

Pretesting 2010 Census Questionnaires for People with Atypical Living Situations¹

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1. Introduction

The majority of the people in the United States are enumerated in the census by a self-administered questionnaire mailed to their place of residence. However, there are many census operations that enumerate people living in the United States in situations that are not conducive to receiving a mailed questionnaire. Some of these operations are targeted at very rural parts of the country, where city-style addresses are not used. Others are targeted at places that house groups of people, such as college dormitories. Each operation has its own procedures, and many of them use tailored census questionnaires to gather data in a way that is most appropriate to the situation.

This paper focuses on qualitative pretesting conducted with two questionnaires that will be used in the 2010 Census to enumerate people that could have been missed in other census procedures. The particular populations of interest for these operations are people who have atypical living situations and may have no “usual place to stay.” Examples include those that frequent transitory locations such as RV parks and marinas; people experiencing homelessness; and people who live in housing without a city-style street address (including basement or garage apartments, as well as very rural addresses). This particular population has been shown in past census evaluations to be very difficult to accurately count in the census (Hunter, de la Puente and Salo, 2003; Mings, 2001; Brownrigg, 2003; Campnelli, Salo, Schwede, and Martin, 1990; Shapiro, Diffendal, and Cantor, 1993; de la Puente, 1993).

This paper reviews the pretesting of two census questionnaires – the Be Counted and the Enumeration of Transitory Locations questionnaires – examining results from the pretesting specific to these populations with atypical living situations. The goal of this testing was to ensure that people with atypical living situations will be counted correctly in the 2010 Census. Special concern was paid to correctly determining the specific geographic location where highly mobile people should be counted.

1.1 Be Counted

The Be Counted Questionnaire is self-administered and available to persons who think they may not have been counted in the census, thus allowing the opportunity to provide a completed questionnaire. The questionnaire is intended for use by 1) households which, for what ever reason, have not received a questionnaire either in the mail or delivered by an interviewer, 2) individuals who are tenuously, or loosely, attached to a household and who feel they may have been omitted from the questionnaire completed by their households, and 3) persons who have no usual residence (including those experiencing

¹ This report is released to inform interested parties of research and to encourage discussion. Any views expressed on the methodological issues are those of the authors and not necessarily those of the U.S. Census Bureau.

homelessness).² During the time of the decennial census, Be Counted questionnaires will be available in a variety of public locations, including post offices, libraries, and convenience stores. Respondents who think they may not have been counted in the census are encouraged to pick up, fill out, and return the questionnaire in the mail. A similar operation was conducted in Census 2000 (see Carter, 2002 for an evaluation of that operation).

Because the questionnaires are publicly accessible self-administered questionnaires, respondents must provide complete and accurate address information so that the Census Bureau can count the people listed on the forms in the right place. The Census Bureau accomplishes this through two primary methods. Either the address is matched to an address on the Census Bureau's Master Address File or it is geocoded to a small geographical area, and an interviewer is sent to that area to confirm the exact location of the address. Persons experiencing homelessness are expected to provide enough location information so that they can be counted within a specific level of geography. The ability of these questionnaires to collect a complete and accurate address is one of the components that was tested during the cognitive test of this questionnaire. Other components examined with this research included how respondents understand the instructions for who to list on the form, and whether they can successfully navigate the form, completing all of the necessary information.

1.2 Enumeration of Transitory Locations

The Enumeration of Transitory Locations (ETL) operation seeks to enumerate people who have no place of usual residence, other than a transitory location. The Census Bureau has identified several types of places where people might be living temporarily or permanently with no other usual residence. These places are Recreational Vehicle (RV) campgrounds and parks, marinas, commercial and public campgrounds, fairs and carnivals, hotels and motels, and military hotels and campgrounds. Census staff will visit places like these and determine if there are people living or staying in these units that have no other place where they usually live or stay. Under that circumstance, the person will be interviewed and reported in the census at that place. Thus, the ETL questionnaire is an interviewer-administered paper data collection that uses a screener questionnaire to determine whether to collect census data at each unit (or whether people in the unit have another place they could and should be enumerated). Though transient quarters have been enumerated in different ways throughout the decades, this is the first decade the Census Bureau has fielded the Enumeration of Transitory Locations operation (see Brownrigg, 2003 for concerns with former methodologies for enumerating highly mobile people).

This questionnaire is administered differently than the Be Counted questionnaire, thus issues surrounding it are likely different. In the ETL, an interviewer is present to administer the interview, and there are two questionnaires to navigate – the screener and the main questionnaire. This paper focuses on the respondent's experience with these questionnaires and interviewers' ability to successfully navigate the forms.

² Though this is not the primary means of enumeration for persons experiencing homelessness in the census, it is one of the opportunities provided to them for enumeration. This form does not attempt to tabulate the number of people experiencing homelessness in the United States because it is only one of the several ways that they can be enumerated.

2. Methods

Several different methodologies were used in the studies presented here. Full reports for each study are available (Childs, Norris, and Gerber, forthcoming; and Jurgenson and Childs, forthcoming), but a brief synopsis of each will be presented here.

2.1 Be Counted

First, for the Be Counted questionnaire, cognitive testing was conducted to examine how potential respondents would understand and be able to respond to the questions. We recruited a purposive sample of persons who were experiencing homelessness, highly mobile or tenuously attached persons who might be omitted from a household census questionnaire, as well as respondents living in a household that could be entirely missed in the census (such as a basement apartment attached to a single-family home entirely unnoticeable from the outside). Because we were concerned with respondent difficulties in providing address information, we also attempted to recruit respondents living in situations that might create problems recording a geocodable address, such as doubled up families who share an address and persons using a PO Box for mail, either exclusively or in conjunction with a street address or rural routes. Table 1 describes the particular living situations of respondents interviewed in this cognitive test.

Respondent Situation	Number of Respondents
Living in shelter	6
Living on street	3
Transitional housing or Single Room Occupancy	2
Embedded Housing (Basement, over garage)	6
Tenuously attached	3
Standard Housing	4
Total	24

Respondents were interviewed using a cognitive interviewing protocol which included retrospective probing. In addition to meaning and paraphrase debriefing probes, we asked expansive probes to ascertain the respondents' actual living situations.³ Because we were only able to identify respondents with a limited set of living situations, we included four vignettes as a final task for the respondents. These vignettes identify some less common living situations, and collect respondent reactions to them in a hypothetical mode (see Gerber, Keeley, and Wellens, 1997, for more information on this type of task). Additionally, as a part of the cognitive test, the researcher made a subjective assessment of each respondent's literacy and form literacy.⁴ This was judged on a relative basis and used as a consideration during the analysis.

³ Some of these methodological terms may require definition. Willis (2005) defines *retrospective probing* as the solicitation of information after questionnaire administration (52). A *paraphrase debriefing probe* solicits respondents to rephrase questions in their own words (117) and *expansive probing* is a technique that expands the question topic to information in a broader context (104-105).

⁴ Literacy was often assessed by respondent's ability to read parts of the form aloud, or speed of reading during the interview. In a couple of situations, the researcher ended up reading the form aloud to the respondent, because he or she expressed considerable difficulty reading him or

2.1 Enumeration of Transitory Locations

Second, for the ETL questionnaires, we conducted the study with two components both involving live field interviews. Because the situation we were investigating was very specific – looking for people in places like RV parks and marinas that have no other usual place to live – we chose to conduct the study in a few RV parks and marinas in the Washington DC metro area. In the first portion of the study, we brought in two experienced Census Bureau survey interviewers, trained them on the questionnaire, and then took them out to an RV park to enumerate units as will be done in 2010. They were observed conducting the interviews and debriefed on their experience. As professional interviewers, they were asked for their opinions on the questionnaires.

The second component of the qualitative test involved sending research teams to two RV parks and one marina to conduct interviews along with respondent debriefings to assess respondents' understanding of the screener questions as well as to observe any difficulty the respondents had in the actual census interview itself. By using these two components, data were gathered on both the usability of the form for the interviewers (focused on in the first component) and respondent understanding of the interview (addressed in the second component). Because the census interview was nearly identical to the census Nonresponse Followup interview, and those questions had already been cognitively tested (Childs, et al., 2009), this study focused on the screener and introduction questions unique to this questionnaire.

Table 2 describes the respondents contacted for this study and whether or not they had a usual home elsewhere, that is, other than at the transient location where we found them.

Types of Respondents	RV parks	Marina	Total
Respondents with Usual Home Elsewhere	28	1	29
Respondents with No Usual Home Elsewhere (Completed ETL)	20	6	26
Refusals	7	2	9
Total Respondents	55	9	64

Note that both of these tests used small purposive samples and are not meant to be random or representative samples of the population or subpopulation. These tests were conducted to examine how the questionnaires would be understood and completed by interviewers and respondents.

3. Results

Respondents who were judged by the researcher to have low levels of literacy and form literacy had difficulty with questionnaire navigation, which led to inaccurate and/or poorly formatted answers. The experience of living a mobile lifestyle, combined with low levels of literacy and form literacy, also produced problems with gathering address

herself. Form literacy was assessed by relative ease that the respondent navigated the form and comments made about prior form completion.

information unrelated to navigation problems. Examples of each of these types of problems identified through this testing are presented below.

3.1 Low Literacy Issues: Unfamiliar Words and Phrases, and Vague Language

Respondents in the Be Counted study had trouble understanding the instructions about who should and should not be listed on the self-administered Be Counted questionnaire. Figure 1 shows the tested instructions. These instructions attempted to convey that persons in certain types of group living situations should not be included on the household census questionnaire,⁵ and that persons experiencing homelessness should report for the address where they stayed on Census Day.

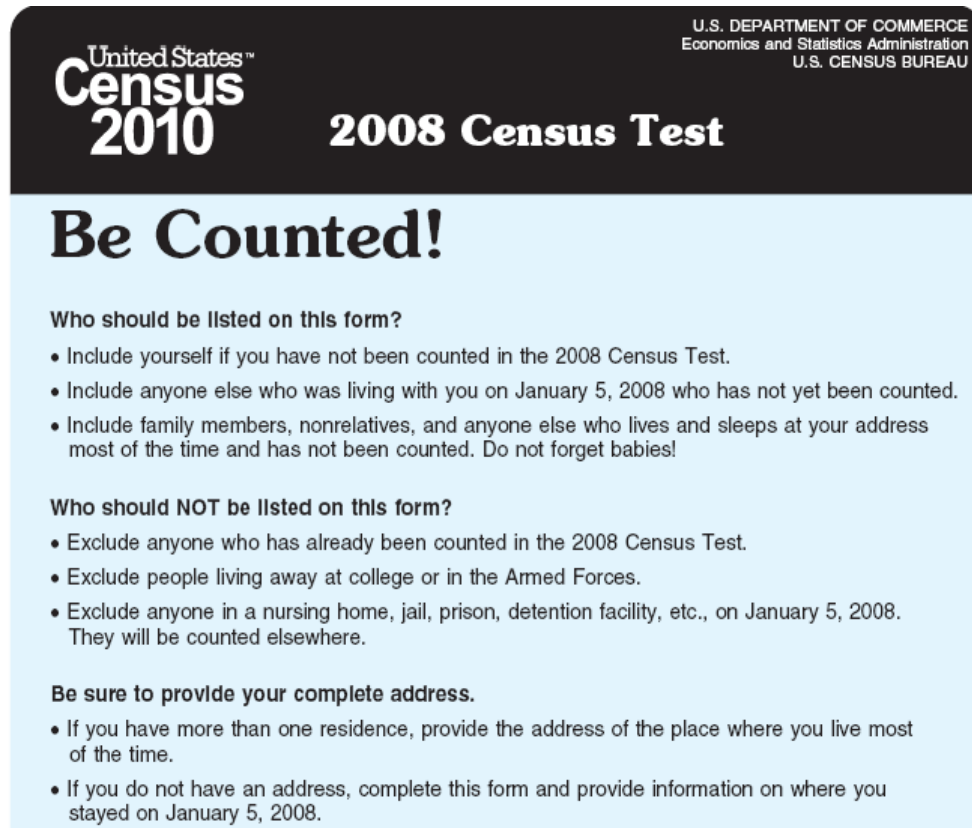


Figure 1: Pretested Instructions for the Be Counted Questionnaire

Results showed that low-literacy respondents misunderstood the word “exclude” and the explanatory sentence “They will be counted elsewhere.” These respondents misunderstood the purpose of the “exclude” instructions – to explain who should and should not be listed on this particular questionnaire. Respondents reported that the questionnaire seemed to be saying that there are people the Census Bureau did not want to count. Some respondents responded negatively to the idea of not counting everyone, and commented that it is wrong to exclude anyone, because “everybody counts.” In addition the vague nature of the sentence “They will be counted elsewhere” led some respondents to believe that certain kinds of people would be counted in a different census at another time, or in another country, possibly by an entity other than the Census Bureau.

⁵ These types of group living situations are called “group quarters.” These places are enumerated in the census via other special operations.

Additionally, the statement about counting people elsewhere appears on the form only once, and not directly connected with each of the “exclude” statements. Some respondents did not make the connection between the statements about people living away in college or in the Armed Forces and the statement that they would be counted elsewhere.

These misunderstandings could lead respondents to list people on the questionnaire that should not be listed at the address they provide. We recommended making the language more understandable by changing “Exclude” to “Do NOT Include.” Also, we recommend including the sentence “We will count them at those places” in both bullets.

These recommendations were incorporated into the questionnaire for the 2010 Census. Some additional formatting of the instructions were made to make them easier to visually navigate. Figure 2 shows the revised instructions.

United States[™]
Census 2010

U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

Be Counted!

This is an official census form for people who might not have been counted already.

Who should be listed on this form?

- Include yourself if you have not been counted in the 2010 Census.
- Include anyone else who was living with you on April 1, 2010 who has not yet been counted.
- Include family members, nonrelatives, and anyone else who lives and sleeps at your address most of the time and has not been counted. Do not forget babies!

Who should NOT be listed on this form?

- Do NOT include anyone who has already been counted in the 2010 Census.
- Do NOT include people living away at college or in the Armed Forces. We will count them at those places.
- Do NOT include anyone in a nursing home, jail, prison, detention facility, etc., on April 1. We will count them at those places.

Provide your complete address.

- If you do not have an address, mark the box under Question 1 and provide as much information as possible about the place you were staying on April 1.
- If you have more than one residence, provide the address of the place where you live most of the time.
- Please do not provide a PO box address. The Census Bureau needs to know the location of where each person was living or staying on April 1.

Figure 2: Revised Instructions for the Be Counted Questionnaire

In addition to these changes on the Be Counted questionnaire, these recommendations were incorporated into the ETL operation. In the ETL, an “information sheet” is provided to respondents to refer to while they are being interviewed. The first reference to this list

regards who to and not to include on the household roster. The language “Do not include” instead of “exclude” was used in this situation for the same literacy reasons described above for the Be Counted questionnaire.

3.2 Low Form Literacy Issues: Unfamiliar Questionnaire Layout and Formatting Style

The address response area on the self-administered Be Counted questionnaire was formatted differently than the standard post office format in order to accommodate automated geocoding.⁶ Because one must search for response fields that are not where one expects them to be, this task was especially confusing for respondents with low form literacy. Figure 3 shows the tested address question and response fields.

1. What is the full address of the place you were living on January 5, 2008? If you have more than one residence, provide the address of the place where you live most of the time. Print address below. Please complete all that apply.

Mark this box if you had no address on Saturday, January 5, 2008. Use the boxes below to identify the location where you stayed. Include city, county, state, ZIP Code, and any other information such as street or park name.

Street address number

Apartment number

Street name

Rural route type and number Rural route BOX number

PO box number

City

County

State or foreign country

ZIP Code

Figure 3: Pretested Address Fields on the Be Counted Questionnaire

Respondents with low form literacy committed a variety of errors, including:

⁶ Geocoding is the process by which addresses provided on Be Counted questionnaires are “mapped” or given specific geographical coordinates so that they can be matched to the Census Bureau’s Master Address File. Automation of this process allows it to become much faster and more efficient than if the addresses needed to be mapped by clerks. However, automating the address fields necessitates breaking them up into smaller components than respondents are typically used to seeing (e.g., House Number is separate from Street Name).

- Writing address information in the wrong field (e.g., street name in the street address number field)
- Duplicating address information (e.g., writing street name in several fields)
- Providing addresses that were not geocodable (e.g., P.O. Box, inadequate detail on street location, or facility name but not location).
- Not marking the “no address” check box when appropriate because they seemingly misinterpreted it as an instructional item rather than as a box to be marked.

The Census Bureau needs geocodable address information in order to be able to count people in the correct housing units. Questionnaires with information in the wrong fields, including misplaced address information, could cause processing errors. Some of these errors would require the Census Bureau to conduct an extra followup interview. Failure to mark the “no address” check box is especially problematic when the respondent also does not provide a complete address. If the respondent has indicated that he or she has no address through the checkbox, then the Census Bureau can process the questionnaire in a special way to ensure the person is still included in the census. If the respondent fails to mark the “no address” checkbox, and does not provide a complete address, the Census Bureau will not be able to process the form.

Aware of the need for automated geocoding,⁷ we recommended moving towards a standard post office format for the address fields (including the order of the fields), using terms respondents were more familiar with to designate address (e.g., House number rather than Street Address number), and removing the P.O. Box field from the questionnaire (since the Census Bureau prefers physical address information). Figure 4 shows the revised questionnaire with these improvements.

⁷ See Footnote 6.

1. What is the full address of the place you were living on April 1, 2010? If you have more than one residence, provide the address of the place where you live most of the time.

Mark this box if you had no address on Thursday, April 1, 2010. Use the boxes below to identify the location where you stayed. Include city, county, state, ZIP Code, and any other information such as street or park name.

House number

Street name

Apartment number

Rural route address

City

State

ZIP Code

County

Figure 4: Revised Be Counted Address Fields

To address the other concerns, we also recommended using a question (rather than a check box item) to ask directly if the respondent is experiencing homelessness. Because this was a radical departure from anything that the Census Bureau had fielded, and there was not time for a field test after this cognitive testing, this change was not implemented.

3.3 Mismatch between a Mobile Lifestyle and the Questionnaire's Purpose

We suspect that the experience of a mobile lifestyle produces a heightened awareness to the need to have an address at which one picks up mail, which may differ from where one physically stays. We believe this is true for both people experiencing homelessness and people who live in transient units like RVs and boats. This experience also may lead to people who do not know address details of the particular place (or places) that they frequent, such as the exact site number of an RV park or the particular cross streets of a park. These factors, combined with elements of the questionnaire's design, produced difficulties unique to highly mobile respondents.

Results showed that highly mobile respondents:

- Misunderstood the purpose of the Be Counted questionnaire. Respondents reported that the purpose of the questionnaire was to gather an address at which the Census Bureau could send them the "real" census questionnaire in the mail.
- Were sometimes unsure which address to provide, because they spent time in different places. Often they provided an address where they knew they could

receive mail, rather than the physical location at which they lived or stayed on Census Day (e.g., street location, park name).

- Did not know all of the requested address information. Respondents provided incomplete address information or omitted address information when they were unsure of the site or unit number within a campground, RV park, or marina.

One aspect of a “typical” living situation is a high degree of consistency in the number of occupants of a residence and the permanence of that residence’s location. Results from the ETL testing showed that the ability to gather the information needed to determine who to count at which address was complicated by atypical living situations. Atypical living situations might not have a consistent address, a consistent moving pattern, or a consistent number of people living in the unit. RV’s, for example, are likely to be highly mobile and may be parked at addresses that are not like those typically recorded by the Census Bureau. RV’s may not have consistent patterns of movement over time, so it might be difficult for these respondents to gauge where they spend most of their time. For RV’s at a campground, the number of people at the site at any given time may also change. All of these factors combine to make counting the number of people at a location more difficult than it is in consistent, non-mobile, “typical” living situations.

For the interviewer-administered ETL questionnaire, during testing we realized that while the respondents often did not know the details of their address at the RV park or marina, the interviewers had this information from their own maps supplemented by any maps provided by park management. Interviewers were required to record the complete address of the unit on a page where they list all of the addresses within their assigned geographic area (block or several blocks), so it was a natural recommendation that the interviewer complete the address on the questionnaire, and then confirm it with the respondent.

From testing with the Be Counted questionnaire, it appears that as highly mobile people try to interpret the intent of the questionnaire, they sometimes assume the Census Bureau wants to gather a mailing address, where they could later send them questionnaires in the mail. Some respondents spoke as if they remembered the census “long form” – which was used in past censuses to gather detailed housing and economic data on 20 percent of households in the United States⁸ – and thought there would be more questions that they would need to complete at a future time. Misunderstanding the questionnaire’s purpose led respondents in testing to provide an address other than that of where they were staying on Census Day. To remedy this, for the self-administered Be Counted questionnaire, we recommended including a sentence at the top of the questionnaire that indicates that the questionnaire is, in fact, an official census questionnaire (shown in Figure 2). Additionally, to decrease the likelihood of receiving a mailing address, we recommended removing the response field for a P.O. Box (see Figures 3 for the tested form and the revised form in Figure 4). These changes were implemented. We also recommended creating custom questions for people experiencing homelessness that ask for their physical location, including fields such as facility name, park name, etc., specific to this population’s experience. Again, this recommendation was not implemented due to the fact that it was a radical departure from the previously tested questionnaire and there was not enough time to sufficiently test a revised questionnaire.

⁸ In 2010, there will only be a “short form” census, which will collect about 10 data items from each person living in the household. The former long form has been converted to the American Community Survey which will collect data throughout the decade to provide more up-to-date information on the nation’s population.

4. Conclusions

Special considerations must be taken into account when designing questionnaires for populations in atypical living situations, with special attention to those who are highly mobile as well as those with low literacy and low form literacy. Because of these special circumstances, survey questionnaire designers should be especially careful to: 1) Use response formats that people in this population are used to seeing (e.g., for reporting address information); 2) Use common terms that people in this population use as well as direct sentence structure (e.g., using “do not include” instead of the slightly higher fluency “exclude”); 3) Be specific and direct about the purpose of the questionnaire as well as the instructions provided for the questionnaire, and consider that the experiences of people in this population may combine with low literacy levels to affect their interpretation and understanding of the questionnaire’s purpose and how to complete it; and 4) If possible, use interviewers for these special populations to assist both with literacy issues as well as specialized knowledge of census rules related to these atypical situations. Because these living situations are atypical, it is difficult to provide all relevant information on a self-administered questionnaire in an easy-to-understand format.

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