input type="checkbox"/> White</td> <td><input type="checkbox"/> Filipino</td> <td><input type="checkbox"/> Native Hawaiian</td> </tr> <tr> <td><input type="checkbox"/> Black, African Am., or Negro</td> <td><input type="checkbox"/> Japanese</td> <td><input type="checkbox"/> Guamanian/Chamorro</td> </tr> <tr> <td><input type="checkbox"/> Asian Indian</td> <td><input type="checkbox"/> Korean</td> <td><input type="checkbox"/> Samoan</td> </tr> <tr> <td><input type="checkbox"/> Chinese</td> <td><input type="checkbox"/> Vietnamese</td> <td><input type="checkbox"/> Other Pacific Islander</td> </tr> <tr> <td><input type="checkbox"/> American Indian or Alaska Native — <i>What is the name of (your/...s) enrolled or principal tribe?</i> <input type="checkbox"/></td> <td><input type="checkbox"/> Other Asian</td> <td><input type="checkbox"/> Some other race</td> </tr> </table> <p style="text-align: center;">What is this race? <input type="checkbox"/></p> <p>_____</p>	<input type="checkbox"/> White	<input type="checkbox"/> Filipino	<input type="checkbox"/> Native Hawaiian	<input type="checkbox"/> Black, African Am., or Negro	<input type="checkbox"/> Japanese	<input type="checkbox"/> Guamanian/Chamorro	<input type="checkbox"/> Asian Indian	<input type="checkbox"/> Korean	<input type="checkbox"/> Samoan	<input type="checkbox"/> Chinese	<input type="checkbox"/> Vietnamese	<input type="checkbox"/> Other Pacific Islander	<input type="checkbox"/> American Indian or Alaska Native — <i>What is the name of (your/...s) enrolled or principal tribe?</i> <input type="checkbox"/>	<input type="checkbox"/> Other Asian	<input type="checkbox"/> Some other race
<input type="checkbox"/> White	<input type="checkbox"/> Filipino	<input type="checkbox"/> Native Hawaiian														
<input type="checkbox"/> Black, African Am., or Negro	<input type="checkbox"/> Japanese	<input type="checkbox"/> Guamanian/Chamorro														
<input type="checkbox"/> Asian Indian	<input type="checkbox"/> Korean	<input type="checkbox"/> Samoan														
<input type="checkbox"/> Chinese	<input type="checkbox"/> Vietnamese	<input type="checkbox"/> Other Pacific Islander														
<input type="checkbox"/> American Indian or Alaska Native — <i>What is the name of (your/...s) enrolled or principal tribe?</i> <input type="checkbox"/>	<input type="checkbox"/> Other Asian	<input type="checkbox"/> Some other race														

2000 ACE

**SHOW FLASHCARD!**

**PERSON NUMBER: \_\_\_ OF \_\_\_**

I'm going to read a list of race categories.  
Please choose one or more categories that best describe [your/NAME'S] race.

INTERVIEWER: ENTER EACH TYPE MENTIONED: **N** FOR "NO MORE" [ ]

- [1] White
- [2] Black, African-American, or Negro
- [3] American Indian or Alaska Native
- [4] Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
- [5] Native Hawaiian
- [6] Other Pacific Islander (Guamanian or Chamorro, or Samoan)
- [7] Or, some other race Specify [ICM\_RACE1@7A]
- [D] Don't know
- [R] Refused

What is [your/NAME'S] enrolled or principal tribe(s)?

[\_\_\_\_\_]

- [D] Don't know
- [R] Refused

INTERVIEWER: ENTER EACH TYPE MENTIONED: **N** FOR "NO MORE" [ ]

To what Asian group [do you/does NAME] belong? [Are you/Is NAME]:

- [1] Asian Indian
- [2] Chinese
- [3] Filipino
- [4] Japanese
- [5] Korean
- [6] Vietnamese
- [7] Or, some other Asian group? Specify [ICM\_RACE3@7A]

- [D] Don't know
- [R] Refused

INTERVIEWER: ENTER EACH TYPE MENTIONED: **N** FOR "NO MORE" [ ]

To what Pacific Islander group [do you/does NAME] belong? [Are you/Is NAME]:

- [1] Guamanian or Chamorro
- [2] Samoan
- [3] Or, some other Pacific Islander group? Specify

- [D] Don't know
- [R] Refused

<p>2000 Be Counted</p>	<p>9 What is this person's race? Mark (X) one or more races to indicate what this person considers himself/herself to be.</p> <p><input type="checkbox"/> White  <input type="checkbox"/> Black, African Am., or Negro  <input type="checkbox"/> American Indian or Alaska Native — Print name of enrolled or principal tribe &gt;</p> <p><input type="checkbox"/> Asian Indian   <input type="checkbox"/> Japanese   <input type="checkbox"/> Native Hawaiian  <input type="checkbox"/> Chinese   <input type="checkbox"/> Korean   <input type="checkbox"/> Guamanian or Chamorro  <input type="checkbox"/> Filipino   <input type="checkbox"/> Vietnamese   <input type="checkbox"/> Samoan  <input type="checkbox"/> Other Asian — Print race. &gt;   <input type="checkbox"/> Other Pacific Islander — Print race. &gt;</p> <p><input type="checkbox"/> Some other race — Print race. &gt;</p>								
<p>2004 NRFU</p>	<table border="1"> <tr> <td data-bbox="402 489 906 1081"> <p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">More &gt;&gt;</p> <p><input type="checkbox"/> White  <input type="checkbox"/> Black or African American or Negro  <input type="checkbox"/> American Indian or Alaska Native  <input type="checkbox"/> Asian Indian  <input type="checkbox"/> Chinese</p> <p><input type="checkbox"/> Race Comments</p> </td> <td data-bbox="906 489 1398 1081"> <p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">&lt;&lt;   More &gt;&gt;</p> <p><input type="checkbox"/> Filipino  <input type="checkbox"/> Japanese  <input type="checkbox"/> Korean  <input type="checkbox"/> Vietnamese  <input type="checkbox"/> Other Asian (for example: Cambodian, Hmong, Thai, Indonesian)</p> <p><input type="checkbox"/> Race Comments</p> </td> </tr> <tr> <td data-bbox="402 1081 906 1129"> <p>Back Next GoTo Options Testing [Keyboard Icon] ^</p> </td> <td data-bbox="906 1081 1398 1129"> <p>Back Next GoTo Options Testing [Keyboard Icon] ^</p> </td> </tr> <tr> <td data-bbox="402 1129 906 1780"> <p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">&lt;&lt;   More &gt;&gt;</p> <p><input type="checkbox"/> Native Hawaiian  <input type="checkbox"/> Guamanian or Chamorro  <input type="checkbox"/> Samoan  <input type="checkbox"/> Other Pacific Islander (For example: Tahitian, Fijian)</p> <p><input type="checkbox"/> Race Comments</p> </td> <td data-bbox="906 1129 1398 1780"></td> </tr> <tr> <td data-bbox="402 1717 906 1780"> <p>Back Next GoTo Options Testing [Keyboard Icon] ^</p> </td> <td data-bbox="906 1717 1398 1780"></td> </tr> </table>	<p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">More &gt;&gt;</p> <p><input type="checkbox"/> White  <input type="checkbox"/> Black or African American or Negro  <input type="checkbox"/> American Indian or Alaska Native  <input type="checkbox"/> Asian Indian  <input type="checkbox"/> Chinese</p> <p><input type="checkbox"/> Race Comments</p>	<p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">&lt;&lt;   More &gt;&gt;</p> <p><input type="checkbox"/> Filipino  <input type="checkbox"/> Japanese  <input type="checkbox"/> Korean  <input type="checkbox"/> Vietnamese  <input type="checkbox"/> Other Asian (for example: Cambodian, Hmong, Thai, Indonesian)</p> <p><input type="checkbox"/> Race Comments</p>	<p>Back Next GoTo Options Testing [Keyboard Icon] ^</p>	<p>Back Next GoTo Options Testing [Keyboard Icon] ^</p>	<p><b>Race</b>   &lt;&lt; 5:23</p> <p>Show respondent Card C, Race. Using this list, please choose one or more races that you consider yourself to be.</p> <p style="text-align: right;">&lt;&lt;   More &gt;&gt;</p> <p><input type="checkbox"/> Native Hawaiian  <input type="checkbox"/> Guamanian or Chamorro  <input type="checkbox"/> Samoan  <input type="checkbox"/> Other Pacific Islander (For example: Tahitian, Fijian)</p> <p><input type="checkbox"/> Race Comments</p>		<p>Back Next GoTo Options Testing [Keyboard Icon] ^</p>	
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<p>Back Next GoTo Options Testing [Keyboard Icon] ^</p>									

2005 NCT  
DC-1A  
(presumed  
DR  
content)

9. What is Person 1's race? **Mark (X) one or more races** to indicate what this person considers himself/herself to be.

White  
 Black, African Am., or Negro  
 American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↘

\_\_\_\_\_

Asian Indian     Japanese     Native Hawaiian  
 Chinese     Korean     Guamanian or Chamorro  
 Filipino     Vietnamese     Samoan  
 Other Asian — *Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.* ↘     Other Pacific Islander — *Print race, for example, Fijian, Tongan, and so on.* ↘

\_\_\_\_\_

Some other race — *Print race.* ↘

\_\_\_\_\_

2005 ACS  
Paper

6 What is this person's race? **Mark (X) one or more races** to indicate what this person considers himself/herself to be.

White     Asian Indian     Native Hawaiian  
 Black or African American     Chinese     Guamanian or Chamorro  
 American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↘     Filipino     Samoan  
 Japanese     Other Pacific Islander — *Print race below.* ↘  
 Korean     Some other race — *Print race below.* ↘  
 Vietnamese    \_\_\_\_\_  
 Other Asian — *Print race.* → \_\_\_\_\_

2005 ACS  
CAPI

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Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**Using this list, please choose one or more races that you consider yourself to be.**

- Enter all that apply, separate with commas.

<input checked="" type="checkbox"/> 11. White	<input type="checkbox"/> 19. Vietnamese
<input type="checkbox"/> 12. Black or African American	<input type="checkbox"/> 20. Other Asian (For example: Cambodian, Hmong, Thai, Indonesian)
<input type="checkbox"/> 13. American Indian or Alaska Native	<input type="checkbox"/> 21. Native Hawaiian
<input type="checkbox"/> 14. Asian Indian	<input type="checkbox"/> 22. Guamanian or Chamorro
<input type="checkbox"/> 15. Chinese	<input type="checkbox"/> 23. Samoan
<input type="checkbox"/> 16. Filipino	<input type="checkbox"/> 24. Other Pacific Islander (For example: Tahitian, Fijian)
<input type="checkbox"/> 17. Japanese	<input type="checkbox"/> 25. Some other race
<input type="checkbox"/> 18. Korean	

**Demographics**

if “American Indian or Alaska Native”

American Community Survey - Puerto Rico Community Survey ver 2.26  
Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**What is the name of your enrolled or principal tribe?**

if “other Asian”:

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Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**To what other Asian group do you belong?**  
(For example: Cambodian, Hmong, Indonesain, Pakistani, Laotian, Thai)

if “other Pacific Islander”:

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Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**To what Pacific Islander group does Minnie Mouse belong?**

- Read all answer categories. Enter all that apply, separate with commas.

if “Other Pacific Islander” and “Some other race”:

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Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

**What is the name of your race and to what other Pacific Islander group do you belong?**  
(For example: Fijian, Palauan, Tahitian, Tongan)

if “Some other race”:

American Community Survey - Puerto Rico Community Survey ver 2.26  
Forms Answer Navigate Options Help  
Main Path ADDR Respondent HHRos FAQ Exit

? [F1]

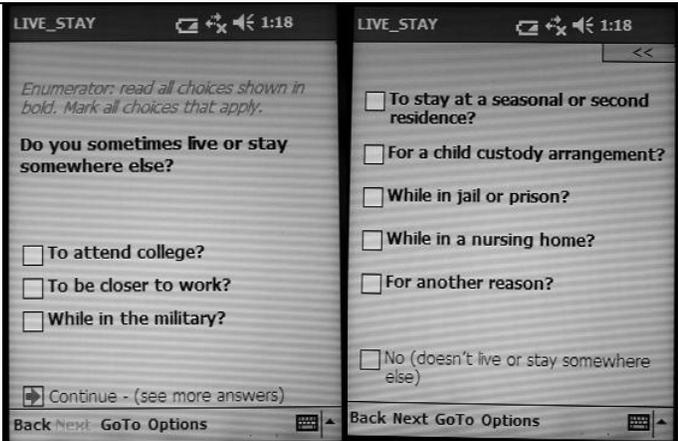
**What is the name of your race?**

<p>2000 U/E Flashcard</p>	 <p>The image shows a flashcard titled "United States Census 2000 CARD C". It is from the U.S. Department of Commerce, Bureau of the Census. The card asks the user to choose one or more of the following race categories:</p> <ul style="list-style-type: none"> <li>• White</li> <li>• Black, African Am., or Negro</li> <li>• American Indian or Alaska Native — <i>Specify enrolled or principal tribe.</i></li> <li>• Asian Indian</li> <li>• Chinese</li> <li>• Filipino</li> <li>• Japanese</li> <li>• Korean</li> <li>• Vietnamese</li> <li>• Other Asian — <i>Specify race.</i></li> <li>• Native Hawaiian</li> <li>• Guamanian or Chamorro</li> <li>• Samoan</li> <li>• Other Pacific Islander — <i>Specify race.</i></li> <li>• Some other race — <i>Specify race.</i></li> </ul>
<p>2000 ACE Flashcard</p>	<p style="text-align: center;"><b>Race</b> (Choose all that apply)</p> <ol style="list-style-type: none"> <li>1 - White</li> <li>2 - Black, African American, or Negro</li> <li>3 - American Indian or Alaska Native</li> <li>4 - Asian - includes <ul style="list-style-type: none"> <li>- Asian Indian</li> <li>- Chinese</li> <li>- Filipino</li> <li>- Japanese</li> <li>- Korean</li> <li>- Vietnamese</li> <li>- Other Asian</li> </ul> </li> <li>5 - Native Hawaiian</li> <li>6 - Other Pacific Islander - includes <ul style="list-style-type: none"> <li>- Guamanian or Chamorro</li> <li>- Samoan</li> <li>- Other</li> </ul> </li> <li>7 - Some other race — Which race?</li> </ol>

<p>2004 NRFU Flashcard</p>	<p style="text-align: center;"><b>CARD C – RACE</b></p> <ul style="list-style-type: none"> <li>• White</li> <li>• Black, African Am., or Negro</li> <li>• American Indian or Alaska Native</li> <li>• Asian Indian</li> <li>• Chinese</li> <li>• Filipino</li> <li>• Japanese</li> <li>• Korean</li> <li>• Vietnamese</li> <li>• Other Asian <i>(for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on)</i></li> <li>• Native Hawaiian</li> <li>• Guamanian or Chamorro</li> <li>• Samoan</li> <li>• Other Pacific Islander <i>(for example, Fijian, Tongan, and so on)</i></li> </ul> <p style="font-size: small; text-align: center;">Page 7</p>
<p>ACS 2005 Flashcard</p>	<p style="text-align: center;"><b>CARD B</b></p> <ol style="list-style-type: none"> <li>11. White</li> <li>12. Black or African-American</li> <li>13. American Indian or Alaska Native</li> <li>14. Asian Indian</li> <li>15. Chinese</li> <li>16. Filipino</li> <li>17. Japanese</li> <li>18. Korean</li> <li>19. Vietnamese</li> <li>20. Other Asian</li> <li>21. Native Hawaiian</li> <li>22. Guamanian or Chamorro</li> <li>23. Samoan</li> <li>24. Other Pacific Islander</li> <li>25. Some other race</li> </ol>

Instrument	Overcount Coverage Question								
2006 MO/MB	<p><b>11. Does Person 1 sometimes live or stay somewhere else?</b></p> <p><input type="checkbox"/> No    <input type="checkbox"/> Yes — Mark <input checked="" type="checkbox"/> all reasons that apply.</p> <table border="0"> <tr> <td><input type="checkbox"/> To attend college</td> <td><input type="checkbox"/> For a child custody arrangement</td> </tr> <tr> <td><input type="checkbox"/> To be closer to work</td> <td><input type="checkbox"/> While in jail or prison</td> </tr> <tr> <td><input type="checkbox"/> While in the military</td> <td><input type="checkbox"/> While in a nursing home</td> </tr> <tr> <td><input type="checkbox"/> To stay at a seasonal or second residence</td> <td><input type="checkbox"/> For another reason</td> </tr> </table>	<input type="checkbox"/> To attend college	<input type="checkbox"/> For a child custody arrangement	<input type="checkbox"/> To be closer to work	<input type="checkbox"/> While in jail or prison	<input type="checkbox"/> While in the military	<input type="checkbox"/> While in a nursing home	<input type="checkbox"/> To stay at a seasonal or second residence	<input type="checkbox"/> For another reason
<input type="checkbox"/> To attend college	<input type="checkbox"/> For a child custody arrangement								
<input type="checkbox"/> To be closer to work	<input type="checkbox"/> While in jail or prison								
<input type="checkbox"/> While in the military	<input type="checkbox"/> While in a nursing home								
<input type="checkbox"/> To stay at a seasonal or second residence	<input type="checkbox"/> For another reason								
2006 U/E	<p><b>8. Does (Read person's name) sometimes live or stay somewhere else for any of these reasons —</b></p> <p><i>Read response categories.</i></p> <p><i>Mark <input checked="" type="checkbox"/> all reasons that apply.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> To attend college</li> <li><input type="checkbox"/> To be closer to work</li> <li><input type="checkbox"/> While in the military</li> <li><input type="checkbox"/> To stay at a seasonal or second residence</li> <li><input type="checkbox"/> For a child custody arrangement</li> <li><input type="checkbox"/> While in jail or prison</li> <li><input type="checkbox"/> While in a nursing home</li> <li><input type="checkbox"/> For another reason</li> <li><input type="checkbox"/> No</li> <li><input type="checkbox"/> To attend college</li> </ul>								
2006 U/E Reinterview	<p><b>8. Does (Read person's name) sometimes live or stay somewhere else for any of these reasons —</b></p> <p><i>Read response categories.</i></p> <p><i>Mark <input checked="" type="checkbox"/> all reasons that apply.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> To attend college</li> <li><input type="checkbox"/> To be closer to work</li> <li><input type="checkbox"/> While in the military</li> <li><input type="checkbox"/> To stay at a seasonal or second residence</li> <li><input type="checkbox"/> For a child custody arrangement</li> <li><input type="checkbox"/> While in jail or prison</li> <li><input type="checkbox"/> While in a nursing home</li> <li><input type="checkbox"/> For another reason</li> <li><input type="checkbox"/> No</li> </ul>								
2006 GQ ICR	<p><b>7. Did you stay in this facility on the night of Saturday, April 1, 2006 (Census Day)?</b></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>→ <i>Continue with question 8 on other side.</i></p> <p><b>8. Do you live or stay in this facility MOST OF THE TIME?</b></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>								

2006 NRFU



2006 CCM PI

N/A

2005 Internet

Topic-based:

Do any of these people sometimes live or stay somewhere else?

Person 1  No  Yes

- To attend college
- To be closer to work
- While in the military
- To stay at a seasonal or second residence
- For a child custody arrangement
- While in jail or prison
- While in a nursing home
- For another reason

Person 2  No  Yes

- To attend college
- To be closer to work
- While in the military
- To stay at a seasonal or second residence
- For a child custody arrangement
- While in jail or prison
- While in a nursing home
- For another reason

Person-based:

Does Mary sometimes live or stay somewhere else?

No  Yes

- To attend college
- To be closer to work
- While in the military
- To stay at a seasonal or second residence
- For a child custody arrangement
- While in jail or prison
- While in a nursing home
- For another reason

2000 Be Counted

Are you filling out this form for ALL of the people who were living or staying at this address on April 1, 2000?

Yes  No

If other people who live at this place were not counted, please answer the questions on the next page(s) for each of them. Include family members, nonrelatives, or anyone else who lives here most of the time. Do not include people living away at college, in the Armed Forces, or in a nursing home, correctional facility, or other institution.

2005 ACS paper

25

a. Do you or any member of this household live or stay at this address year round?

- Yes → SKIP to the questions for Person 1 on the next page
- No

b. How many months a year do members of this household stay at this address?

Months

c. What is the main reason members of this household are staying at this address?

- This is their permanent address
- This is their seasonal or vacation address
- To be close to work
- To attend school or college
- Looking for permanent housing
- Other reason(s)– Specify

2005 ACS  
CAPI/CATI

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Forms Answer Navigate Options Help

Main Path ADDR HHRos FAQ Exit

? [F1]

The next questions are to help refine this list. I have listed...

- Read all bolded names.

**Are any of these people away NOW for more than 2 months, like a college student or someone in the military?**

- DO NOT select children in boarding school or summer camp.
- Select children in joint custody who are not currently staying at the sample address, regardless of the length of stay.
- Select the persons who are away NOW for more than 2 months.
- Enter all that apply, separate with commas.
- The two month period is not anchored by a specific reference date, but can encompass the two months prior to survey contact or the two months following the survey contact day.
- If no one is away, enter 999 to continue.

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Forms Answer Navigate Options Help

Main Path ADDR HHRos FAQ Exit

? [F1]

**Do any of these people...**

- Read all bolded names.

**have some other place where they usually stay?**

- DO NOT select children in joint custody who are currently staying at the sample address, regardless of where they usually stay.
- DO NOT select commuter workers who stay in some residence closer to work when their family residence is the sample address.
- Select commuter workers who stay at the sample address in order to be closer to work.
- Select the persons who have some other residence.
- Enter all that apply, separate with commas.
- If no one has another place where they usually stay, enter 999 to continue.