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ACS Internet 2011 Project:
Report for Rounds 1 and 2
of ACS Wireframe Usability
Testing and Round 1 of ACS Internet
Experiment Mailing Materials Cognitive Testing

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Abstract

Usability testing was performed on 15 prototypical screens with limited functionality (i.e., wireframes) comprising an initial version of an online version of the American Community Survey (ACS). The wireframes for Rounds 1 and 2 were identical and the same protocol was followed for each round. The wireframes were tested alone in the first round, and the mailing materials for ACS Internet experiment were tested along with the wireframes in the second round of wireframe testing. The panels for the second round of testing matched the five panels fielded in the 2011 ACS Internet Test: Prominent Offer (Choice), Not Prominent Offer, Push Internet, Push Internet Modified Schedule, and Control (Production – no Internet option). Participants were randomly assigned to read one of the five sets of materials for one panel condition and then they used the materials to access the online wireframe instrument. For the Control condition, the mailing materials offered no option for taking the survey online, so participants were given materials from one of the other panels in order to access the online survey. The results from the 2011 ACS Internet Test will be used in planning for an Internet response option in the 2020 United States Census.

1.0 Introduction

Although limited response to Census 2000 was offered online, the Decennial Census in 2010 did not offer an Internet option for responding. However, the U.S. Census Bureau tested an Internet version of the 2011 American Community Survey (ACS), which collects demographic and economic data that were previously collected by the Decennial Census Long Form. The ACS is an ongoing monthly survey with a sample of 250,000 households per month (3 million per year). While the Decennial Census is intended mainly to count the population, the ACS describes it. The ACS provides critical economic, social, demographic, and housing data that are used to allocate resources to communities.

The 2011 ACS Internet Test was fielded in April 2011. The results from the 2011 ACS Internet Test will be used in planning for both future versions of the ACS and an Internet response option in the 2020 United States Census. The tests described in this report were the first two rounds of five iterative versions of the online 2011 ACS Internet Test instrument.

1.1 ACS Internet Option

An Internet option represents a fourth mode of administering the ACS, joining the existing paper mail form mode, the computer-assisted telephone interview (CATI) mode, and computer-assisted person interview (CAPI) mode. The paper and Internet versions of the ACS are self-administered modes, while the CATI and CAPI versions are administered by a Census Bureau interviewer. Because the paper and Internet forms are both self-report modes and the focus is on the new Internet form, most comparisons drawn in this report will be between question formatting and presentation between the paper and Internet versions.

1.2 2011 ACS Internet Test Mailing Materials

In 2009-2010, the Experimental Design Team[1] developed five experimental panels. These panels were developed to identify new messages and procedures that might increase internet response rates.

The Five Experimental Panels

1) The Prominent Internet Offer (Choice) panel received a Pre-notice letter, then an Initial Mail Package, then a reminder postcard, and then a replacement mail package and questionnaire. In this panel, the Pre-notice letter did not contain the option for taking the survey online, but respondents were offered the option to take the survey online in the introductory letter in the initial mail package, on the questionnaire, in the Reminder postcard, and in the letter and questionnaire cover in the replacement mail package.

2) The Not Prominent Internet Offer panel received a Pre-notice letter, then an Initial Mail Package, then a Reminder Postcard, and then a replacement mail package,[2] and questionnaire. The letters and postcards did not mention the Internet option, but the paper questionnaire did have a non-prominent message on the first page that gave them the option to go online to complete the survey.

3) The Production (Control) panel received a Pre-notice letter, then the Initial Mail Package, then a reminder postcard, and then a Replacement Mail package and questionnaire. This panel represented the ACS mailing materials as they are currently being used. That is, there was no mention of an Internet option for taking the survey anywhere on any of the letters, on the postcard, or on the questionnaire.

There were two Internet Push panels that initially only offered the Internet option. For those panels, respondents received the Pre-notice letter that told them that they will be receiving an instructional packet about the ACS.

4) The Internet Push Panel Regular Schedule panel received the Pre-notice letter, followed by the Modified Initial Package and the Reminder Postcard. About three weeks later, the Replacement Mail Package was sent, on the same timing as ACS production. The Modified Initial Mail Package included an Introductory letter that only offers the option of taking the survey online along with an instruction card. The ACS questionnaire was not included in the first mailing. The Replacement Mail Package included both a letter and a paper questionnaire. The letter encouraged respondents to complete either the paper questionnaire or the online survey.

5) The Internet Push Modified Schedule panel differed from the Internet Push Regular Schedule panel with respect to when the mail items were sent to respondents (e.g., the second mailing was sent a week earlier in the Modified Schedule panel). As with the Internet Push Regular Schedule panel, respondents for the Internet Push Modified Schedule received a Pre-notice letter that told them that they would be receiving an instructional packet about the ACS. The Modified Initial Mail Package included an Introductory letter that only offered the option of taking the survey online. No ACS questionnaire was included in the first mailing. The Replacement Mail Package was the same as in the Prominent Internet Offer panel. It included both a letter and a paper questionnaire, and respondents were offered the option to take the survey either online or to use the enclosed form.

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[1] The Experimental Design team included members from the American Community Survey Office (ACSO), Decennial Statistical Studies Division (DSSD), HHES (Housing and Household Economics Statistics), Population Division (POP), Statistical Research Division (SRD; now the Center for Survey Measurement), and other divisions within the Census Bureau.

[2] A Replacement Mail Package will only be sent to those households that have not yet responded.

1.3 Report Structure

This report details the results of Rounds 1 and 2 of 5 rounds of usability testing for the 2011 ACS Internet instrument and one formal round of cognitive testing of the mailing materials associated with it. The wireframe screens were not changed between Rounds 1 and 2, so the results are presented together in this report. Eye-tracking results are presented with the usability findings, including heatmaps and gazeplots where appropriate.[3] The number of participants represented in the compiled heatmaps and gazeplots is included with each figure; where the "n=" number does not match the number of total participants run in the study (for instance, a figure that shows n=8 for Round 1 when there were 9 total participants), there was no usable eye-tracking data captured for at least one participant for that screen.

The report structure is as follows: 1) a section describing the methods; 2) a section presenting the results of Round 1 and 2 usability results; and 3) a section presenting the results of cognitive testing of the mailing materials.

2. Methods

2.1 Scope

This usability test focused on the functionality of the screens and various features of the Internet instrument itself. The testing was not intended to evaluate the content of the ACS questions. However, if participants experienced difficulty understanding the questions, we noted it and included it with our findings.

The user interface was not tested for compliance with the Section 508 regulations, since it was not fully programmed or fully functional. Since this survey will be an instrument that will be accessed through a government Web site, it must comply with Section 508 regulations before the Web site becomes available, unless a waiver is granted.

2.2 Participants

Participants for both rounds were recruited from outside of the Census Bureau and received a $40 honorarium for their participation. Round 1 took place in March and April 2010 and Round 2 took place in April and May 2010.

2.2.1. Round 1

Nine external participants who were not Census Bureau employees were recruited from the usability laboratory's participant database. The criteria applied were: 1) at least one year of prior experience in navigating different Web sites and; 2) they had not previously participated in usability testing related to the ACS or the Decennial Census.

The average age of the participants was 46.4, ranging from 21-61.

2.2.2 Round 2

Fifty external participants were recruited from the usability laboratory's participant database using the same criteria as in Round 1. The average age of participants was 45.7 years, ranging from age 20-80.

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[3] Heatmaps are color-coded images that show where participants looked the most on a screen, with green coloring representing where they looked the least and red where they looked the most. Gazeplots are images that show, in numeric order, the coordinates on the screen where participants fixated with their eyes.

2.3 Testing Facilities

Each participant sat in a small room, facing a one-way mirror and a wall camera, in front of an LCD monitor equipped with an eye-tracking machine placed on a table at standard desktop height. The test participant and test administrator were in the same room for the reading of the general protocol, the think-aloud practice, and eye-tracking calibration. The test administrator then went into the control room (behind the one-way mirror) for the usability testing segment of the session and returned to sit in the same room as the participant for the debriefing segment.

The participant's eye movements were recorded during the usability test using a Tobii eye-tracking device. The data recorded represent the physical position of the eye's gaze as measured by the reflection of a near-infrared beam off of the pupil.

2.4 Procedure

All participants for Rounds 1 and 2 were instructed to complete the survey for themselves only. Because of the limited functionality of the wireframe screens, the name displayed on some of the screens could not be changed. Therefore, the gender-neutral name "Pat Smith" was used. The participants were given the instruction, "Please respond to the survey online as you would at home. For the purposes of this study, please pretend that your name is Pat Smith and that you speak French at home and live at 101 Main Street in Anytown, MD, 20000. Your home is a one-family house detached from any other house. You may answer all other survey questions as they apply to you in your real life." The participants were given a reference card to use to remind them of the scenario. This reference card can be found in Appendix A.

Each participant was read a general protocol, which can be found in Appendix B[4]. The test administrator read some background material and explained several key points about the session. The general protocol emphasizes that the participant's skills and abilities are not being tested, but that the participant is helping in an evaluation of the Web survey experience completing the survey and overall usability of its design elements.

Prior to beginning the usability test, the test participants completed a general consent form and a questionnaire on demographics, computer use, and Internet experience (Appendices C and D). Participants were asked to "think aloud while completing the survey (Olmsted-Hawala, Murphy, Hawala, & Ashenfelter, 2010).

Following the study, the participants completed a short satisfaction questionnaire based on the Questionnaire for User Interface Satisfaction (QUIS) (Chin, Diehl, & Norman, 1988).   (Appendix E).

After the participant completed the satisfaction questionnaire, the administrator asked the participant a series of debriefing questions about their overall experience using the prototype ACS Web survey wireframes (the debriefing questions are contained Appendix B, as part of the protocol). The debriefing questions included an inquiry about each participant's experience completing the survey and its design elements. These questions were included in the debriefing segment of the protocol following testing and are not included in the survey administered to the participants before testing. For Round 2, the administrator handed each piece of mail to the participants one at a time and told them what the timing would be between the mailings and asked him/her to read it as if he/she had received it in the mail at home. When finished examining each piece of mail, he/she was asked a series of debriefing questions about that piece of mail (Appendix B) and then the next piece was introduced.

When the testing of the mailing materials was complete, the participant was given an Introductory package from the Prominent, Not Prominent, or Push Internet conditions and instructed to begin the survey online.

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[4] The instructions for completing the online ACS instrument were the same for Rounds 1 and 2. Since Round 2 protocols asked about the mailing materials, these more complete protocols are included.

3. ACS Screens and Usability Results

Eye-tracking data were recorded during the cognitive interviews and was analyzed after the study was over. Heatmaps of all participants' data are included in the report to show overall patterns that occurred during testing. Heatmaps show areas where people's eyes were drawn the most, with areas in red having the most eye fixations and areas in green having the fewest fixations.

The wireframe screens were linked together both for Round 1 and for Round 2 so that the participant could proceed through them in linear order, but they were not fully functional. An example of why these screens were "wireframe" prototypes as opposed to regular, fully-programmed pages is that the help links were not functional for this round of testing. The non-functional prototype help screen that popped up can be seen in Figure 1. Only one participant clicked on it during testing.

Figure 1: Non-Functional Prototype Help Screen

Additionally, although participants entered a Household ID and PIN to access the survey for Round 2, the form was not functional and allowed the participants to enter the survey whether the information was entered correctly or not.

A green background color was chosen to be consistent with the paper form and the banner image was adapted from the informational brochure that is currently sent out in the production ACS mailings (Figure 2).

Figure 2: Front of ACS Frequently Asked Questions (FAQs) Brochure

The banner image is meant to symbolize the diversity of the people that the ACS represents. This image can be seen in Figure 3.
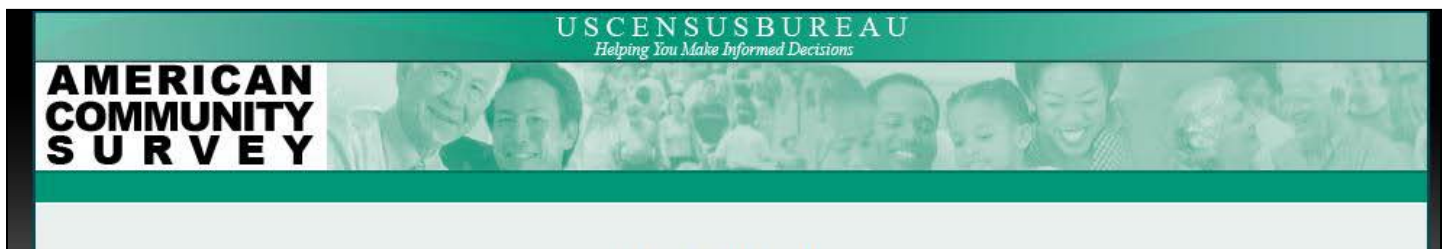
Figure 3: 2011 ACS Internet Banner Image

3. 1 Begin Testing Screen

The Web address for the internal Census Bureau server accessed for usability testing was not the same as the https://respond.census.gov Web address that is described in the mailing materials. This could have been intimidating for participants to enter due to its additional "s" in the address' structure. A simple entry screen (Figure 4) was added so that the participant could begin when ready without typing in the complex internal URL. For the second round of testing, a screen was added where participants had to enter https://respond.census.gov into a text entry field correctly in order to proceed.

This screen was used solely as a replacement for typing in the URL and was not analyzed; there is no "Usability Results" section for this screen. Figure 4 shows this "Begin Testing'" screen.
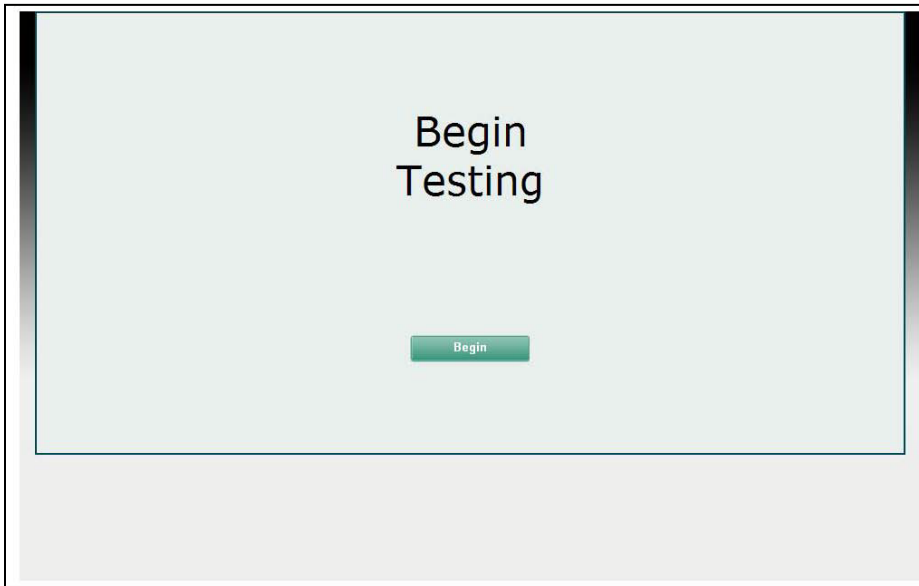
Figure 4: Begin Testing Screen

3.2 Enter URL Screen (Round 2 Only)

This test of the URL address was used to address any potential usability problems with participants having to enter the extra "s" in the Web address https://www.respond.census.gov/ACS and this can be seen in Figure 5. Because the real link to the survey could not be used to access the prototype screens, the sponsor needed another way to test whether respondents would have trouble with the "s" in the secure Web address provided to them for accessing the ACS online. For the second round of testing, the usability staff recommended that a screen be added that required the participants to correctly enter the URL into a response field on a Web screen before they could proceed with the survey. If the participant did not enter the URL correctly, an error message was displayed and the entry box was cleared. The participant would have to start over and try entering the URL again.
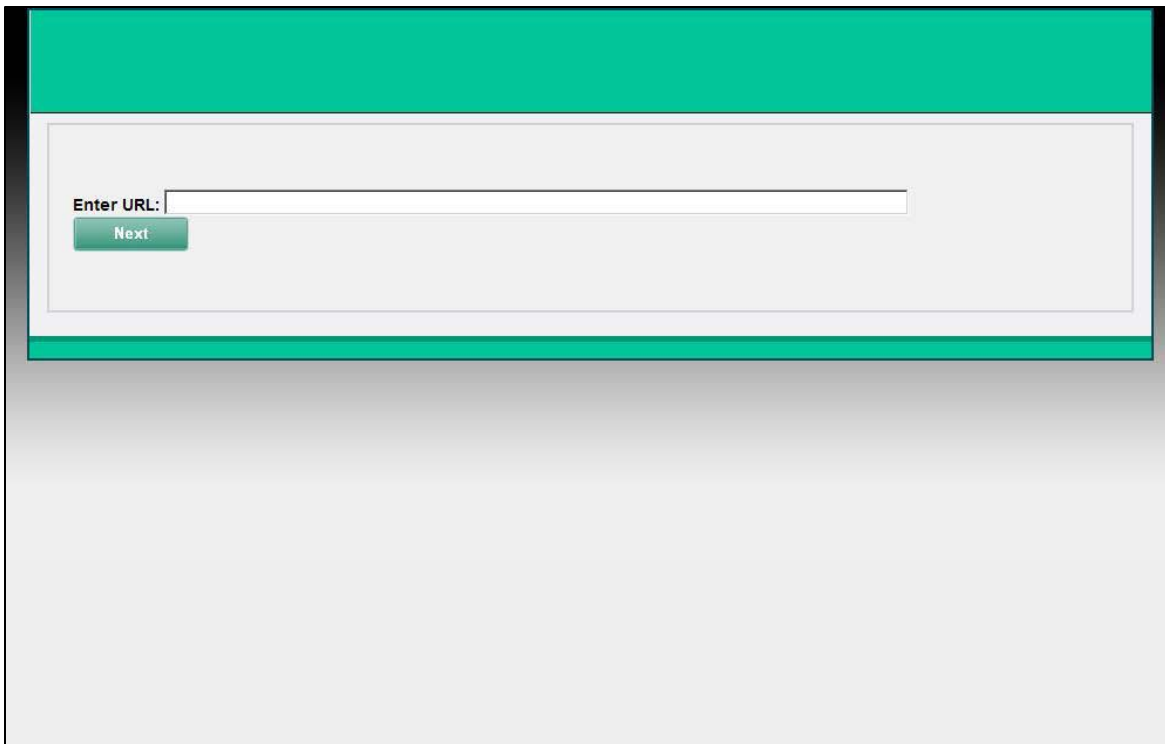
Figure 5: Enter URL Screen (Round 2 Only)

3.2.1 Enter URL Screen Usability Results

Although many participants failed to enter the URL correctly the first time they tried, all but one were able to enter it correctly within a few tries. The participant who could not enter it correctly in over 10 tries was entering incorrect characters and making mistakes unrelated to the "s" in "https."

The additional "s" did not appear to be problematic for participants.

Media: http://idc4.ssd.census.gov:3006/acstest?page=url (CRC)
Time: 00:00:00.000 - 00:04:04.611
Participant filter: All

231 counts

Figure 6: Eye-Tracking Heatmap for Enter URL Screen (Round 2 Only)

Figure 6 shows an example of a heatmap from the eye-tracking software. The click marks indicate instances where the participants clicked on the text entry field to enter or correct their response. Most of the fixations are on the beginning of the URL where the 'https' portion of the address would be placed. The patterns show that there did not seem to be issues with entering the address overall.

3.3 Welcome Screen (Round 1)

The Welcome Screen (Figure 7) was the first official ACS screen that participants saw and the first screen that had the ACS banner displayed at the top. We were interested in evaluating whether or not participants thought there was enough information on the Welcome Screen and whether participants noticed that there was a link in Spanish to a Spanish version of the survey at the bottom of the screen. We also wanted to gather general feedback about the appearance of this screen.
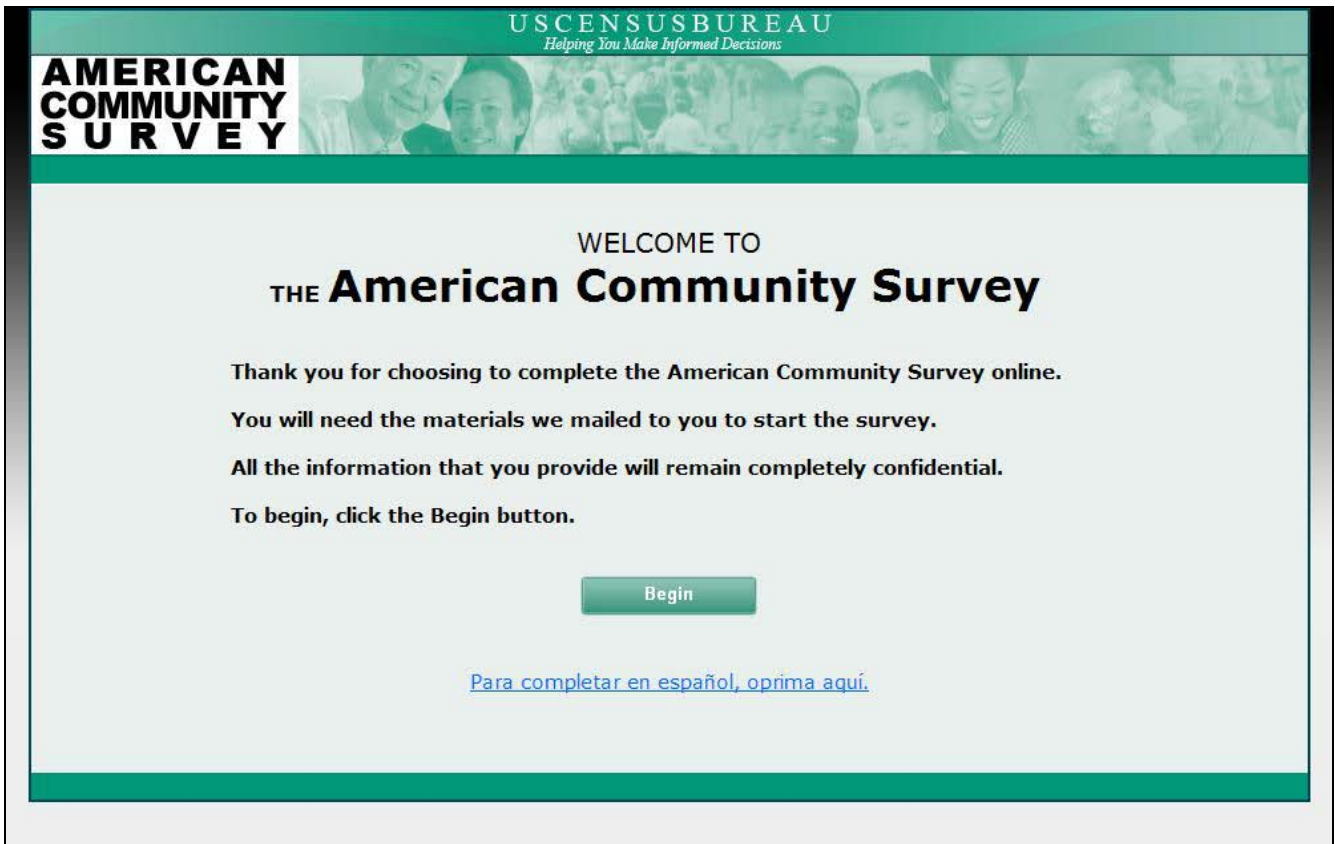
Figure 7: Round 1 Welcome Screen

3.3.1 Welcome Screen (Round 1) Usability Results

Some participants had concerns about a lack of information about security and privacy for respondent information on this screen. When beginning the survey, one Round 1 participant said softly, "I hope all this stuff is confidential."[5]

Two participants mentioned that they wished there was some more information about the ACS because they were completely unfamiliar with it. When asked during debriefing what information they thought should be provided on the Welcome screen, one participant in Round 1 (where the participants had not read all of the mailing materials before accessing the survey) asked, "Am I supposed to know what the American Community Survey is?"

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[5] There was no confidentiality statement on this screen in Round 1.
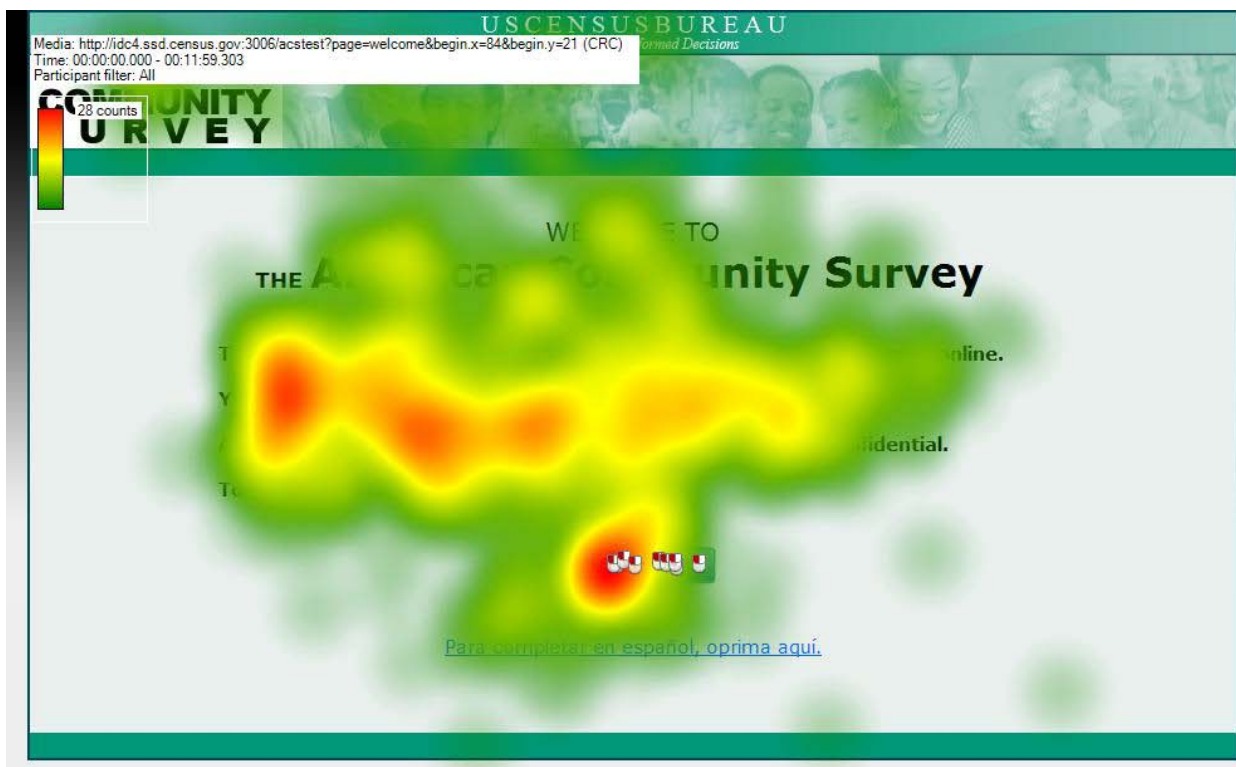
According to the Welcome Screen heatmap in Figure 8, participants focused on the left side of the text and on the Begin button the most. It appears that fixation times decrease as they move to the right of the page, possibly demonstrating that they are not reading the text in its entirety.

There are some, but not many, fixations on the banner and U.S. Census Bureau logo. People are looking at the artwork and the Census Bureau's logo, so they may be looking for information about the legitimacy of the survey. One participant remarked enthusiastically that he really liked the banner because it represented all of the people living in the United States, not just certain subsets.

There are also some fixations on the link to the Spanish version of the survey, which is consistent with the fact that most participants mentioned during debriefing that they did notice the option. The lower number of fixations in this area and the fact that no one clicked on the link can be attributed to the fact that participants did not need to use it to complete the survey because they spoke English.

3.4 Welcome/Login Screen (Round 2)

In Round 2, participants were required to correctly find their Household ID and password on the mailing materials for their condition. [6]

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[6] The Decennial Census' Census Quality Survey team, who was developing another Web survey in parallel, decided to put both the Welcome and Login components on the same screen, so a similar design was tested here.

The example Household ID in the instructional image online and on the instruction card used all 9s and 123456 was used as the PIN with the expectation that these values would be "fake" enough for participants to know not to enter these numbers, but rather to find them in their mailing materials.

There was a warning message at the bottom of the screen, but participants would have to scroll down to read it. We were interested in whether they would look for the privacy information contained in this warning message.
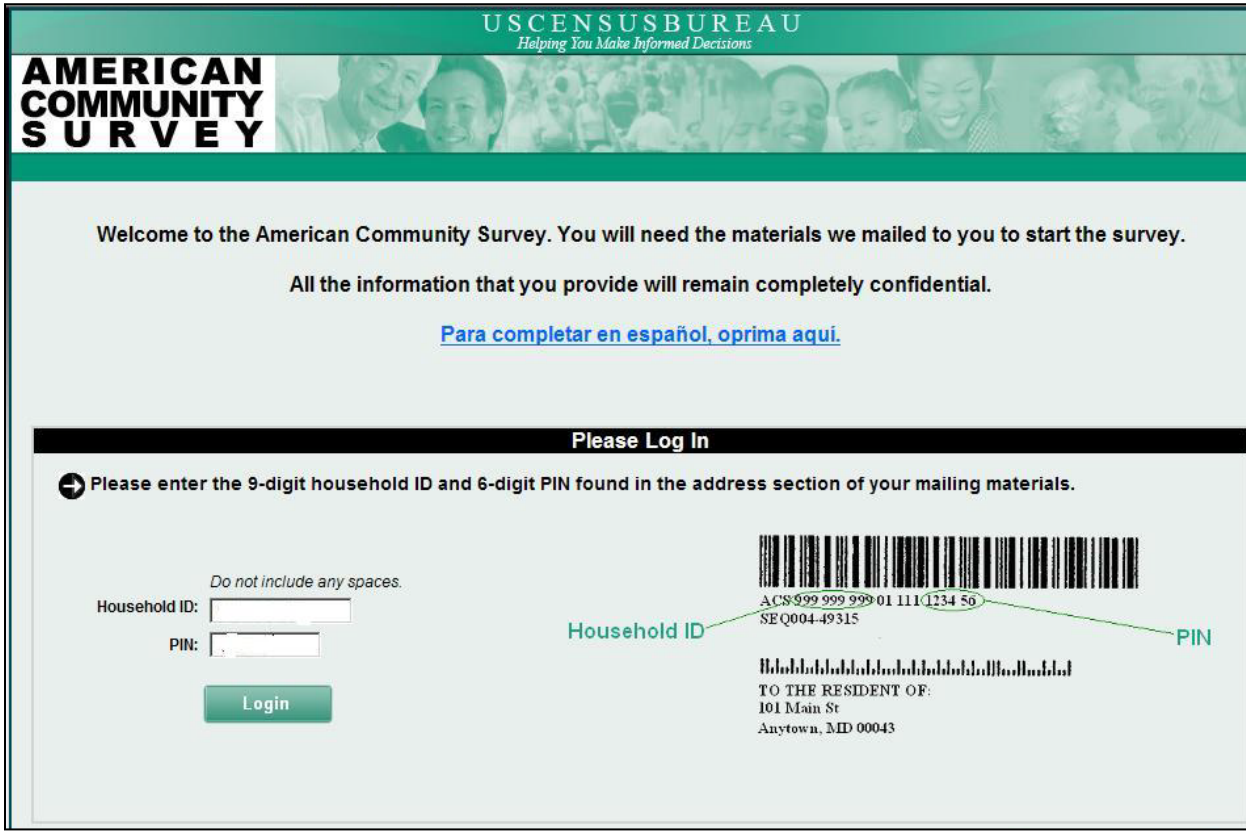
Figure 9: Round 2 Welcome/Login Screen

3.4.1 Welcome/Login Screen (Round 2) Usability Results

Figure 10 is a combined Heat Map for all 50 participants. It does appear that they are looking at the example image and the descriptive "Household ID" and, to a lesser extent, "PIN" text, as well as reading the instructions at the top of the screen. However, as will be discussed, looking at the example was associated with a major issue.

In contrast to Round 1, one participant in Round 2 did speak Spanish and said she wanted to take the survey online. There was no Spanish version available at the time of testing, however, so this was not possible.

Participants did not seem to read the warning message at the bottom of the screen (Figure 8).
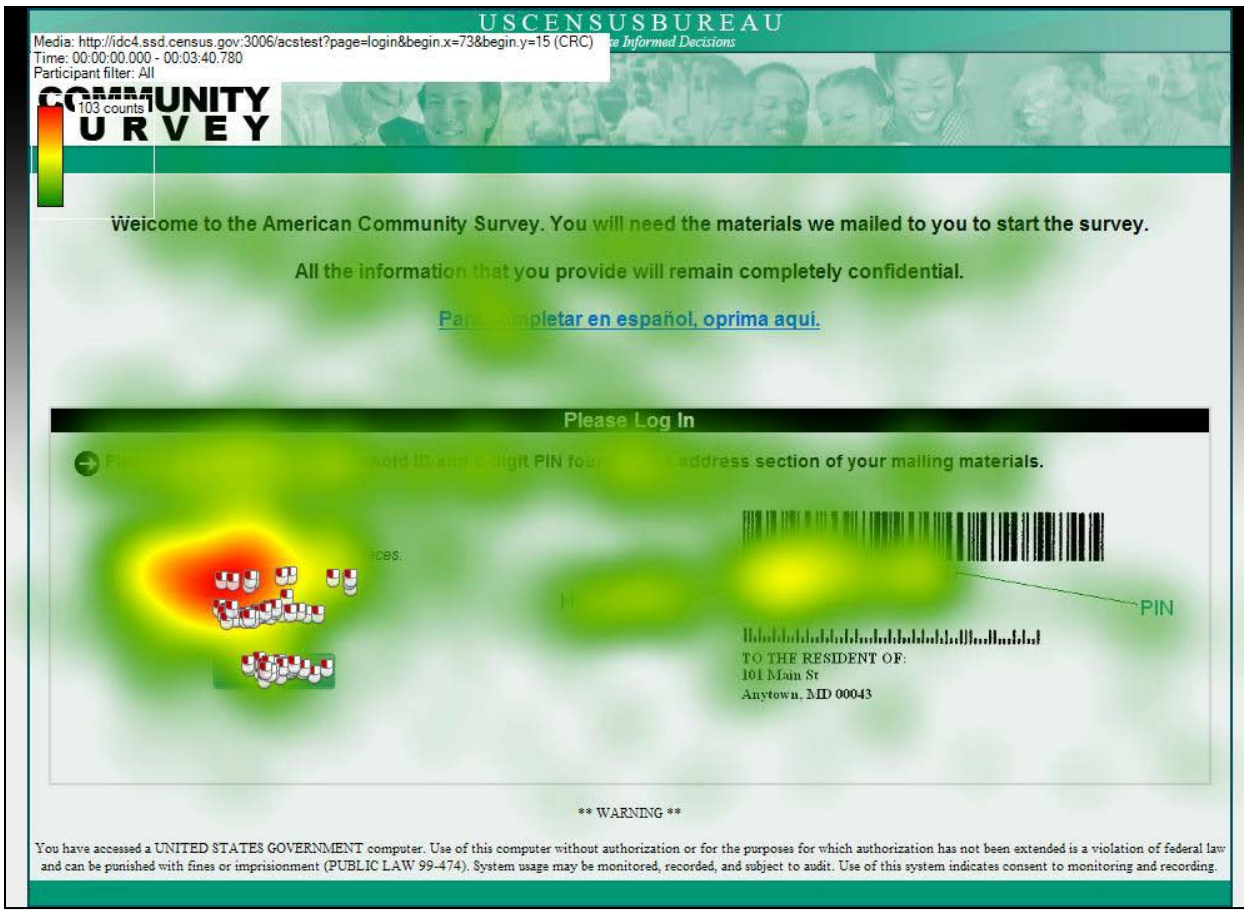
Figure 10: Heatmap for Round 2 Welcome/Login Screen (n=50)

Participants frequently entered the example numbers; sixteen of the 50 participants in Round 2 did so. An example of one such instance is shown in Figure 11.

Figure 11: Participant Entering Example HHID and PIN on Round 2 Welcome/Login Screen

Some participants also entered the entire string of numbers below the bar code. Although participants were able to enter more characters than allowable in this round of testing, the programmed instrument was limited to the correct length. Additionally, the machinery at the Census Bureau's National Processing Center (NPC) uses the numbers on the mailing labels to sort and file the mail coming into the NPC, so the solution to having so many numbers on the label is not straightforward.

Because participants were entering the example numbers, the digits were changed to Xs during the course of testing for both the example image on the Web screen and the instruction card[7] to see if this would alleviate the problem. Figure 12 shows the adjusted image.

Figure 12: Example HHID and PIN Changed to Xs

This change did not alleviate the problem. Three of the four participants who were given these images entered the Xs. An instance of this pattern is shown in Figure 13 (only four Xs instead of six were entered for the PIN, which was also an incorrect number of characters).

Figure 13: Participant Entering Xs for HHID and PIN on Round 2 Welcome/Login Screen

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[7] The instructions to take the survey online were not on the instruction card for the Prominent or Not Prominent Choice panels.

The image was changed once again during testing to pound (#) signs with a somewhat blurry appearance[8] (Figure 14) to see if that change would help resolve the problem.
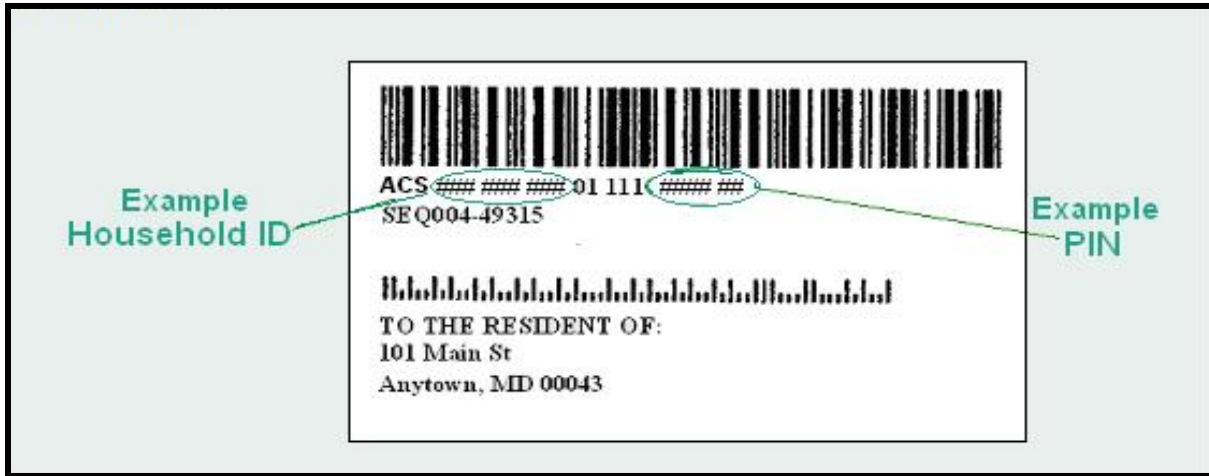
Figure 14: Example HHID and PIN Changed to #s

This change did actually seem to help. The participants in the rest of this test and the later rounds of testing did not enter the pound signs. This seems to have been the best option to come out of testing and serves as a good example of how useful usability testing can be prior to a survey release. More than one round of usability testing should be done, since this type of lesson may not have been learned in one round.

3.5 Address Verification Screen

The Address Verification (Figure 15) question asks whether or not the respondent is completing the ACS for the address listed. This question is meant to verify that the respondent is filling out the form for the correct address before any data are collected. Every participant received the same address for both rounds of testing, since the instrument was not programmed to collect individual data. The usability staff monitored whether participants had a problem with the fictitious address during testing, but it did not seem to be a problem.

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[8] The blurriness was not intentional, but may have been serendipitously advantageous in that it made typing the example more difficult for participants.
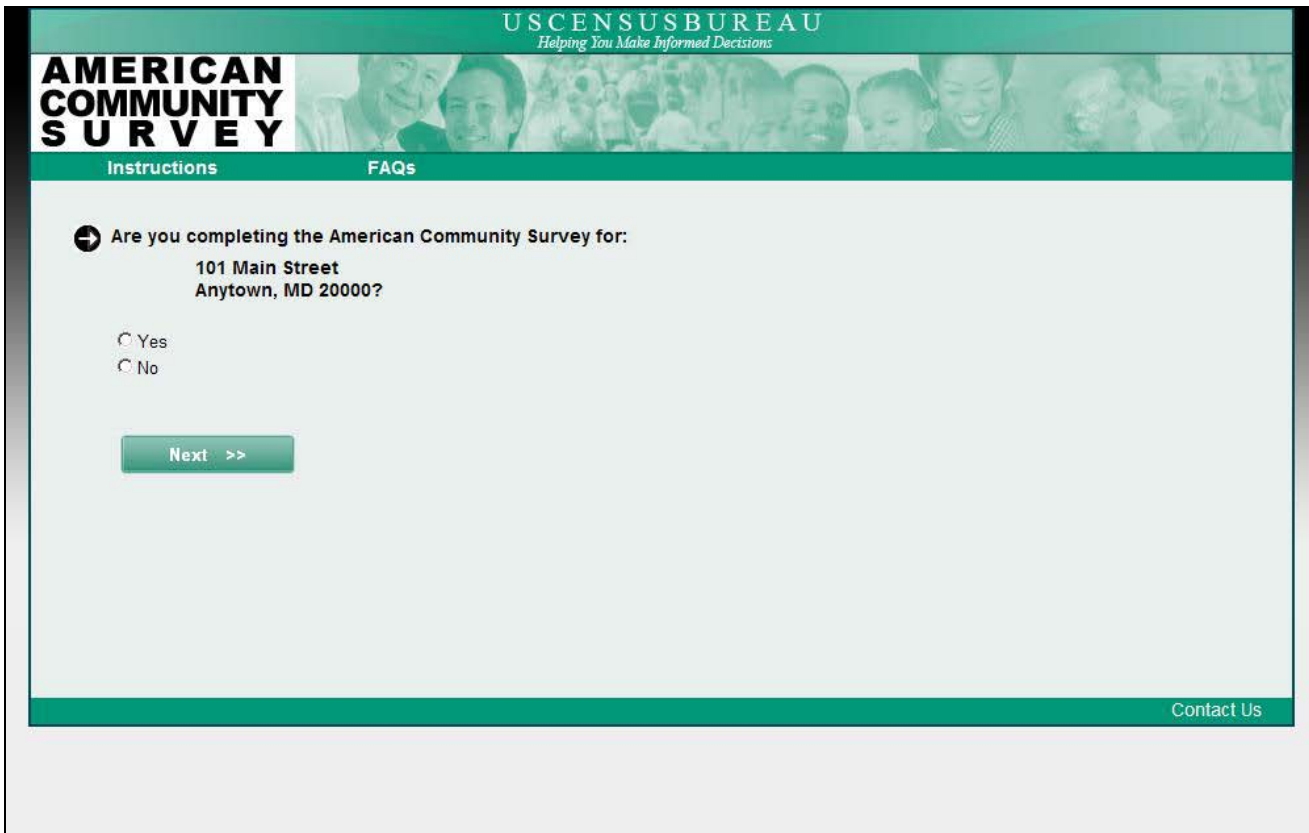
Figure 15: Address Verification Screen

3.5.1 Address Verification Screen Usability Results

In the Address Verification Heatmaps in Figure 16 and 17, it appears that participants were reading the text to verify the address. They may also have been looking at the address longer because it was different from their "real address" and they had to recall the fact that they were engaging in a fictitious scenario.
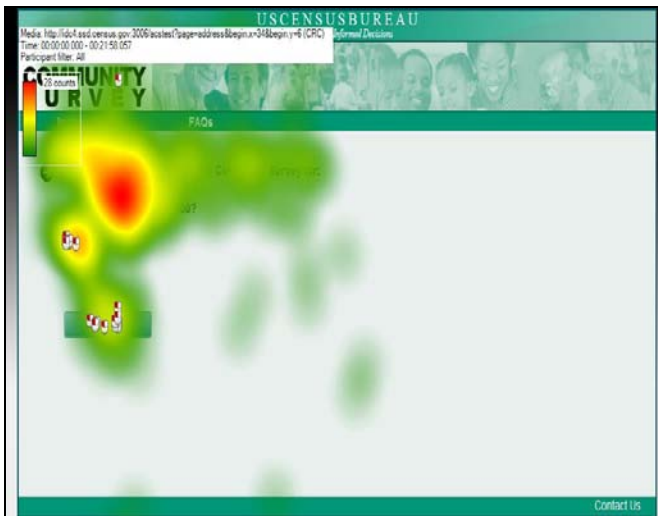
Figure 16: Round 1 Heatmap for Address Verification (n=8)
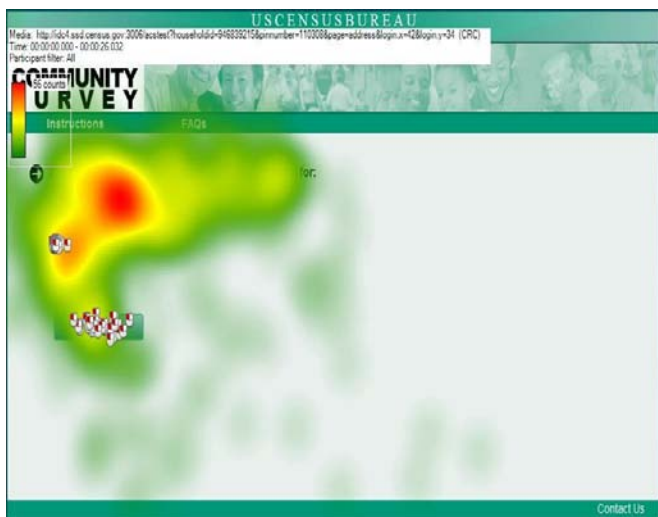
Figure 17: Round 2 Heatmap for Address Verification (n=50)

Despite the fact that participants were given a vignette, they did not have difficulty answering this question.

3.6 Residency Question Screen
The Residency Question (Figure 18) asks whether the respondent lives or stays at the sample address.
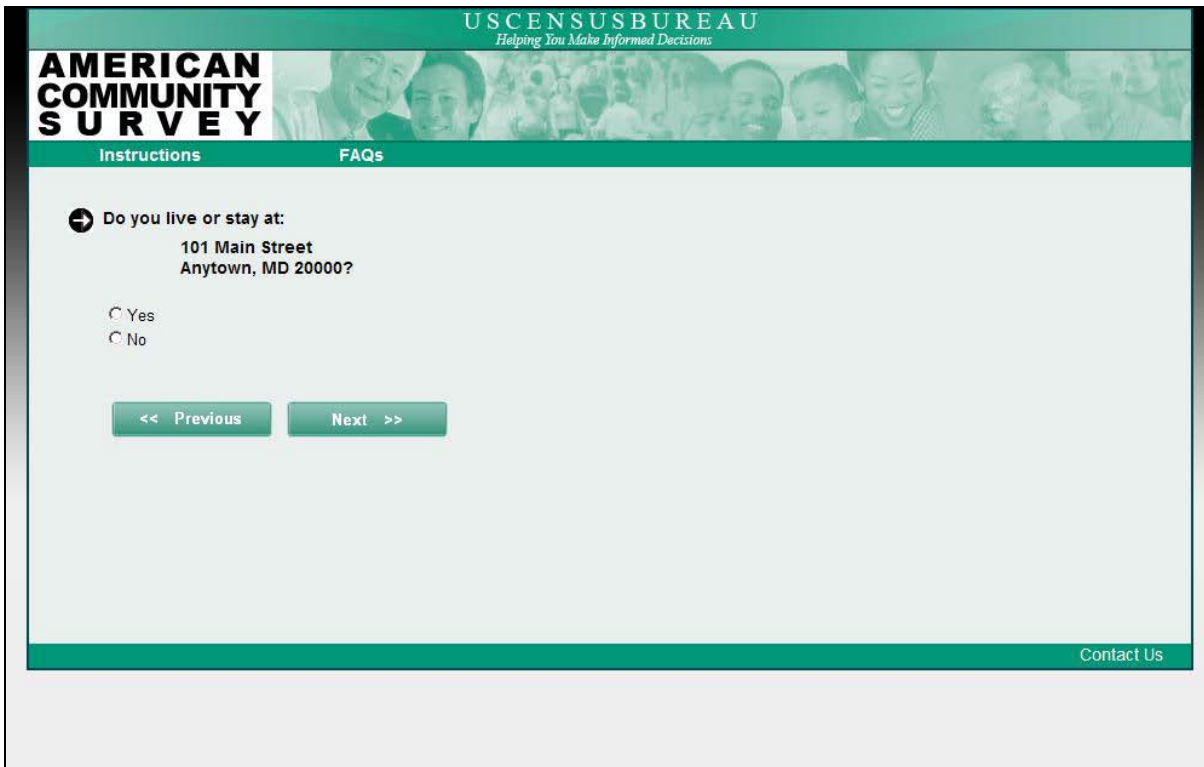
Figure 18: Residency Question Screen

3.6.1 Residency Question Screen Usability Results

From the Residency Question Heatmap in Figures 19 and 20, it appears that participants verified the information here as they did for the address verification screen. The only minor difference is the mouse clicks on the previous link. The previous link appears on this screen and was not available on the prior screen, so respondents had to shift their mouse to get to the Next button. One potential explanation for this may be that a few participants expected the Next link to be in the same location as before.
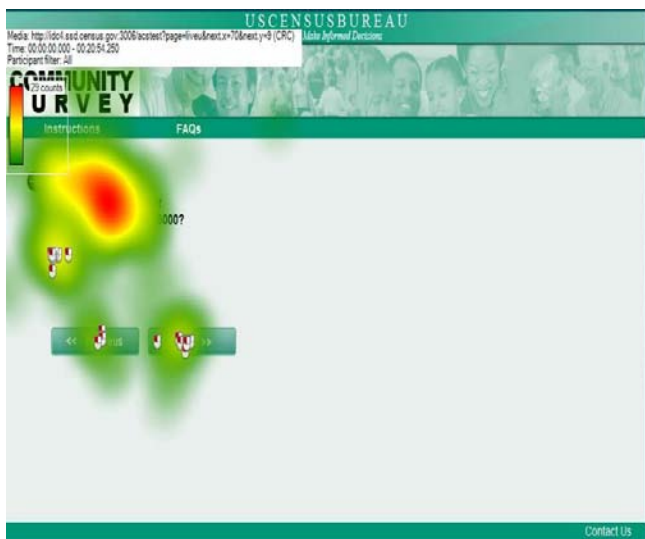
Figure 19: Round 1 Heatmap for Residency Question (n=8)
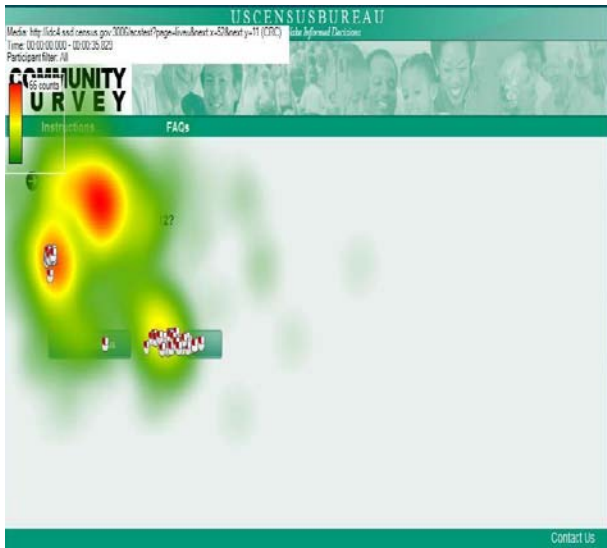
Figure 20: Round 2 Heatmap for Residency Question (n=50)

Again, participants did not have any notable problems with this screen.

3.7 Roster Check Screen

The roster for this survey was to be locked after this point, so this Roster Check (Figure 21) screen lists the people that have been entered and gives the respondent a chance to go back and change the roster in case there is a mistake. For this round of testing, no data could be captured by the instrument, so all of the participants were told that their name was Pat Smith[9]. Since this screen was not functional, we were testing the basic layout and structure of this page.
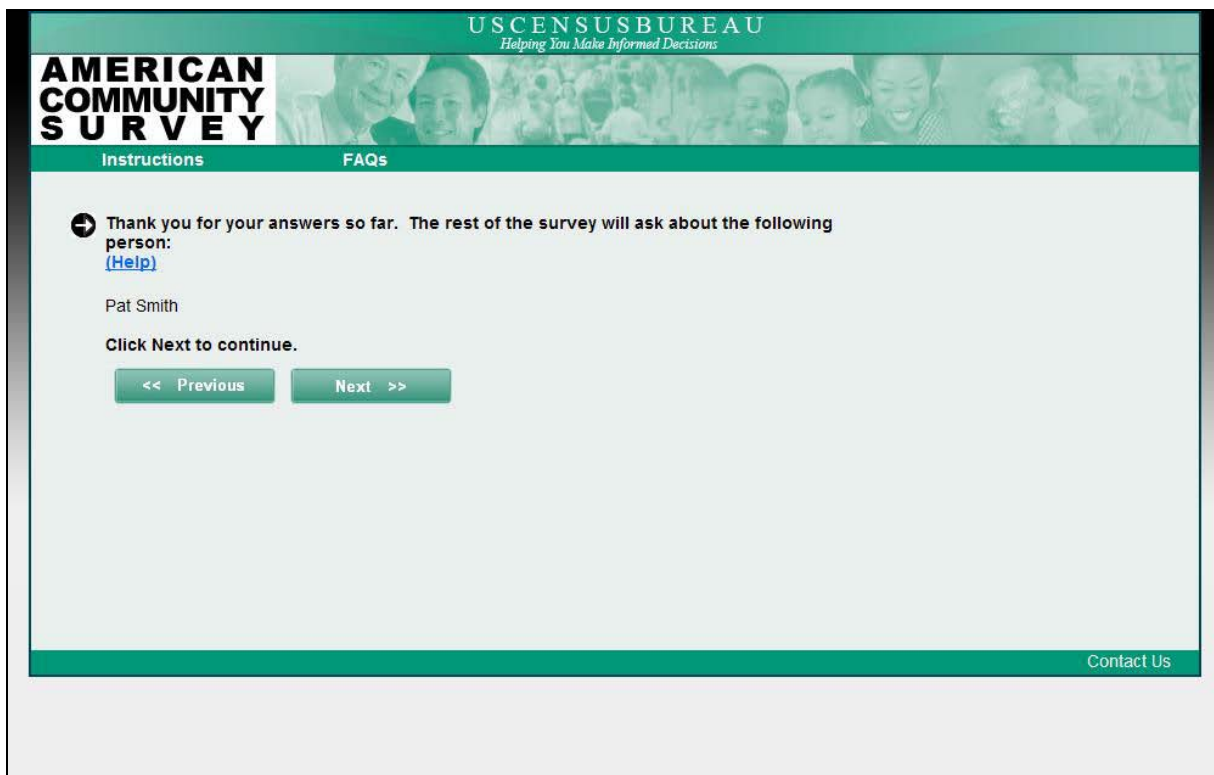
Figure 21: Roster Check Screen

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[9] This generic name was chosen so that it would apply to both male and female participants.

3.7.1 Roster Check Screen Usability Results

In the heatmaps in Figures 22 and 23, it appears that the participants read the question and the name listed.
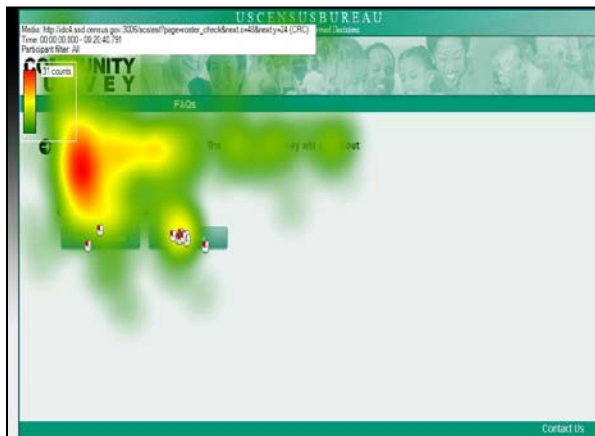
Figure 22: Round 1 Heatmap for Roster Check (n=8)
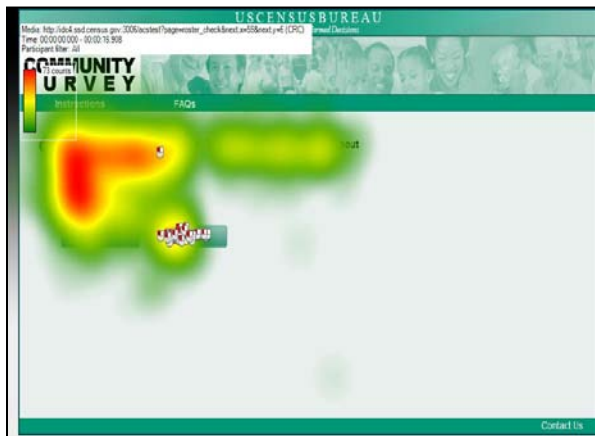
Figure 23: Round 2 Heatmap for Roster Check S (n=50)

Although a few participants asked the test administrator to remind them whether this was their name or not, there were no obvious problems with this screen.

3.8 Sex Question Screen

The screen with the ACS Sex Question appears in Figure 24. The researchers were interested in whether people noticed the new "Where You Are'' progress indicator feature at the right side of the screen. Since the contents of this feature are not clickable, we examined whether or not participants would try to click on this to navigate between the different sections of the survey.
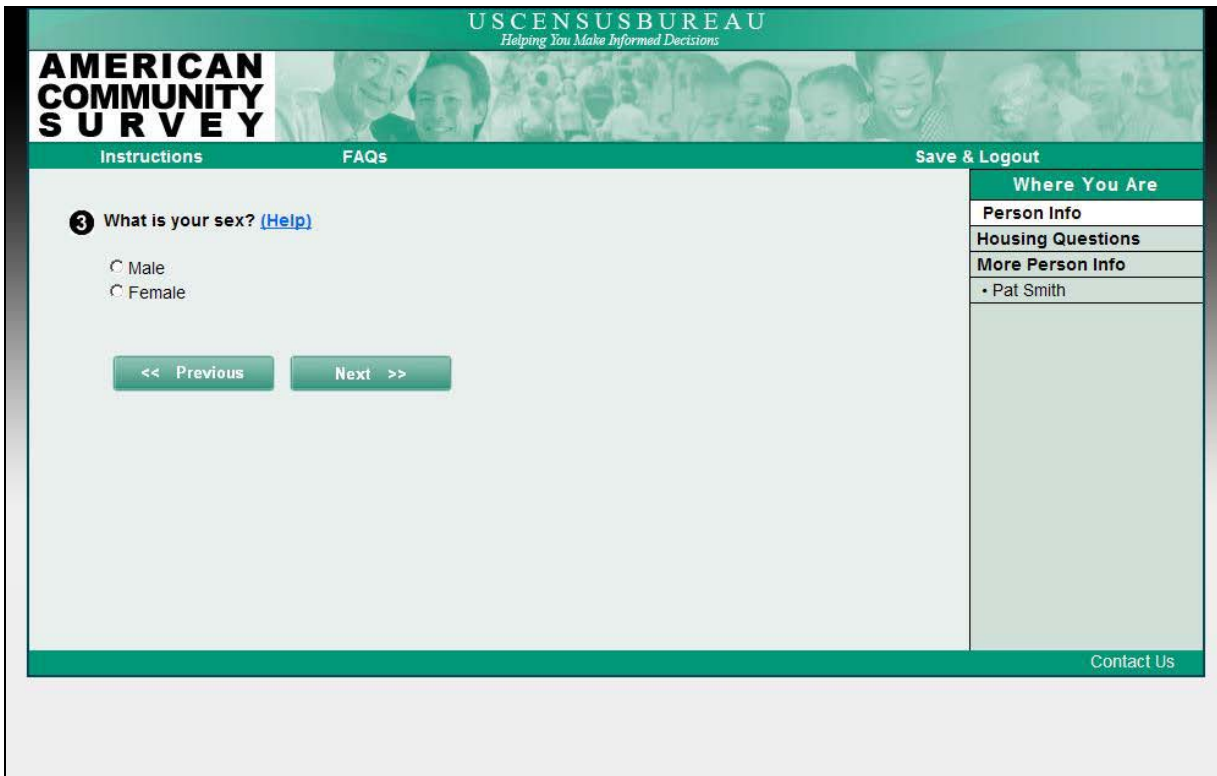
Figure 24: Sex Question Screen

3.8.1 Sex Question Screen Usability Results

Figure 25 shows that the progress indicator definitely drew the attention of the participants in Round 1, but Figure 26 shows that with 50 participants in Round 2, it becomes less of a hotspot. There could have been a few participants that were particularly drawn to this feature in Round 1. Since there were only 8 participants with eye-tracking data for this screen in Round 1, individual eye fixation patterns can influence the overall heatmap patterns more so than when there are more participants, such as the 50 in Round 2.
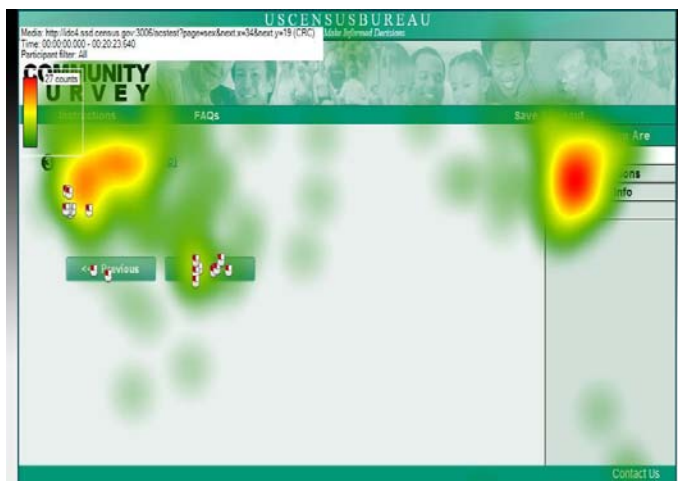
Figure 25: Round 1 Heatmap for Sex Question Screen (n=8)
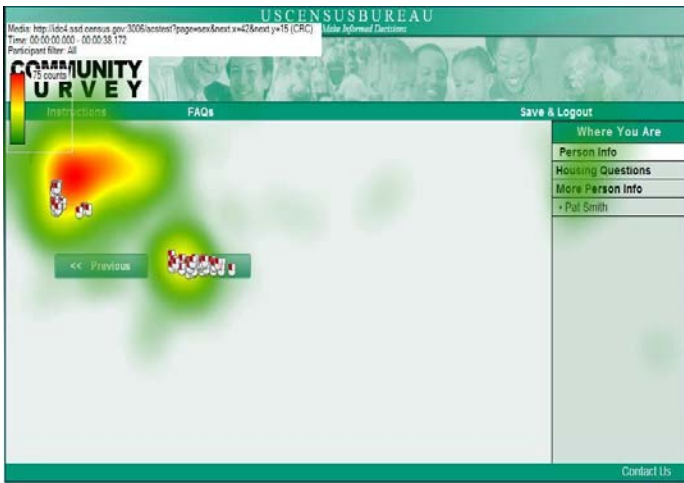
Figure 26: Round 2 Heatmap for Sex Question Screen (n=50)

No usability issues were observed for this screen.

3.9 Age and Date of Birth Screen

This question asks for both the respondent's age and his/her date of birth. Once the participant entered a valid date of birth, the age box was automatically filled. Participants were able to change the answer in the age response box if there was a discrepancy. We were interested in whether participants noticed the auto-filling feature, whether or not it caused them any difficulty or frustration, and whether they liked this feature. There was also an auto-tabbing feature for the Date of Birth response fields and we evaluated whether participants had problems with this feature and whether or not they liked it. The Age and Date of Birth Screen is shown in Figure 27.

Figure 27: Age and Date of Birth Screen

3.9.1 Age and Date of Birth Screen Usability Results

A few participants experienced trouble with the auto-tabbing feature on the Date of Birth (DOB) Question. One participant did not realize she was in the Year field and entered a value before she realized it. When she tried to correct it, the age displayed was 189 years old. This feature may cause problems for people who are quickly filling out the form and do not realize that they left the Month field blank or made a mistake because of the auto-tabbing and proceed to the next screen. If this were to happen frequently in the field, it would adversely affect the quality of the data. However, there are soft edits meant to prevent the participant from proceeding without checking their responses for accuracy. Additionally, the fully programmed instrument that went into the field in April 2011 did not calculate ages higher than 126.

Even if respondents do notice that they have made an error due to their tabbing over after completing the Day field without realizing there was auto-tabbing, having to correct the mistake could cause user frustration. If respondents get frustrated enough, it could lead to increased break-offs.

We saw some mild irritation during testing when participants had to correct their responses when making an erroneous data entry due to an auto-tabbing error, but no extreme emotional reactions.

Figures 28 and 29 show that participants still looked at the Progress indicator for this screen in Rounds 1 and 2, respectively.
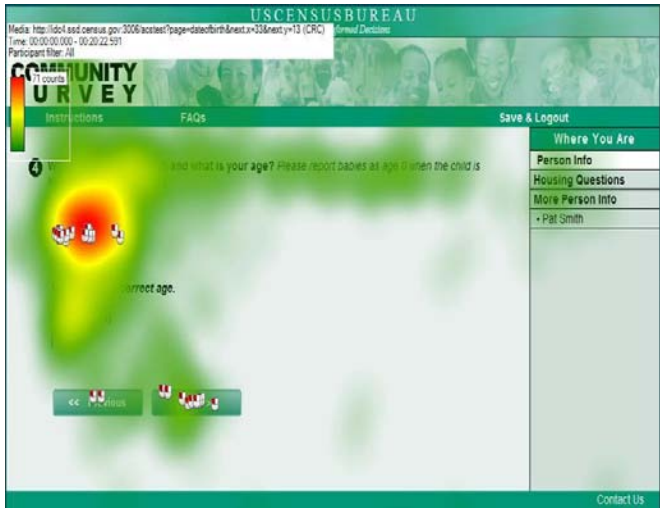
Figure 28: Round 1 Heatmap for Age & Date of Birth (n=8)
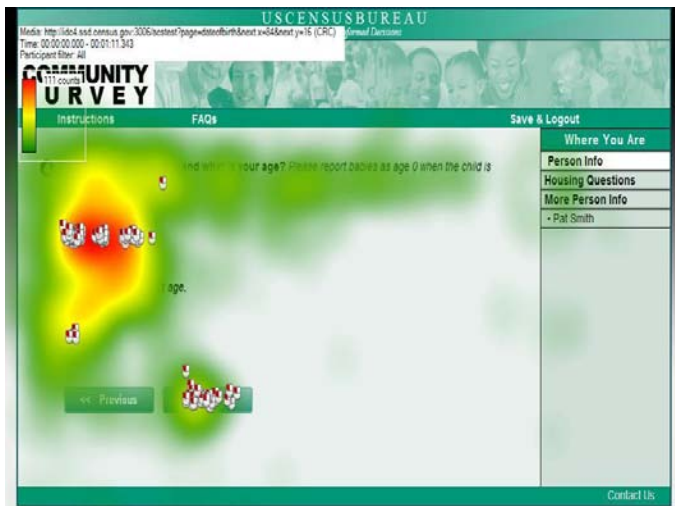
Figure 29: Round 2 Heatmap for Age & Date of Birth (n=50)

Heatmaps from both Round 1 and Round 2 show that the majority of participants clicked on the DOB fields instead of relying on the auto-tabbing.

3.10 Hispanic Origin Screen

This question differs from the paper form because the instruction to answer both this question and the following race question has been removed (Figure 30).

On the paper form, respondents can see both the Race and Hispanic Origin questions at the same time. However, these two questions are on separate screens for the Web instrument, so this instruction could potentially be confusing to respondents when they read it in connection to the Hispanic Origin question before they see the Race question. For this reason, it was removed from the Hispanic Origin question for the online instrument. The Hispanic Origin question from the 2011 ACS Internet Test is shown in Figure 31.

Figure 31: 2011 ACS Internet Hispanic Origin Screen

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3.10.1 Hispanic Origin Screen Usability Results

Some participants could not easily differentiate the Hispanic Origin and the Race question. While respondents can see both questions at the same time on the paper form, they do not know a Race question is coming when they answer the Hispanic Origin question on the Web Instrument. Some participants thought the Hispanic Origin question was the Race question and were then confused when the Race question appeared. Before understanding the Hispanic Origin question, one participant said, "I told you I'm mixed, so where would I put that?"

During debriefing, participants were asked how they would indicate their response if they were Columbian. The expected method for doing this would be to select the ``Other Hispanic Origin'' radio button and then to type "Columbian" into the text entry box. However, not all participants did this. For example, one participant simply typed Columbian in the entry box without selecting the check box, another participant highlighted Columbian from the list of examples and dropped it in the entry field, and another participant just selected ``Yes.'' Although this pattern of response is not ideal from a usability perspective and suggests that there could be a more concise design, the pattern is not problematic for the ACS specifically because there are post-processing edits that will mark the corresponding boxes when a write-in is provided.

Looking at Figures 32 and 33, even though the first response applied to all of the participants, they continued to scan down the screen and looked at all of the response options. One possible explanation for this pattern could be the observed confusion between this question and the race question. Participants may have been searching for other response options that were not displayed on this screen.
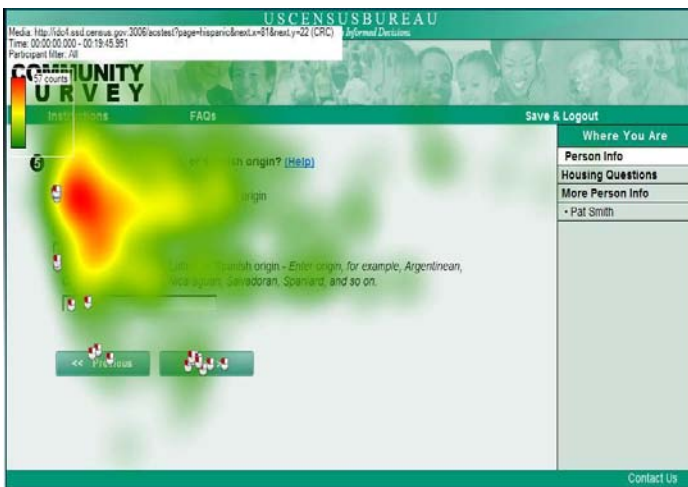
Figure 32: Round 1 Heatmap for Hispanic Origin (n=8)
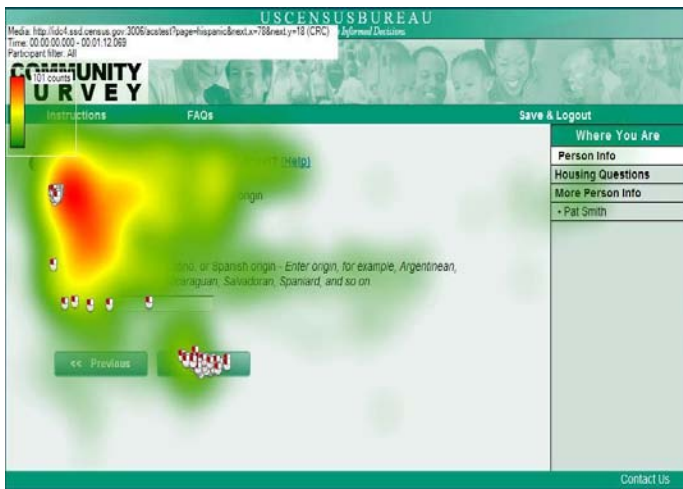
Figure 33: Round 2 Heatmap for Hispanic Origin (n=50)

3.11 Race Screen

The Race question was displayed differently on the Web instrument prototype for this round of testing than it is on the paper form, which is double-banked and has a few write-in boxes that are shared by more than one response option (Figure 34).

Figure 34: Race Question from ACS Paper Form

The online version of the question for the 2011 ACS Internet Test was modified to have all of the response options in one column with no shared write-in boxes (Figure 35).

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Figure 35: Race Question from the 2011 ACS Internet Test

Because of the large number of response options, the Previous and Next buttons cannot be seen without scrolling when this screen appears in some browsers (Figure 36). The screen was designed so that all of the race categories could be seen in all browsers. We were interested in whether or not this necessary scrolling to find the Next button would be problematic for participants.
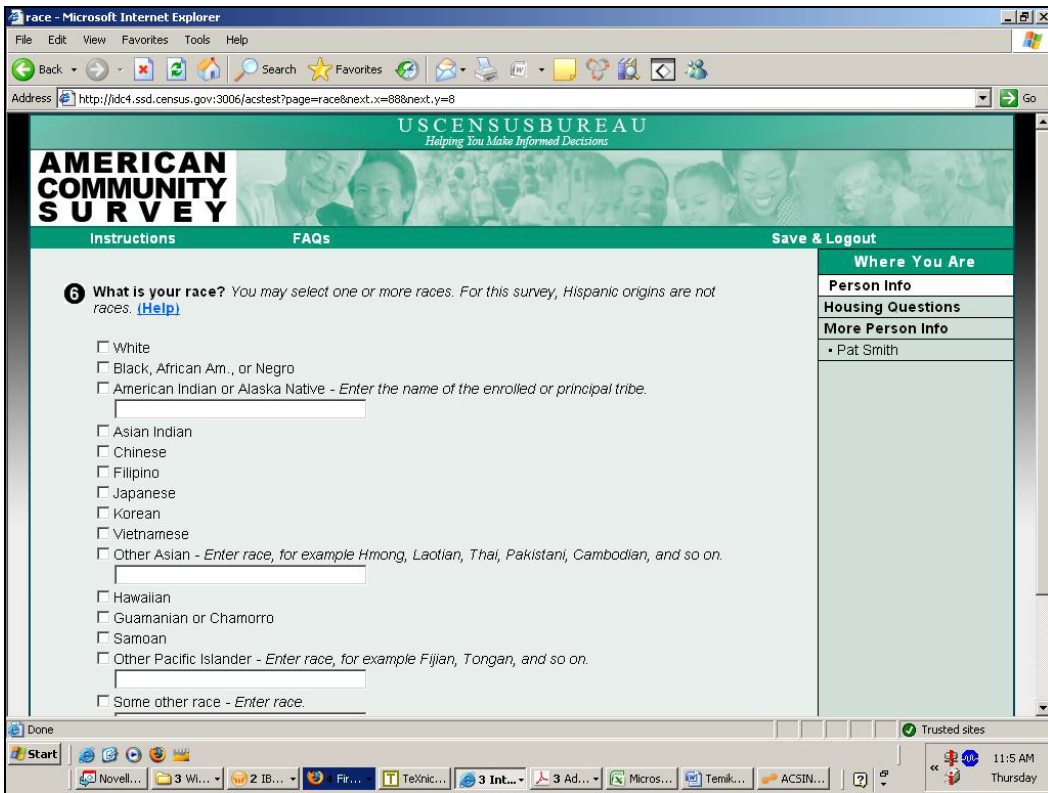
Figure 36: Race as Displayed On-Screen with Internet Explorer 7 (Vertical Scrolling Required)

3.11.1 Race Screen Usability Findings

Participants had to scroll down to find the Previous and Next buttons for the Race Screen. This was problematic for two participants in Round 1 round of testing, who did not know to scroll down and said that they could not proceed because there was no way to do so. The test administrator had to scroll down so that the participant could see the Next button.

All participants were able to proceed past the race screen without test administrator assistance for Round 2, although several searched around the page and made comments that they were having difficulty proceeding before realizing they needed to scroll down to find the Next button.

A few participants remarked that they had difficulty using the mouse, which we had in the lab, for this question in particular because they were used to using a laptop with a touchpad.

A related observation is that one Round 1 participant actually thought she could proceed by clicking the enter key on the keyboard, but it did not work. Surprised by this, she said, "I'm hitting enter, but it's not happening!" This was only observed on this screen for participants who had trouble finding the Next button and tried to hit "Enter" to continue.

If the functionality of using the enter key were available as an alternative to navigating forward through the survey, this might help some people who get stuck on this question and cannot scroll for any reason. However, there are some risks associated with enabling the "Enter" key, such as accidental premature data submission by pressing the Enter key too soon.

Figures 37 and 38 show a wide pattern of eye fixations, where participants were looking all over the screen. This pattern shows the eye movements associated with the comments and observed problems that some participants had (at least initially) with scrolling down to find the Next button.
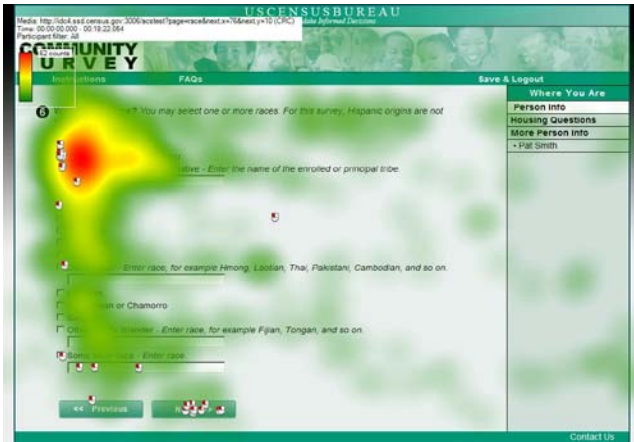
Figure 37: Round 1 Heatmap for Race Screen (n=8)
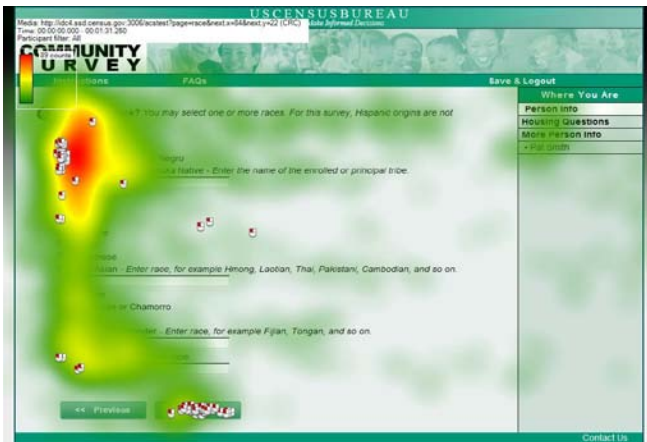
Figure 38: Round 2 Heatmap for Race Screen (n=50)

Most participants did not have trouble with the functionality of the page, although some did have comments about the content of the question itself. Some participants were still referencing the progress indicator.

3.12 Type of Unit Screen

The Type of Unit Screen can be found in Figure 39. As part of their vignette, participants were told to pretend that they live in a detached home.
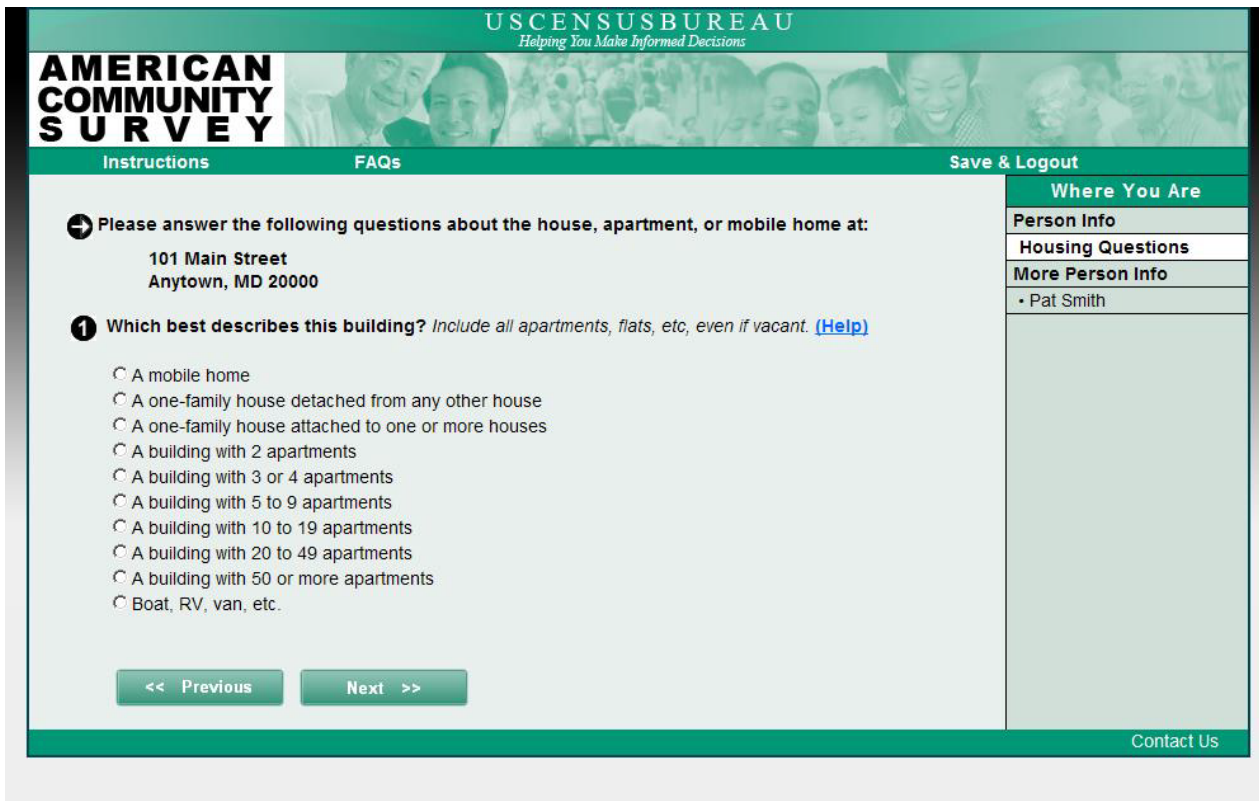
3.12.1 Type of Unit Screen Usability Results

For Round 1, although told to select the detached house option, some participants forgot this instruction and clicked other options instead (Figure 40). For the second round, we did not specify what kind of dwelling the participants had, so they marked the option that applied to them (Figure 41). This difference in instructions likely resulted in the participants reading past the first few housing options. Participants did this less in the first round when they were told that they lived in a detached house.

At least one participant mentioned that he/she did not know whether to classify their condo as a building with 3 apartments or a house attached to other houses.
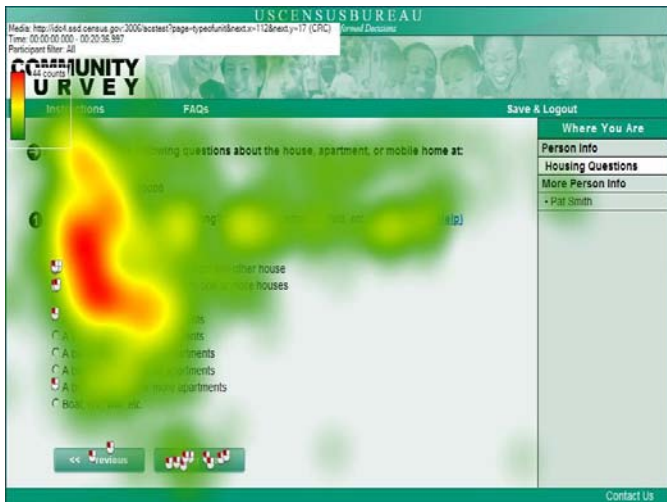
Figure 40: Round 1 Heatmap for Type of Unit Screen (n=8)
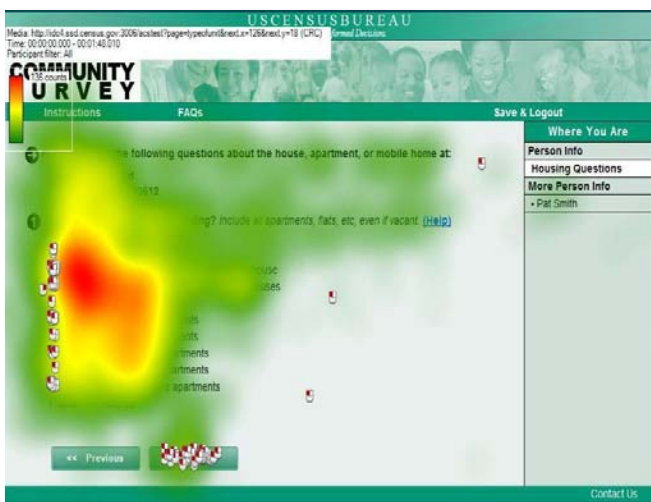
Figure 41: Round 2 Heatmap for Type of Unit Screen (n=50)

There were no notable usability issues with this screen, although two participants did click the "Previous" button to return to the prior screen in Round 1. Since this pattern did not occur in Round 2, there may have been some confusion associated with the fictitious information that the participants were asked to remember.

3.13 Property Value Screen

Participants answered this question as it applied to them in their own lives. On the paper form (Figure 42), there are green $ and .00 values before and after the entry fields and there are grey lines inside the box.

The researchers were interested in whether participants entered commas or cents in the response field or were confused by the decimal and two zeros following the response field (i.e., ``.00''). We also wanted to know if they would enter a $. The Property Value Screen for the 2011 ACS Internet Test is shown in Figure 43.

3.13.1 Property Value Screen Usability Results
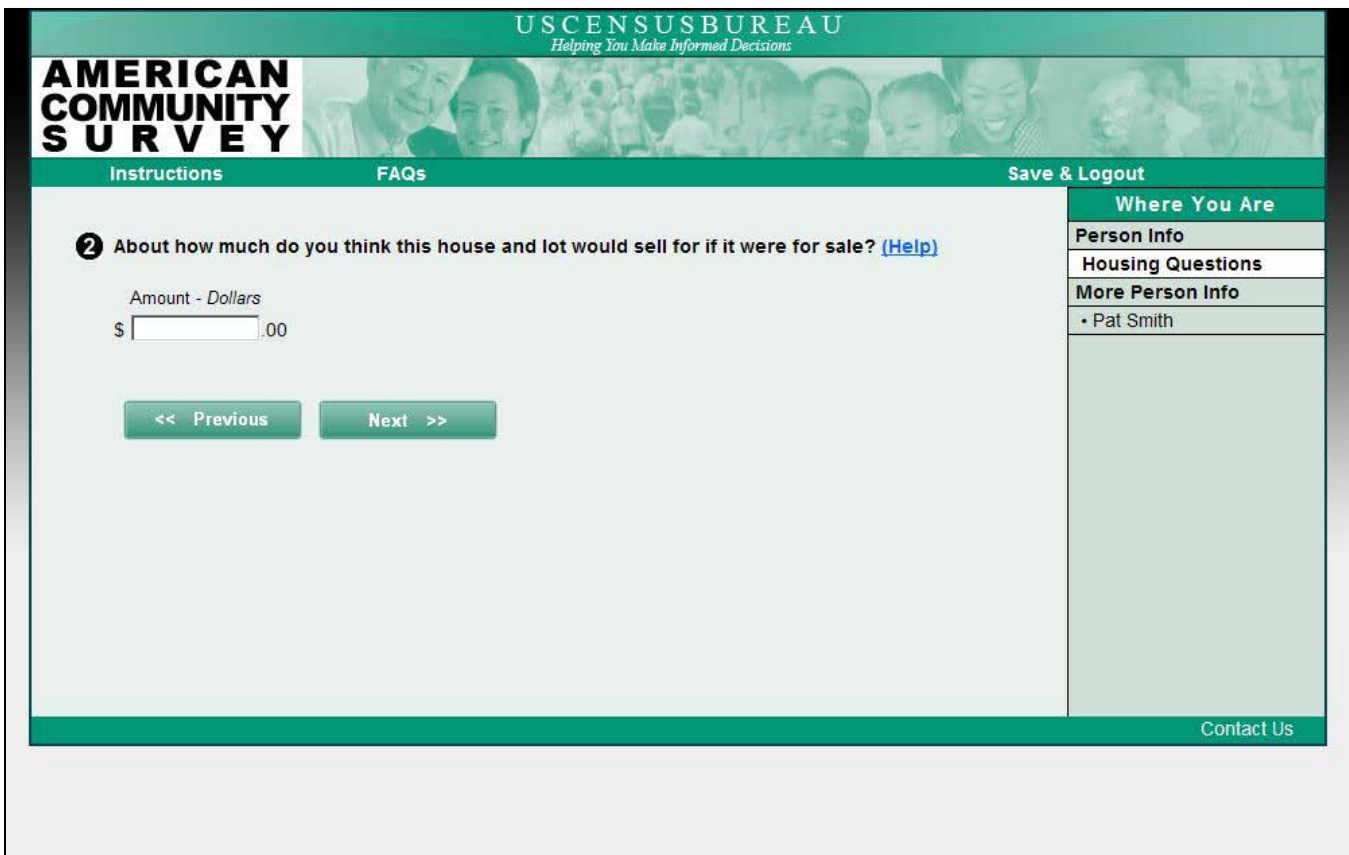
Participants showed a variety of problems when entering a response for the property value question. One participant placed a decimal in the entry field and may not have noticed the pre-filled decimal. One participant said she was entering 500,000 in the entry field, yet entered 5,000. She was unable to detect this discrepancy and proceeded through the survey.

Participants commented that it would be nice to have some sort of guidance here if they were unsure of the value of their property. One participant mentioned that it was difficult for her/him to determine the value of the home.

Figures 43 and 44 show heatmaps for the Property Value screens. Some Round 2 participants had problems with this question because they rent and were not told that they owned a house. Some participants in both rounds clicked the "Previous" button to go back and look for guidance in the questions leading up this one.
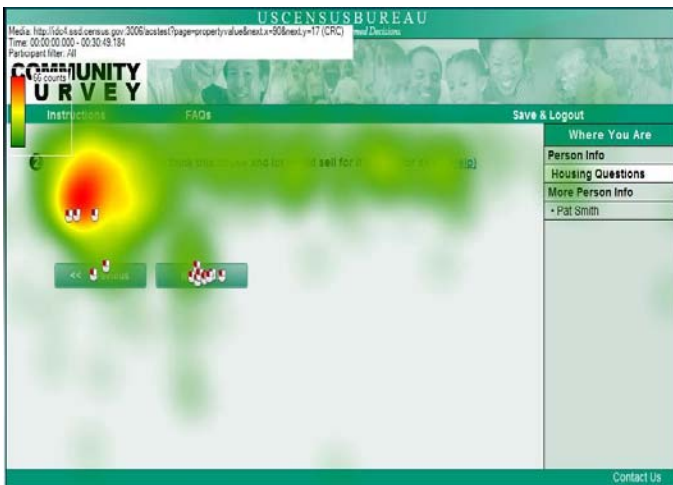
Figure 44: Round 1 Heatmap for Property Value (n=8)
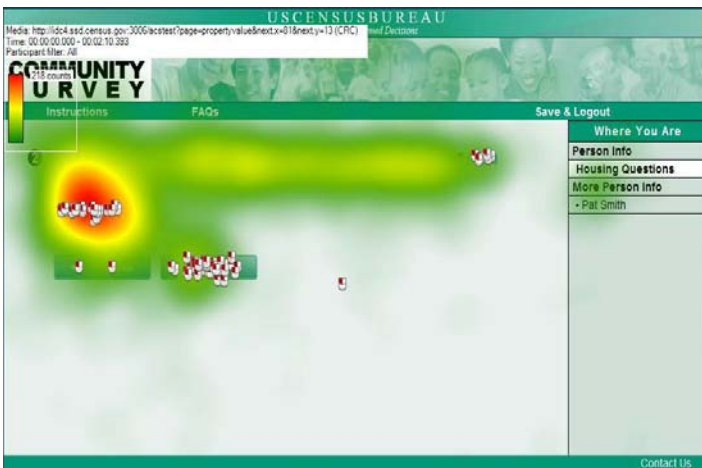
Figure 45: Round 2 Heatmap for Property Value (n=50)

   Several participants clicked on the Help link, which caused a blank help window to pop up for this round of testing. Their confusion was likely because of this difficulty. This was an issue with the wireframe instrument and not the question or design, however, since the fully programmed instrument would skip the respondent to a question about rent instead of property value.

3.14 Place of Birth Screen

For the Place of Birth question screen (Figure 46), one question of interest was whether participants would notice that they have to choose a state from the drop-down menu for the second part of the question if they live in the United States. The State drop-down menu only becomes activated if the person selects the "In the United States" as their place of birth. Similarly, respondents could not type in a country without selecting the "Outside the United States."

Figure 46: Place of Birth Screen

3.14.1 Place of Birth Screen Usability Results

For both rounds of testing, some participants clicked on the state dropdown box before they clicked the radio button that they lived in the United States and some did not notice the dropdown box and moved on without selecting a state. One participant suggested adding the capability of inserting place of birth by Zip code.

At this point, the "Where are You" indicator moves to the "More Person Info" section on Pat Smith's name. Figures 47and 48 show that this change in the Progress Indicator does draw some attention.
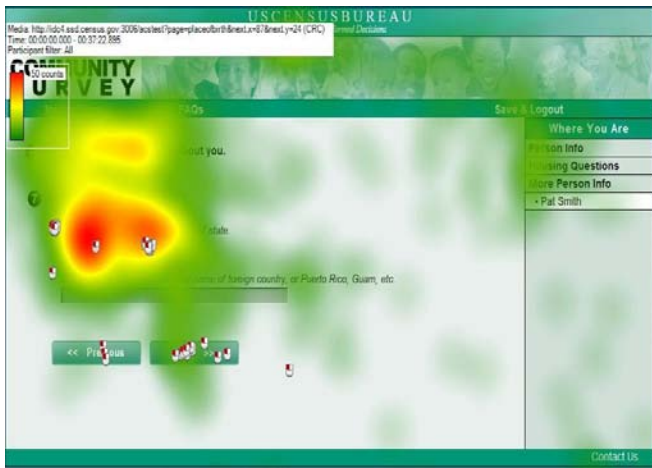
Figure 47: Round 1 Heatmap for Place of Birth Screen (n=8)
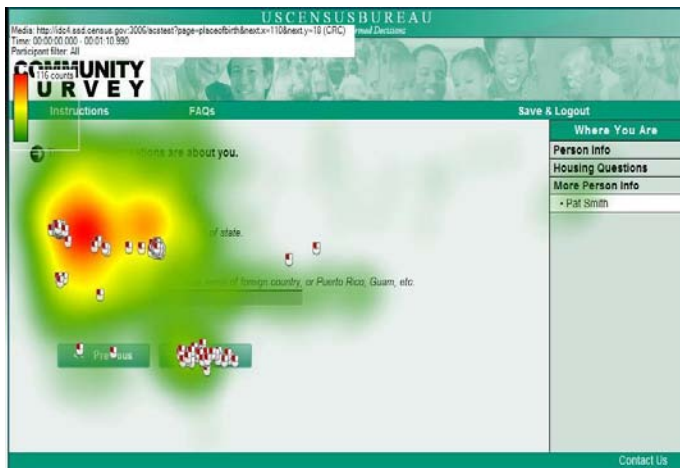
Figure 48: Round 2 Heatmap for Place of Birth Screen (n=50)

One suggestion that resulted from this testing was to gray out the drop-down list of States until the "In the United States" radio button is clicked. This might eliminate some confusion about what respondents should do first when completing this item.

3.15 Educational Attainment Screen

For the Educational Attainment Screen (Figure 49), the researchers were interested in whether participants would be confused by the green category labels and initially think that they had to provide a response for each category. This question also required vertical scrolling to see the last response options and to proceed with this survey using the "Next" button.

Figure 49: Educational Attainment Screen

3.15.1 Educational Attainment Screen Usability Results

Participants did not appear to have an issue with trying to pick one option per header during Rounds 1 and 2. There were no problems scrolling for either round of testing, probably because participants had already completed the race question. All participants in Rounds 1 and 2 were able to find the Previous and Next buttons for this question.

Figure 50: Round 1 Heatmap for Education Attainment (n=8)
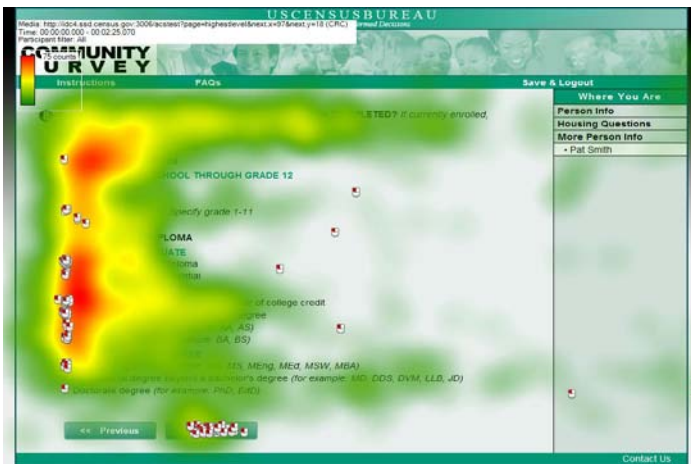
Figure 51: Round 2 Heatmap for Educational Attainment (n=50)

Round 2 (Figure 50) showed a similar pattern to Round 1 (Figure 51) in terms of eye-tracking results. Participants in Round 2 had more diverse educational backgrounds than in Round 1, as evidenced by the more distributed eye fixations across the response options (and supported by our recruitment screening questions).

3.16 Ancestry Screen

For the Ancestry Screen (Figure 52), the usability staff examined whether participants would feel obligated to enter a long answer because of the large text entry box. The researchers also used eye-tracking analysis to determine whether participants would read the list of examples beneath the response field.
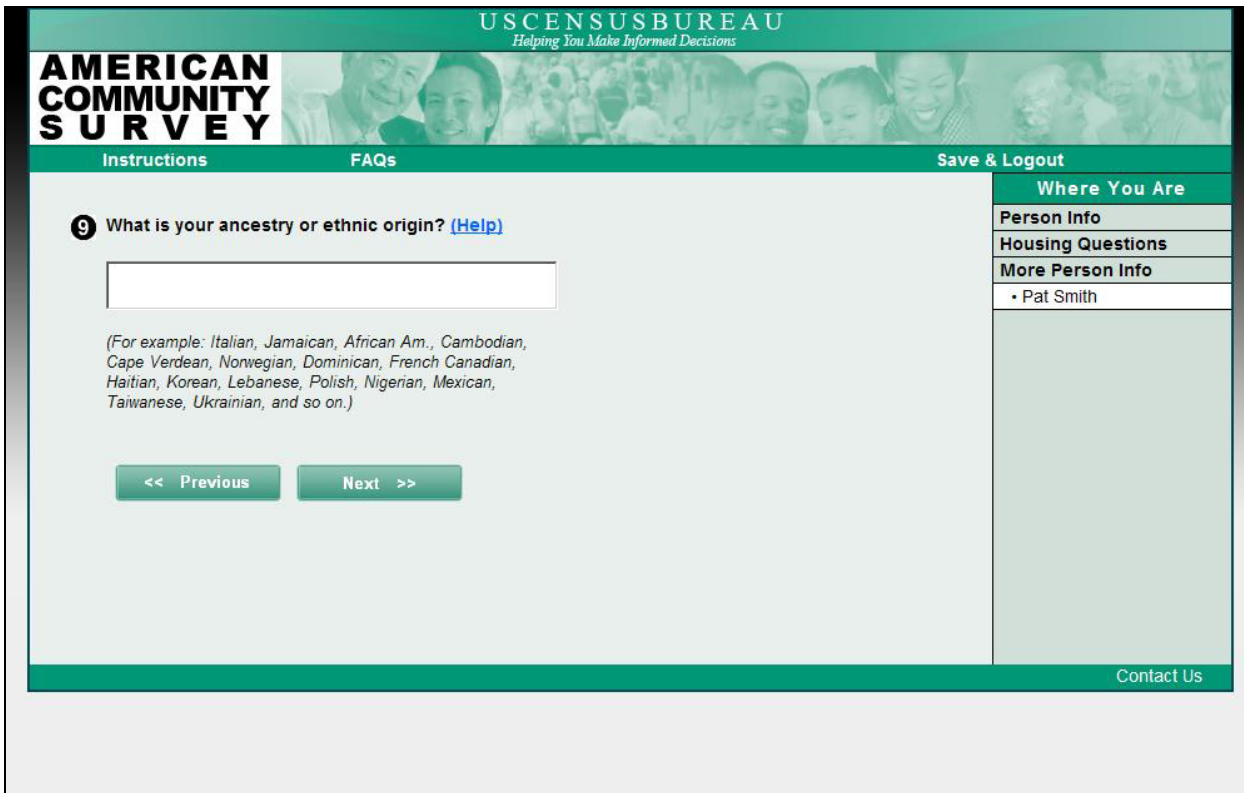
Figure 52: Ancestry Screen

3.16.1 Ancestry Screen Usability Results

No one really seemed to confuse this question with the race question during Rounds 1 and 2, although they did confuse the Race and Hispanic Origin questions. Participants did not tend to enter long responses or vocalize that they felt obligated to do so.

Participants did read the list of examples for both rounds of testing (Figures 53 and 54), and it seemed to be helpful to them. For instance, an African American participant read the list of examples and entered "African Am.", the way it is abbreviated in the example list.
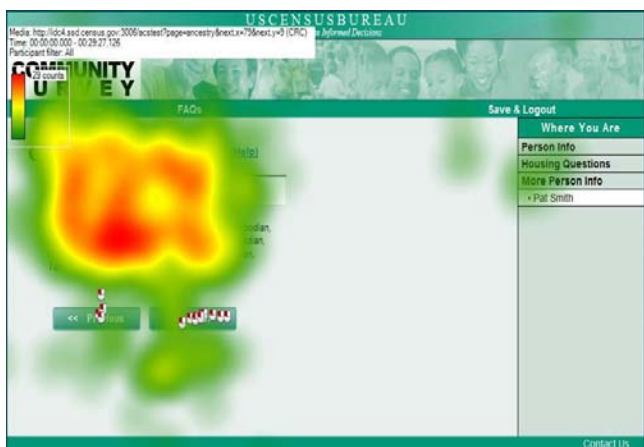
Figure 53: Round 1 Heatmap for Ancestry (n=8)
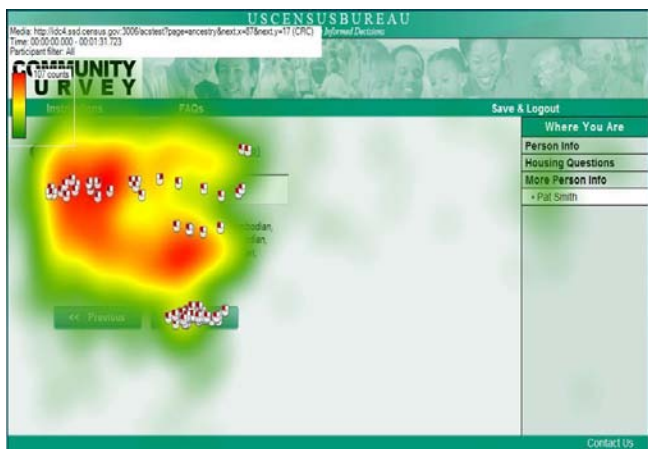
Figure 54: Round 2 Heatmap for Ancestry (n=50)

Two participants clicked on the help link for this question in Round 2 (Figure 54).

Round 2 showed a similar eye fixation pattern to Round 1, except for the number of mouse clicks on the text entry box. Round 2 had some participants who clicked on the list of examples while reading it and then had to re-click on the text box to enter a response. Some expected to be able to select the examples as hyperlinked response options, while others copied and pasted the examples into the response box.

Participants did not appear to feel obligated to enter a large amount of text into the box; they tended to enter one or two ancestries and moved on.

3.17. Language Screen

The question on the Language screen asks whether respondents speak another language at home other than English.

This question also deviates from the 2010 ACS paper form's format in that it is split into two sub-questions with the second part being based on the first part. On paper, both parts a) and b) can be seen at the same time (Figure 55).

Figure 55: Language Question on the 2010 ACS Paper Form

The first part of the question, "Do you speak a Language other than English at home?" appeared first (Figure 56). If "Yes" was selected as the response, the second part of the question appeared (Figure 57). The second part asked the participants to specify the language spoken at home with an open-ended response field labeled, "What is this language?" The "→ *SKIP to question 15a*" instruction is obviated and the instrument takes advantage of Web technology here.
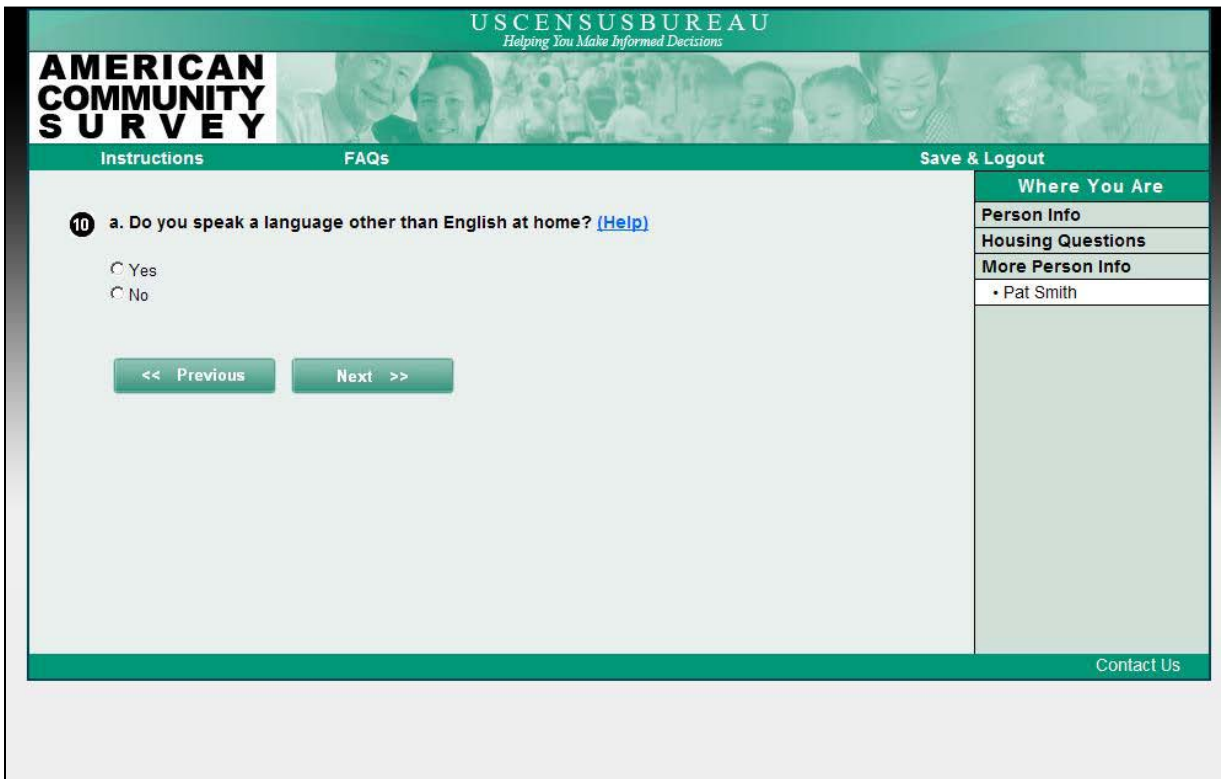
For Rounds 1 and 2, the response field asking them to specify which language they speak only becomes activated if the participant selects ``Yes'' as their answer. That is, they only see part "b" if they answer "Yes" the first time they see question "a."

For Round 1, the researchers investigated whether this feature was confusing for participants by telling them that for the purposes of this study, they spoke French at home. Not all of the respondents remembered this instruction and some answered "No" anyway and did not see part b of this question. We did not do this in Round 2. However, we did have six foreign language speakers in Round 2 who saw this screen.
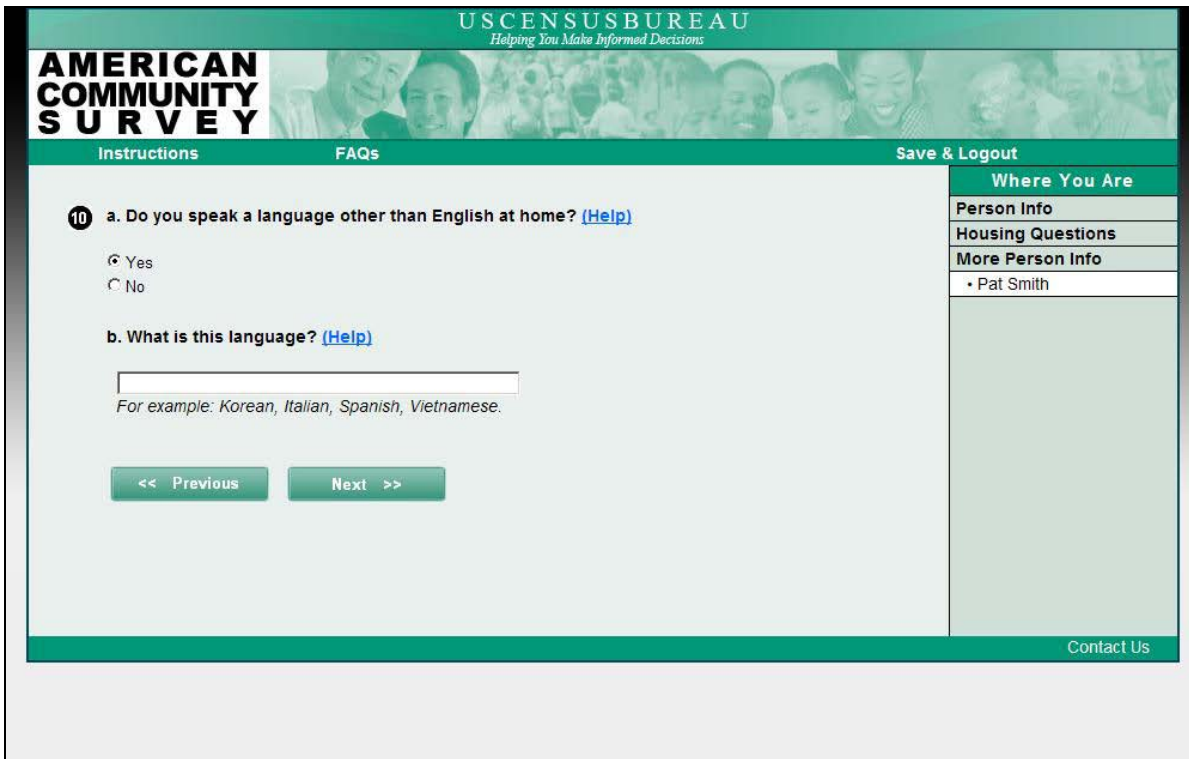
Figure 57: Language Question (Parts a and b) on the 2011 ACS Internet Test

3.17.1 Language Screen Usability Results

Although all 9 participants in Round 1 (all 8 represented in the heatmap as well as 1 that did not have usable eye-tracking data but still had usability session notes) should have selected "Yes" and specified French as a language spoken at home, 2 of the participants forgot this instruction and selected "No."

Figures 58 and 59 from Round 1 also show that the participants re-read the first part of the question and may not have realized that it was the same question they just answered. This could lead to respondent burden issues if they interpret the question differently the second time and change their answer.
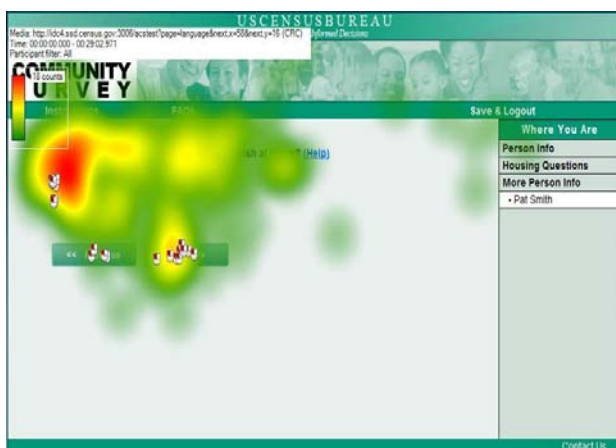
Figure 58: Round 1 Heatmap for Language 1 (n=8)
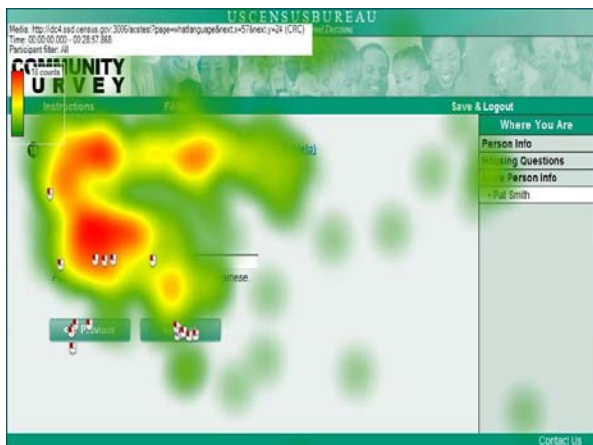
Figure 59: Round 1 Heatmap for Language 2 (n=6)

For the second round (Figures 60 and 61), participants were not told to pretend that they spoke a second language at home, so only those who really did speak another language at home selected "Yes." Three participants selected "Yes," and none of them re-read the first part of the question, so the re-reading issue might be an artifact of the mini-vignette we gave them.
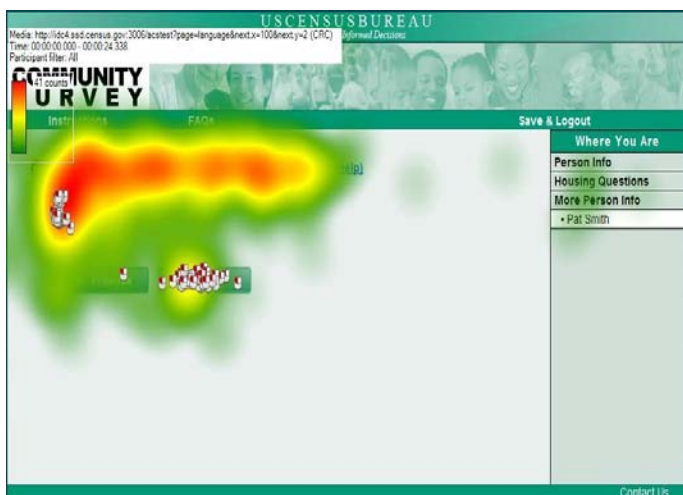
Figure 60: Round 2 Heatmap for Language 1 (n=50)

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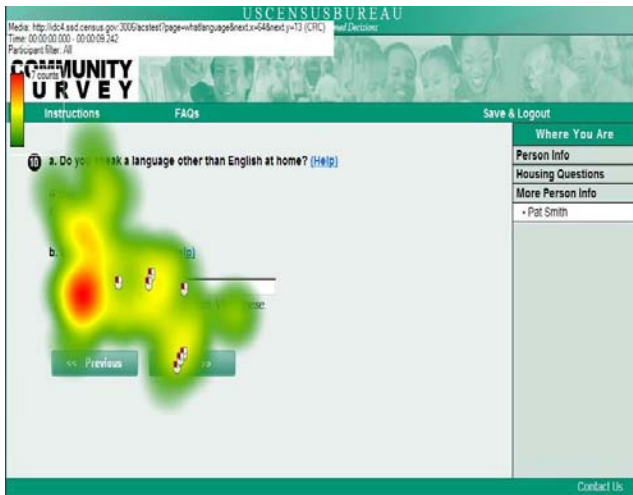
Figure 61: Round 2 Heatmap for Language 2 (n=3)

3.18 Health Insurance Screen

For the screen with the Health Insurance question (Figure 62), the researchers were interested in whether participants would notice that they had to mark "No" for all of the responses that did not apply to them. The usability team also investigated whether the layout of this question was problematic for participants.

Figure 62: Health Insurance Screen

3.18.1 Health Insurance Screen Usability Results

The majority of participants did not know that they needed to respond to each item and only selected one "Yes" response and clicked "Next."[10]

Several participants tried to click on the response field to fill it in before they clicked "Yes." They all realized that they had to click "Yes" and did it, but it is possible that low-Internet-use respondents may not realize how to make the field active so that they could type an answer into it.

The eye-tracking gaze plot in Figure 63 and the close-up in Figure 64 show an example of one participant's eye-tracking data; this is a typical pattern. This participant read the question, then skimmed the response options before seeing the text entry response field for option h and clicking on it. Fixation 53, which is highlighted in Figure 64, shows where the participant was looking when this person clicked on the box and the mouse click symbol shows where this person clicked.
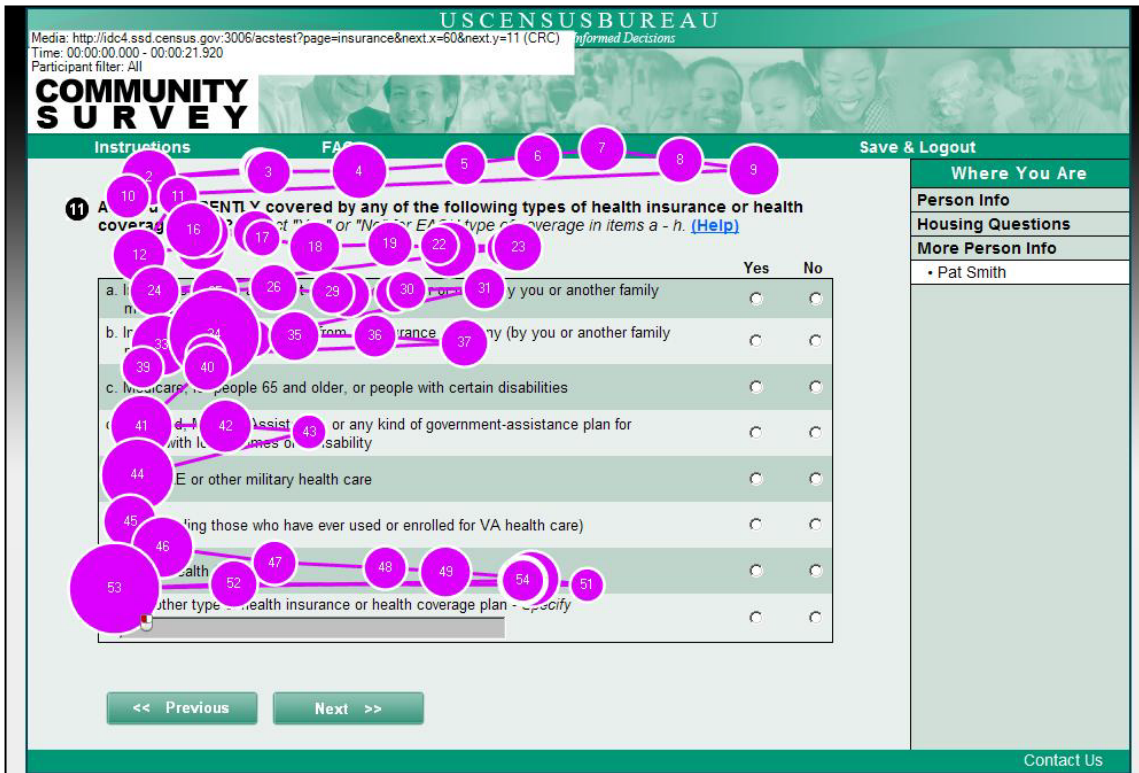
Figure 63: Gazeplot of Health Insurance Question 1

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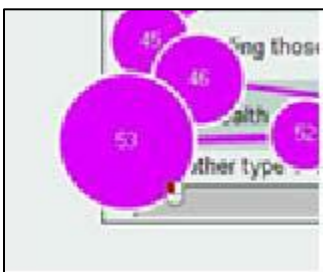
[10] This pattern is also commonly seen on the paper form and is not considered a problem because it is easily fixed with post-processing edits.

Figure 65 illustrates that the participant then looked to the right side of the screen (Fixation 54) and saw the radio button for this response option (Fixation 55).
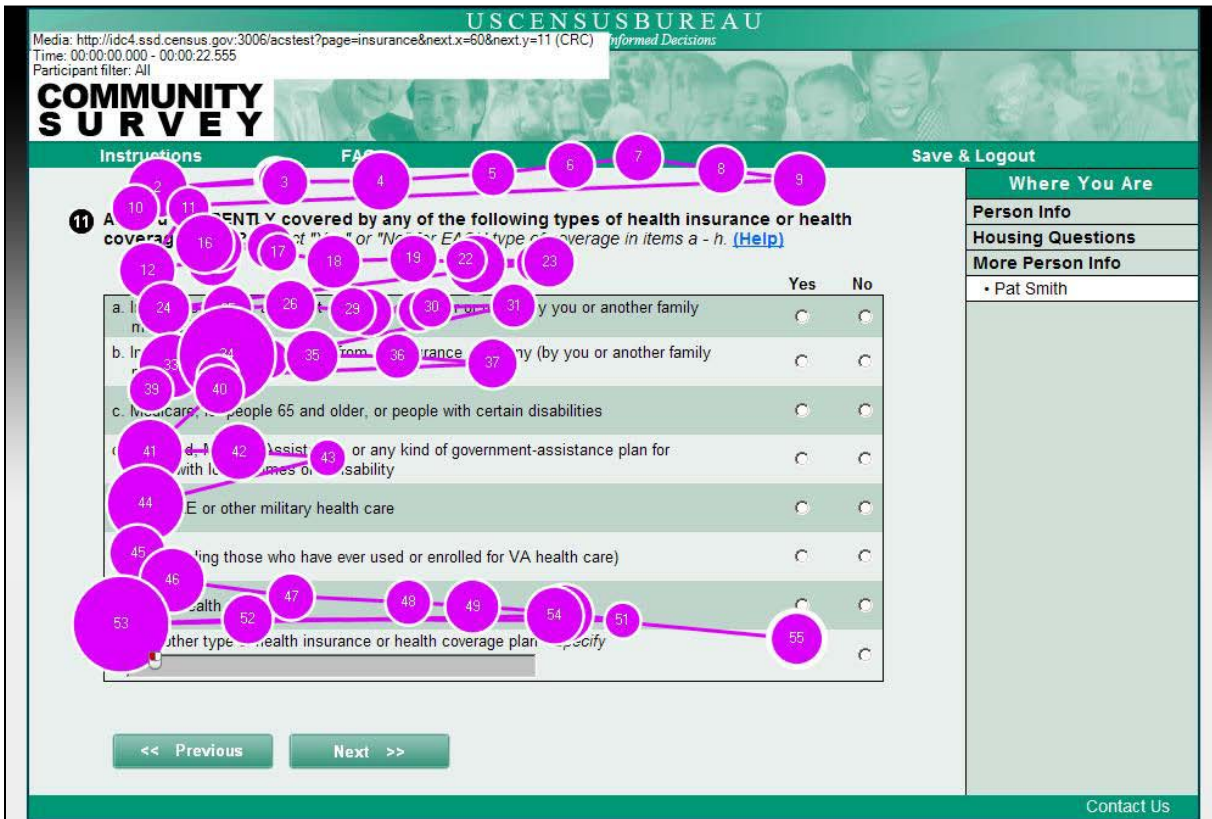
Figure 65: Gazeplot of Health Insurance Question 2

Figure 66 shows that the participant then looked at the column header to see what the radio buttons indicated (Fixation 56).
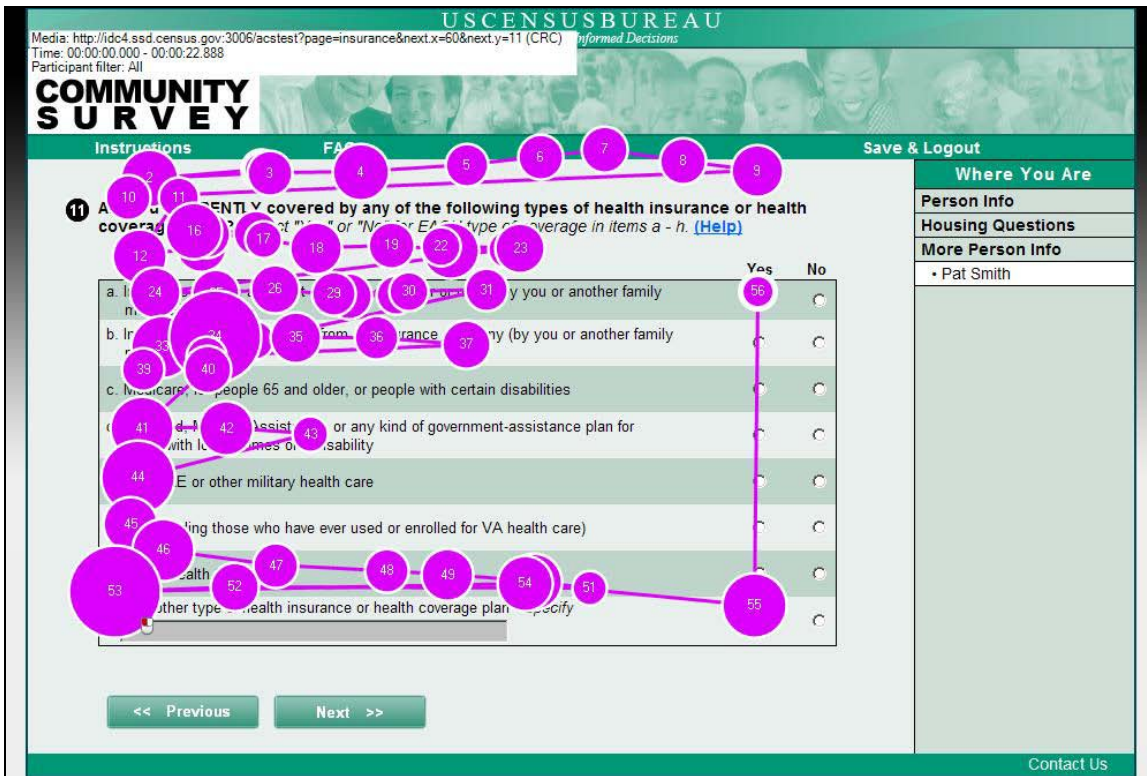
Figure 66: Gazeplot of Health Insurance Question 3

Having the text entry field for response option h directly beneath the text for all of the response options could lead participants into thinking that they need to answer the question by writing what kind of insurance they have in this box and they may not notice the radio buttons initially. This may be attributed to the location of the "Yes" or "No" radio buttons and their labels. They are on the right side of the screen, causing participants to shift their mode of responding to survey items; prior to this question, they were answering questions with response selections on the left side of the page.

Not having the text entry field active until the button is clicked may direct Internet-savvy users to find the radio buttons while confusing low-Internet users. The sponsor did change the spacing of the options for future rounds of testing, which will be discussed in future reports.

3.19 Testing Complete Screen

Since the survey that we tested was not a complete working version that progresses naturally toward the end, a ``Testing Complete'' screen (Figure 67) was added as the last screen so that participants would know that they were finished taking the survey. This screen was not analyzed, and there is no "Usability Results" section associated with this screen.
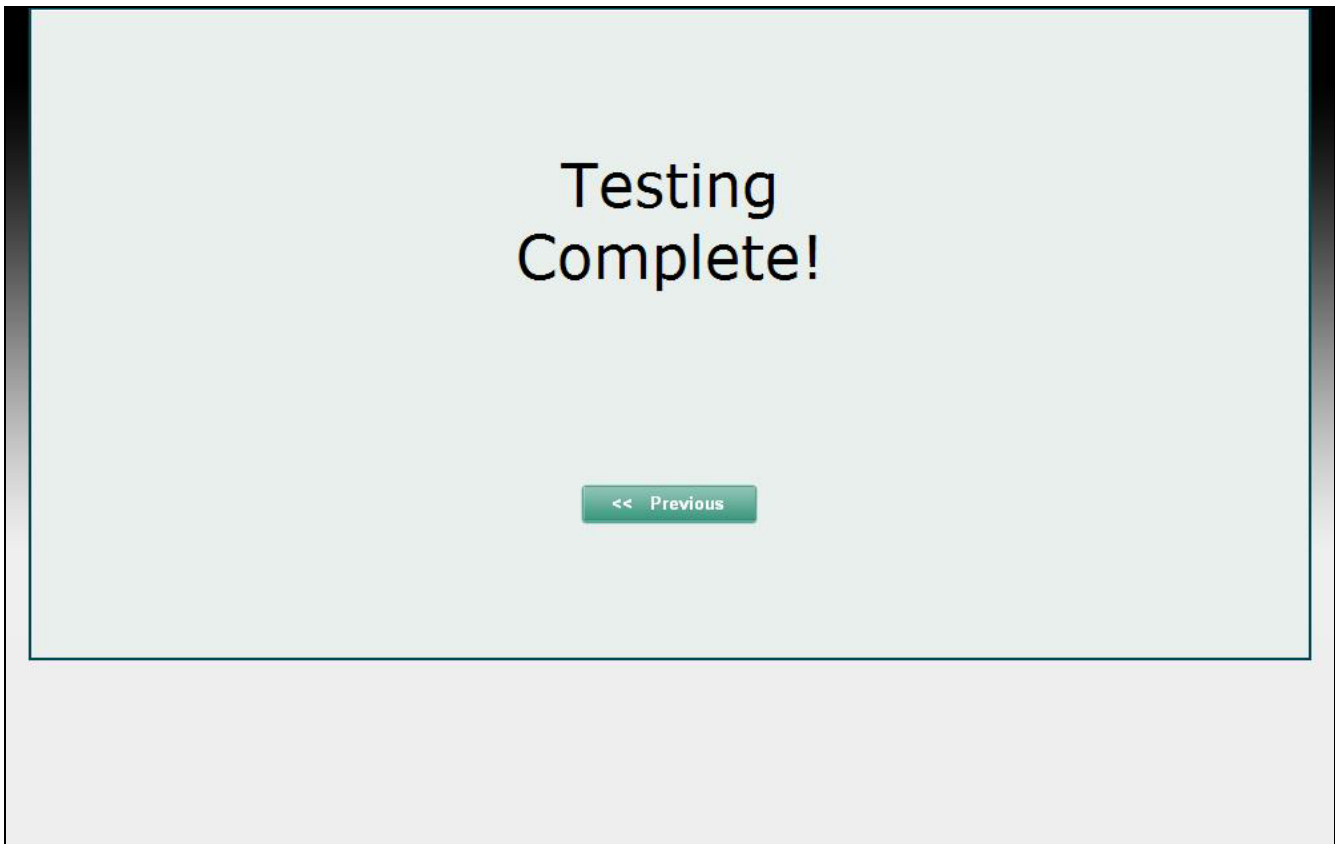
Figure 67: Testing Complete Screen

3.20 Usability Testing Discussion

Overall, the survey wireframes performed very well and users were able to navigate through the instrument to complete it. Some of the most notable findings were:

- Number/pound (#) signs seem to work better than Xs or "fake" numbers for example Household Ids.
- There was some confusion over how to respond to the Hispanic Origin and Type of Unit questions.
- Participants did not feel obligated to enter a lot of text in the large response box for the ancestry question.
- We identified a potential issue with the layout of the insurance question, which was addressed for later rounds of testing.

4.0 Results of Cognitive Testing of Mailing Materials Associated with the 2011 ACS

Internet Test

The mailing materials associated with the 2011 ACS Internet Test included a prenotice letter, an Initial packet with either a questionnaire (Production and Choice panels) or an instruction card for taking the survey online (Push panels), a reminder postcard, and a replacement packet with a questionnaire. They can be found in Appendix F. Besides a letter, the packets also included an ACS Frequently asked Questions (FAQ) brochure, and an informational brochure about the

ACS. These supplemental materials were not explicitly tested, but participants were permitted to examine these materials and comment on them.

We intended to do an eye-tracking analysis on the mailing materials; however, we could not do so due to equipment problems.

Participants were allowed to open the envelope and look at all of the materials in the packets, including the brochure and ACS FAQ guide. Participants looked at materials in whatever order they chose, but usually focused on the questionnaire and letter. A few participants had to be directed to read the letter after a few minutes of looking at the other materials.

All of the participants in the Prominent Choice and Push panels saw the text about the Internet option in the letters and reported it as an option for responding to the survey. When asked when the Census Bureau expected them to complete the survey, participants said "as soon as possible" in almost all cases across all of the conditions.

Overall, the participants did not find any of the pieces of mail confusing. Common themes that came up for the mailing materials were that the mailing packets containing the paper forms were large, the packets tended to look like junk mail, the messages in the mailing materials were repetitive and sounded like the same mail over and over again, and that the Census Bureau was being irritating with too much mail. These were all comments that have been given for Census Bureau mailing materials before and are not easily addressed without changing the standard mailing methodology currently in place.

Several participants in all conditions said that they wished the letter were addressed to them and not to the resident of the household because it would give the letters a more personalized feel. The ACS samples by address and not by individual, so this suggestion is not feasible.

Some participants commented that the personal visit would seem like "Big Brother" intrusion, and most did say this message would motivate them to complete the survey. A few participants said they would not mind if an enumerator came to the door, however.

The message about possibly receiving a personal visit appeared in the second paragraph of the replacement letter for the Production panel, but was in the third paragraph for the Not Prominent Choice panel and beneath two paragraphs and two bold sentences for the Push and Prominent Choice panels. There did not seem to be a difference in visibility with the statement about the personal visit more often in conditions where the visit was mentioned sooner in the text. This could be because we asked them to read the letter in a lab setting, so it is hard to say whether it would really make a difference in the field. Most participants also reported that the text about saving taxpayer money and saving natural resources would be a motivating factor to complete it.

The biggest issue discovered during cognitive testing was that participants tended not to notice the Internet message on the survey form on the Prominent Internet Offer condition, and the goal was for this message to "pop out" at respondents. The sponsor changed the message based on the testing results. The participants did not notice the message on the Not Prominent materials, either, but that was less of an issue because it was not intended to stand out.

The results of the cognitive testing for the Push Panels (Regular and Modified Schedule) are presented together because the mailing materials used were identical, although they were mailed out for the 2011 ACS Internet test on different schedules. Each of the conditions has 10 participants associated with it, except for the combined Push condition, which has 20.

4.1 Pre-Notice Letter

This letter was the same for all of the panels. All of the participants understood that the letter was telling them that a survey was coming in the mail and that they were required to complete it. Some admitted that they would throw something like this away, especially if it was addressed to "Resident."

4.1.1 Production

All participants said that they knew the survey was coming and that they should complete it. All participants picked up on the message that said that completing the survey is required by law.

One participant wanted to know why the Census Bureau was sending another letter (possibly confusing the ACS with the recent Decennial Census).

All of the participants said that the letter itself was not confusing; however, but one participant was confused by the time frame associated with receiving the survey. She said that it talked about "a few days," but she would rather have a date when she would receive the questionnaire.

Selected comments:

- "Is there a certain date that it needs to be mailed back in?"
- "This is a similar approach used with the Census."
- "This is something official, so I definitely want to go through this. "
- "The tone of the letter is soft; it makes you want to help out."

4.1.2. Prominent Choice

None of the participants reported finding anything in the letter confusing. One participant mistakenly thought that his neighbors would also be getting the letter. All of the participants understood that there was another mailing on the way.

A few participants compared this letter to those that were associated with the recently conducted 2010 Decennial Census, which is an artifact of the study having taken place so soon after the Census.

One participant said that she would like "bigger print for the address and the barcode hidden." Another said that he would normally throw away "stuff from the Census."

Selected comments:

- "It's pretty simple."
- "It should say it's voluntary to participate."
- "People normally don't read stuff like this."

4.1.3 Not Prominent Choice

None of the participants said that the letter was confusing.

One participant said, "I am wondering why I got this letter, I already sent my Census." Another participant said that he expected to see his specific information on the address label and thought that it seemed generic without his name.

Selected comments:

- "Looks like something serious."
- "It threw me off with 'not you personally.'"
- "It's telling me to fill the Census out."

Of the participants who said they would complete the survey, half said they would prefer to take the survey on paper and half said they would prefer to take it online. Two participants said they would not complete the survey.

4.1.4 Push Panels

Only one participant said that the letter was confusing. This participant said, "I am not really understanding it, what the survey is about" and then a few seconds later, "I don't really get it." The other 19 participants reported that there was nothing confusing about the letter.

Many participants, however, expressed that they did not have a clear understanding of what the ACS was. One participant said, "I've never heard of the ACS before."

4.2 Introductory Letter/Initial questionnaire package

No participants found anything confusing about this letter. The participants tended to focus on the survey form itself in the choice and production panels and most glanced at the colorful brochure inserts but did not read them. Although most participants unfolded the introductory letter and read it on their own, some had to be instructed to do so because they spent a long time commenting on the form and did not get to the letter.

4.2.1 Production

Participants understood that this is the questionnaire that the Introductory letter described. One participant said, "This is the questionnaire they were talking about in the first letter." Many participants said they would complete the survey immediately, while others admitted they would probably do it in a day or two or simply "later."

Participants did not have problems understanding the letter and no participants reported that anything in the letter was confusing.

- This letter is "leaning more towards letting me know the importance."
- "It's more personal- now I have a phone number."
- "It's reminding me of the first letter" but that now it is more urgent. "I would put it as a higher priority."

There were many comments about the size and thickness of this packet.

- "This is a "fat package"
- "I didn't realize how long of a survey it was."
- "Whoo, this is pretty thick!"
- It's "pretty hefty."

- "I hate all this paper."

4.2.2. Prominent Choice

None of the participants reported that there was anything confusing about the letter. All of the participants understood that they had two options for completing the ACS: online or via the paper form.

All of the participants said they thought they were expected to complete the survey as soon as possible, and some commented that there was no specific time frame given.

Several participants made comments about the size of the mailing and/or the length of the survey, such as, "It's pretty heavy."

Most participants said they would prefer to take the survey online (n=7), although a few said it would be easier to do it on paper if they had the survey on hand (n=3).

One participant in the prominent panel did not see the letter and pulled out the form. He said, "If I saw the survey first, I would throw it in the trash. I would want a letter first with the option to do it online. Or a message saying, 'Once you receive the paper survey, you may take it online [did not see the Prominent Internet message on the form, either]."

4.2.3 Not Prominent Choice

None of the participants reported that there was anything confusing about the letter. Most participants eventually found the Internet message on the questionnaire during the debriefing portion of the session.

All of the participants said they thought they should complete the survey as soon as possible, as in the other conditions, some noted that there was no specific time frame given.

There were many comments about the size of the packet:

- "Thick packet- it will take time to fill out."
- "It looks like the form you sent before [2010 Census]. I hope you don't change to thick packets."
- "This is cumbersome. This is turning me off."
- This survey is going to be "quite a project."

Another participant said the letter was "making it seem like something could happen to me if I don't fill it out; it's threatening."

Two participants said they would not take survey, but half of the remainder said they would prefer to complete the survey online (n=4) and half preferred paper (n=4).

4.3.4 Push Panels

None of the participants said that anything in the letter was confusing. One participant commented that it was a "huge packet" in the production/control panel, and several other participants said things like, "wow" and "jeez," etc. The size of the packet can be intimidating for respondents, although there were fewer comments about the size of the initial packet being large or thick in the push panels than the other panels.

While participants in the other conditions tended to focus most on the questionnaire and the letter first when opening the packet, more participants pulled out and looked at the glossy brochure for the Push panels. One participant said "I don't know what this is" and then moved on to the letter.

All of the participants said that they would respond to the survey via the Internet, although a few said that they would prefer paper.

When participants were asked what they would do if they did not have access to the Internet, the two most frequent responses were that 1) they would wait for the paper form to come; or 2) they would use the Internet at the library.

4.3 Reminder Postcard

All of the participants understood that this was a postcard that served as a reminder to complete the ACS. Many commented that it was repetitive and bothersome, but some said they would not mind it.

4.3.1 Production

No participants reported that anything in the postcard was confusing.

Participants noted the increasing sense of urgency with this third piece of mail. One participant said, "It's prompting me to be more urgent" and I would "take it more seriously."

When asked when the Census Bureau expected them to complete the survey, participants said "as soon as possible" in almost all cases. All of the participants understood that this was a reminder to complete the survey.

One participant said he "didn't feel pressured by it," while another said she "would feel guilty" if she had not done it yet. The reaction to the reminder postcard, like the other pieces of mail, might have been influenced heavily by individual personality.

4.3.2. Prominent Choice

None of the participants reported that they thought anything was confusing in the postcard.

One participant pointed out that the postcard has a toll-free number, but no hours listed for when customer service would be available.

All of the participants understood that this was a reminder to complete the survey and said they should complete the survey as soon as possible.

4.2.3 Not Prominent Choice

None of the participants reported that they thought anything was confusing in the postcard.

Participants generally commented that it was a reminder, although one participant said the message was "Hurry up and send your Census in," apparently confusing the ACS with the recent 2010 Decennial Census.

One participant pointed out that "it said fire stations before. Now it says roads." He thought the reasons given for the ACS were inconsistent between the mailings. One participant suggested adding how the ACS impacts employment because everyone is interested in jobs and "a lot of people out here are unemployed."

All of the participants said they should complete the survey as soon as possible.

4.3.4 Push Panels

No participants found anything confusing about this postcard.

One participant said that she would "toss" the postcard because the previous letter said there would be a questionnaire coming and that there might be a communication issue. Another participant mentioned that he was expecting the next piece of mail to be the paper questionnaire as well. The reminder postcard does arrive before the replacement packet in the temporal order of the mailing materials.

For future testing, we recommend examining a version of the Introduction letter that tells respondents that there will also be a postcard coming in between the packets so that they are not confused by the postcard coming before the paper form.

4.4 Replacement Letter/questionnaire

Many participants in all conditions said that they felt the message was repetitive, but several participants commented that this letter had an escalated sense of urgency with respect to completing the survey soon with respect to the prior pieces of mail. Some participants in the push panels commented that they received a paper questionnaire and most said that they would have already completed it online.

4.4.1 Production

No participants reported that anything in the letter was confusing and they all reported that they got the impression that they should return the survey as soon as possible. Most participants commented that this mailing packet looked the same as the other materials they had already received.

Participants noted that the tone had changed to a more serious nature. One participant noted that the opening paragraph increased the amount of responsibility as an individual that he had to complete the survey. He said it was because the letter says [from the Director] "I asked you to help us," so he felt it was his responsibility to do this.

Participants had different reactions to the message about having an enumerator possibly visit their residence if they did not complete the survey. Most said they would complete the survey to avoid this, but some participants reported that they thought this message was invasive and threatening. Others said they did not care whether someone came to their house.

Selected comments:

- "Robert Groves [Census Bureau Director] is pleading for it to be sent in."

- "I have to do this tonight, but it's so long."
- "If I had not decided to do it, this letter would make me more resistant."

Most participants said they would complete the ACS for various reasons. Here are some examples:

- "To be counted."
- "I understand the importance of the Census and its benefits."
- "I realize the necessity of it in a broader way than I did before."

4.4.2. Prominent Choice

None of the participants reported that anything in the letter was confusing. Most participants expressed some frustration over having received yet another piece of mail.

Participants also commented that the tone of the letter had gotten more serious. One participant remarked, "Now it's getting a little personal." Another participant said, "Now they are going to call me on the phone. I would get a little irritated."

Most participants said they would complete the ACS for various reasons. Some examples include:

- Help in planning the process of the United States.
- To avoid a personal visit.

4.2.3 Not Prominent Choice

None of the participants reported that anything in the letter was confusing. Some did express frustration at getting yet another piece of mail. One participant said, "They keep bugging me. I'm going to trash it." Another said, "By this point, it probably wouldn't get opened by me."

Many participants remarked on the increased sense of urgency in this letter. Some participants felt threatened by the concept of a "personal visit," but most were indifferent. One participant said the personal visit was "not a pretty one. They may be coming to take me to jail because it says by law."

Most participants said they would complete the ACS for various reasons, including:

- Civic duty.
- To avoid a personal visit.

4.3.4 Push Panels

No participants found anything confusing about this letter. Participants commented that the tone of this letter had a more harsh and direct feel. One participant expressed dislike for the way "that Census implies they sent a survey three weeks ago." She said it sounds like they are putting the blame on the respondent.

Some participants were offended by the notion of an enumerator visiting their residence, but most were indifferent.

Most participants said they would complete the survey for various reasons. Some examples are:

- "Just to get rid of it now and I know [its] importance."
- "Because I understand it's very important; it's urgent."
- "I would like to be a part of it. Would look at the neighborhood and say we need so and so."

4.5 Prominent Offer Form

One major observation during the formal cognitive testing and during following rounds of testing was that participants did not tend to notice the Internet option displayed on the ACS Internet form itself in the Prominent Internet Offer (Choice) Condition (an example is discussed in section 4.2). The sponsor team changed the form after a series of alternative versions of the form were vetted. The original and revised versions of the form can be seen in Figures 68 and 69, respectively.

Respond online today at:
https://respond.census.gov/acs

Or complete this form and mail it back as soon as possible.

This form asks for information about the people who are living or staying at the address on the mailing label and about the house, apartment, or mobile home located at the address on the mailing label.

If you need help or have questions about completing this form, please call **1-800-354-7271.** The telephone call is free.

Telephone Device for the Deaf (TDD): Call 1–800–582–8330. The telephone call is free.

¿NECESITA AYUDA? Si usted habla español y necesita ayuda para completar su cuestionario, llame sin cargo alguno al **1-877-833-5625.** Usted también puede completar su entrevista por teléfono con un entrevistador que habla español. O puede responder por Internet en https://respond.census.gov/acs

For more information about the American Community Survey, visit our web site at: http://www.census.gov/acs/www/

Start Here

➡ **Please print today's date.**
Month Day Year

➡ **Please print the name and telephone number of the person who is filling out this form.** We may contact you if there is a question.
Last Name

First Name   MI

Area Code + Number

➡ **How many people are living or staying at this address?**
- **INCLUDE** everyone who is living or staying here for more than 2 months.
- **INCLUDE** yourself if you are living here for more than 2 months.
- **INCLUDE** anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- **DO NOT INCLUDE** anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

➡ **Fill out pages 2, 3, and 4 for everyone, including yourself, who is living or staying at this address for more than 2 months. Then complete the rest of the form.**

Figure 68: Originally Proposed "Prominent" Offer for the 2011 ACS Internet Test

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Figure 69: Revised "Prominent" Offer for the 2011 ACS Internet Test

4.6. Mailing Materials Discussion

Overall, the mailing materials were not confusing to participants and they were able to understand the main messages contained in the letters and postcards. General themes found are not unique to this study, such as that there are too many pieces of mail, the preference for a name on the mailing label instead of just "resident," and that the idea of a personal visit from an enumerator felt threatening to some people. Because of the timing of the research, there was some confusion with the recent 2010 Census.

Usability testing was able to uncover a potential issue with the design of the Prominent Choice offer questionnaire and informed its redesign and future development.

5. Summary

Two rounds of testing were performed on the wireframe ACS screens and one round of cognitive testing was performed on the associated mailing materials. The usability team was able to uncover several issues with the Web screens and mailing materials that the sponsor team addressed for future rounds of usability testing, including the layout of the health insurance question, the format of the Prominent Offer paper form, and the formatting of the example Household ID and PIN.

6. Acknowledgements

7. References

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Appendix A: Participant Vignette Reminder Card

Name: Pat Smith

Language: Speak French at home

Address: 101 Main Street in Anytown, MD, 20000.

Type of home: Your home is a one-family house detached from any other house.

Appendix B: General Protocols (Round 2)

Protocol for ACS Internet Letters Package (Prominent)

RESPONDENT #:	Condition= Prominent

General Introduction

Thank you for your time today. My name is XX, and I will be working with you today. We will be evaluating the design of the American Community Survey letters. We will be evaluating the American Community Survey itself by having you complete part of it after we are done with the letters and postcard. We are going to use your comments to give feedback to the developers of these American Community Survey materials. I did not create the materials or the survey, so please share both your positive and negative reactions to them. We are not evaluating you or your skills, but rather you are helping us see how well the letters explain things.

First, I would like to ask you to read and sign this consent form. It explains the purpose of the session and informs you that we would like to videotape the session, with your permission. Only those of us connected with the project will review the tape. We will use it mainly as a memory aid. We may also use clips from the tape to illustrate key points about the design of the letters.

We will also be using eye-tracking equipment to help us understand how you use the materials we will show you.

Explain the eye-tracking analysis to the participant if they ask about it.

Hand the participant the consent form; give time to read and sign; sign own name and date if you have not already done so.

Start the tape when the participant signs the consent form.

Before we get started, I would also like you to complete this short background survey.

Then, hand the participant the demographics and computer usage survey to complete.

I would like you to tell me your impressions and thoughts about the letters as you read them. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that

expectation as well. Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me.

You don't have to read the letters or postcard aloud if that is not what you normally would do, but we do want you to tell us what you are thinking as you read.

Before we get started, let's practice thinking aloud, since it's not something that you would normally do while reading letters. Can you tell me how many windows are in your house or apartment? *[PROBE as appropriate to the participant's responses to this question.]*

After think-aloud practice is complete:

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration. The eye tracker may need to be re-calibrated for each type of letter.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received each of these items in the mail at home and read them as you would normally read your mail.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

Pre-Notice Letter

Imagine that you are opening your mail at home and that you received the envelope that I am going to show you now. Please read it as you would at home, and remember to think aloud as you go through it.

Give them the Pre-Notice Letter.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Survey is coming   Can fill on paper   Can fill on Internet   Complete it

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

Introductory Letter

After a few days, you would receive this envelope in the mail at home. Please read it as you would at home and remember to think aloud as you go through it.

By observation, what did they look at

NOTES: Form   Letter   Information Card   Guide for ACS   Glossy ACS   Envelope

Redirect them to the letter.

Go ahead and read the letter and think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

How does this letter say you should complete the American Community Survey? *IF they say by the Internet, probe:* How do you feel about using the Internet to respond to the survey?

NOTES: Circle: Paper   Internet

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y   N

If Yes above, If you were taking the survey at your home, would you complete the survey online or by paper? Why?

NOTES: Circle: Online   Paper

Please read the Option 1 text in the letter. What do the words, "access code" mean to you? Can you show me what you would do to find your access code?

NOTES:

Reminder Postcard

After a few more days, you would receive this postcard in the mail. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the postcard:

What do you think the postcard is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this postcard, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the postcard was confusing?

NOTES: Circle: Y   N

How does this postcard say you should complete the survey?

NOTES: Circle: Paper   Internet

Replacement Letter

After a few weeks, you would receive this envelope in the mail if you had not yet responded to the survey. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

How does this letter say you should complete the American Community Survey? *IF they say by the Internet here and did not say it for the Introductory Letter, probe:* How do you feel about using the Internet to respond to the survey?

NOTES: Circle: Paper   Internet

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y   N

General debriefing

1. Did you see the option for taking the survey online on this letter/postcard?

Go through each letter and postcard and ask if they saw it.

NOTES:

Introductory Letter: Yes   No DK

Postcard: Yes No DK

2. Did you see the sentence about how an interviewer for the Census Bureau will come to your house to conduct a personal interview if you do not complete the American Community Survey?

NOTES: Yes   No   DK

3. In your own words, what is a "personal visit?"

NOTES:

4. How would you feel about an interviewer conducting a personal visit at your home?

NOTES: Would Like   Would not like   No opinion

5. Would that sentence encourage you to complete the survey, or would it not affect you?

Why or why not?

NOTES: Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

8. *Give the paper form to the respondent.* Did you see the Internet message on the paper American Community Survey

form?

NOTES: See the message?   Yes   Not   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the letters or postcard?

<div style="border:1px solid black; padding:10px; background:#cccccc;">

<u>NOTES:</u>

</div>

After the participant has finished with the test of the letters and postcard, bring them in to testing Room A (5K509).

Hand them each letter packet for their assigned condition

Now we may proceed to the next part of the session.

Please complete the American Community Survey online for yourself only. I would like you to tell me your impressions and thoughts about the Web survey as you take it. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well.

Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me. Please focus on verbalizing what you are thinking as you take the survey.

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received this mail packet in the mail. Please respond to the survey online as you would at home. For the purposes of this study, please pretend that

your name is Pat Smith and live at the address on this envelope. Otherwise, you may answer the questions as they apply to you in your real life.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

After the participant is finished, ask them to complete the satisfaction questionnaire.

Now you can complete the questionnaire on your experiences using the Web survey. The questionnaire is titled, "Questionnaire for User Interaction Satisfaction."

Debriefing Interview Questions

Go over any negatively rated items on the QUIS

NOTES:

1. What was your overall impression of the survey?

NOTES:

2. Based on your experience with this online survey, would you be more likely to take this survey online if you receive it, less likely to complete it, or would you say that your likelihood of taking the survey was not affected?

NOTES: More likely to take it online   Less likely to complete it on line   Neither

3. How does this survey compare to the Web surveys that you have taken in the past in terms of visual appeal?

NOTES:

4. How does this survey compare to the Web surveys that you have taken in the past in terms of ease of use?

NOTES:

5. On the Welcome Screen (pull it up), Aside from what information was provided on this screen, did you want to know anything else before starting the survey?

NOTES:

6. Based on the information on the Welcome Screen, did you think that your answers would be kept private?

NOTES: Yes   No   DK

7. Based on the information on the Welcome Screen, did you think that your answers would be kept secure?

NOTES: Yes   No   DK

8. *Redirect the respondent to the Information card.* Was the Internet instruction card helpful? Did you think anything was confusing on the Internet instruction card?

NOTES: Card was helpful?   Yes   No   DK

Anything confusing?   Yes   No   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the Web survey?

NOTES: No   Yes, please explain:

RESPONDENT#:

Prominent Condition

80

RACE: White   Black   Hispanic   Asian   Other

AGE RANGE: < 30   31-45   46-60   61+

GENDER: M   F

EDUCATION: HS/GED   Some Coll/AA   Bachelor's   Some grad

DATE OF INTERVIEW:

INTERVIEWER:

Protocol for ACS Internet Letters Package (Not Prominent)

RESPONDENT #:	Condition= Not Prominent

General Introduction

Thank you for your time today. My name is XX, and I will be working with you today. We will be evaluating the design of the American Community Survey letters. We will be evaluating the American Community Survey itself by having you complete part of it after we are done with the letters and postcard. We are going to use your comments to give feedback to the developers of these ACS materials. I did not create the materials or the survey, so please share both your positive and negative reactions to them. We are not evaluating you or your skills, but rather you are helping us see how well the letters explain things.

First, I would like to ask you to read and sign this consent form. It explains the purpose of the session and informs you that we would like to videotape the session, with your permission. Only those of us connected with the project will review the tape. We will use it mainly as a memory aid. We may also use clips from the tape to illustrate key points about the design of the letters.

We will also be using eye-tracking equipment to help us understand how you use the materials we will show you.

Explain the eye-tracking analysis to the participant if they ask about it.

Hand the participant the consent form; give time to read and sign; sign own name and date if you have not already done so.

Start the tape when the participant signs the consent form.

Before we get started, I would also like you to complete this short background survey.

Then, hand the participant the demographics and computer usage survey to complete.

I would like you to tell me your impressions and thoughts about the letters as you read them. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well. Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me.

You don't have to read the letters or postcard aloud if that is not what you normally would do, but we do want you to tell us what you are thinking as you read.

Before we get started, let's practice thinking aloud, since it's not something that you would normally do while reading letters. Can you tell me how many windows are in your house or apartment? *[PROBE as appropriate to the participant's responses to this question.]*

After think-aloud practice is complete:

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration. The eye tracker may need to be re-calibrated for each type of letter.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received each of these items in the mail at home and read them as you would normally read your mail.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

Pre-Notice Letter

Imagine that you are opening your mail at home and that you received the envelope that I am going to show you now. Please read it as you would at home, and remember to think aloud as you go through it.

Give them the Pre-Notice Letter.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Survey is coming   Can fill on paper   Can fill on Internet   Complete it

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

<u>Introductory Letter</u>

After a few days, you would receive this envelope in the mail at home. Please read it as you would at home and remember to think aloud as you go through it.

By observation, what did they look at

NOTES: Form   Letter   Guide for ACS   Glossy ACS   Envelope

Redirect them to the letter.

Go ahead and read the letter and think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y N

If Yes above, If you were taking the survey at your home, would you complete the survey online or by paper? Why?

NOTES: Circle: Online Paper

Reminder Postcard

After a few more days, you would receive this postcard in the mail. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the postcard:

What do you think the postcard is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this postcard, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the postcard was confusing?

NOTES: Circle: Y   N

Replacement Letter

After a few weeks, you would receive this envelope in the mail if you had not yet responded to the survey. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y   N

General debriefing

2. Did you see the sentence about how an interviewer for the Census Bureau will come to your house to conduct a personal interview if you do not complete the American Community Survey?

NOTES: Yes   No   DK

3. In your own words, what is a "personal visit?"

NOTES:

4. How would you feel about an interviewer conducting a personal visit at your home?

NOTES: Would Like   Would not like   No opinion

5. Would that sentence encourage you to complete the survey, or would it not affect you?

Why or why not?

NOTES: Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

NOTES: Not at all strongly 1 2 3 4 5 6 7 8 9 Very strongly

8. *Give the paper form to the respondent.* Did you see the Internet message on the paper American Community Survey form?

NOTES: See the message?   Yes   Not   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the letters or postcard?

NOTES:

After the participant has finished with the test of the letters and postcard, bring them in to testing Room A (5K509).

Now we may proceed to the next part of the session.

Hand them the form and point out the url on the form.

Please complete the American Community Survey online for yourself only. I would like you to tell me your impressions and thoughts about the Web survey as you take it. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well.

Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me. Please focus on verbalizing what you are thinking as you take the survey.

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received this mail packet in the mail. Please respond to the survey online as you would at home. For the purposes of this study, please pretend that your name is Pat Smith and live at the address on this envelope. Otherwise, you may answer the questions as they apply to you in your real life.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

After the participant is finished, ask them to complete the satisfaction questionnaire.

Now you can complete the questionnaire on your experiences using the Web survey. The questionnaire is titled, "Questionnaire for User Interaction Satisfaction."

Debriefing Interview Questions

Go over any negatively rated items on the QUIS

NOTES:

1. What was your overall impression of the survey?

NOTES:

2. Based on your experience with this online survey, would you be more likely to take this survey online if you receive it, less likely to complete it, or would you say that your likelihood of taking the survey was not affected?

NOTES: More likely to take it online   Less likely to complete it on line   Neither

3. How does this survey compare to the Web surveys that you have taken in the past in terms of visual appeal?

NOTES:

4. How does this survey compare to the Web surveys that you have taken in the past in terms of ease of use?

NOTES:

5. On the Welcome Screen (pull it up), Aside from what information was provided on this screen, did you want to know anything else before starting the survey?

NOTES:

6. Based on the information on the Welcome Screen, did you think that your answers would be kept private?

NOTES: Yes   No   DK

7. Based on the information on the Welcome Screen, did you think that your answers would be kept secure?

NOTES: Yes   No   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the Web survey?

NOTES: No   Yes, please explain:

RESPONDENT#:

Not Prominent Condition

RACE: White   Black   Hispanic   Asian   Other

AGE RANGE: < 30   31-45   46-60   61+

GENDER: M   F

EDUCATION: HS/GED   Some Coll/AA   Bachelor's   Some grad

DATE OF INTERVIEW:

Protocol for ACS Internet Letters Package (Push Regular Schedule)

<u>Pre-Notice Letter</u>

Imagine that you are opening your mail at home and that you received the envelope that I am going to show you now. Please read it as you would at home, and remember to think aloud as you go through it.

Give them the Pre-Notice Letter.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

Did you think anything in the letter was confusing?

<u>Introductory Letter</u>

After a few days, you would receive this envelope in the mail at home. Please read it as you would at home and remember to think aloud as you go through it.

By observation, what did they look at

P3	Instruction card Many materials- That's a lot of paper
P5	Instruction card
P9	FAQ
P13	Letter

Redirect them to the letter.

Go ahead and read the letter and think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

Did you think anything in the letter was confusing?

How does this letter say you should complete the American Community Survey? *IF they say by the Internet, probe:* How do you feel about using the Internet to respond to the survey?

Was there any sentence in the letter that would encourage you to complete the survey?

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

What would you do if you didn't have Internet access?

mail?

Based on this letter, would you think that a paper form was eventually going to come in the mail?

Please read aloud the second sentence in the second paragraph. *Point to sentence with unable to complete the survey online.* What does that mean in your own words?

<u>Reminder Postcard</u>

After a few more days, you would receive this postcard in the mail. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the postcard:

What do you think the postcard is telling you? Anything else?

Based on this postcard, how soon did you think that the Census Bureau expects you to complete the survey?

Did you think anything in the postcard was confusing?

How does this postcard say you should complete the survey?

Replacement Letter

After a few weeks, you would receive this envelope in the mail if you had not yet responded to the survey. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

Did you think anything in the letter was confusing?

How does this letter say you should complete the American Community Survey? *IF they say by the Internet here and did not say it for the Introductory Letter, probe:* How do you feel about using the Internet to respond to the survey?

Was there any sentence in the letter that would encourage you to complete the survey?

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

General debriefing

1. Did you see the option for taking the survey online on this letter/postcard?

Go through each letter and postcard and ask if they saw it.

NOTES:

Introductory Letter: Yes   No DK

Postcard: Yes No DK

2. Did you see the sentence about how an interviewer for the Census Bureau will come to your house to conduct a personal interview if you do not complete the American Community Survey?

3. In your own words, what is a "personal visit?"

4. How would you feel about an interviewer conducting a personal visit at your home?

5. Would that sentence encourage you to complete the survey, or would it not affect you?

Why or why not?

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

6. *Give the Introductory letter back to the participant.* Did you see the message about saving taxpayers money by responding to the American Community Survey? Would that message encourage you to complete the survey? Why or why not?

NOTES: See the message?   Yes   Not   DK

Would it encourage? Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

> NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

7. Did you see the message about saving natural resources by responding to the American Community Survey online? Would that message encourage you to complete the survey? Why or why not?

> NOTES: See the message?   Yes   Not   DK
>
>
> Would it encourage? Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

> NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

8. *Give the paper form to the respondent.* Did you see the Internet message on the paper American Community Survey form?

NOTES: See the message?   Yes   Not   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the letters or postcard?

NOTES:

After the participant has finished with the test of the letters and postcard, bring them in to testing Room A (5K509).

Hand them each letter packet for their assigned condition

Now we may proceed to the next part of the session.

Please complete the American Community Survey online for yourself only. I would like you to tell me your impressions and thoughts about the Web survey as you take it. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well.

Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me. Please focus on verbalizing what you are thinking as you take the survey.

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received this mail packet in the mail. Please respond to the survey online as you would at home. For the purposes of this study, please pretend that your name is Pat Smith and live at the address on this envelope. Otherwise, you may answer the questions as they apply to you in your real life.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

After the participant is finished, ask them to complete the satisfaction questionnaire.

Now you can complete the questionnaire on your experiences using the Web survey. The questionnaire is titled, "Questionnaire for User Interaction Satisfaction."

Debriefing Interview Questions

Go over any negatively rated items on the QUIS

NOTES:

1. What was your overall impression of the survey?

NOTES:

2. Based on your experience with this online survey, would you be more likely to take this survey online if you receive it, less likely to complete it, or would you say that your likelihood of taking the survey was not affected?

NOTES: More likely to take it online   Less likely to complete it on line   Neither

3. How does this survey compare to the Web surveys that you have taken in the past in terms of visual appeal?

NOTES:

4. How does this survey compare to the Web surveys that you have taken in the past in terms of ease of use?

NOTES:

5. On the Welcome Screen (pull it up), Aside from what information was provided on this screen, did you want to know anything else before starting the survey?

NOTES:

6. Based on the information on the Welcome Screen, did you think that your answers would be kept private?

NOTES: Yes   No   DK

7. Based on the information on the Welcome Screen, did you think that your answers would be kept secure?

NOTES: Yes   No   DK

8. *Redirect the respondent to the Information card.* Was the Internet instruction card helpful? Did you think anything was confusing on the Internet instruction card?

NOTES: Card was helpful?   Yes   No   DK

Anything confusing?   Yes   No   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the Web survey?

NOTES: No   Yes, please explain:

RESPONDENT#:

Push Regular Schedule Condition

RACE: White   Black   Hispanic   Asian   Other

AGE RANGE: < 30   31-45   46-60   61+

GENDER: M   F

EDUCATION: HS/GED   Some Coll/AA   Bachelor's   Some grad

DATE OF INTERVIEW:

INTERVIEWER:

Protocol for ACS Internet Letters Package (Push Modified Schedule)

<u>RESPONDENT #:</u>   <u>Condition</u>= Push Modified Schedule

General Introduction

Thank you for your time today. My name is XX, and I will be working with you today. We will be evaluating the design of the American Community Survey letters. We will be evaluating the American Community Survey itself by having you complete part of it after we are done with the letters and postcard. We are going to use your comments to give feedback to the developers of these American Community Survey materials. I did not create the materials or the survey, so please share both your positive and negative reactions to them. We are not evaluating you or your skills, but rather you are helping us see how well the letters explain things.

First, I would like to ask you to read and sign this consent form. It explains the purpose of the session and informs you that we would like to videotape the session, with your permission. Only those of us connected with the project will review the tape. We will use it mainly as a memory aid. We may also use clips from the tape to illustrate key points about the design of the letters.

We will also be using eye-tracking equipment to help us understand how you use the materials we will show you.

Explain the eye-tracking analysis to the participant if they ask about it.

Hand the participant the consent form; give time to read and sign; sign own name and date if you have not already done so.

Start the tape when the participant signs the consent form.

Before we get started, I would also like you to complete this short background survey.

Then, hand the participant the demographics and computer usage survey to complete.

I would like you to tell me your impressions and thoughts about the letters as you read them. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well. Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me.

You don't have to read the letters or postcard aloud if that is not what you normally would do, but we do want you to tell us what you are thinking as you read.

Before we get started, let's practice thinking aloud, since it's not something that you would normally do while reading letters. Can you tell me how many windows are in your house or apartment? *[PROBE as appropriate to the participant's responses to this question.]*

After think-aloud practice is complete:

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration. The eye tracker may need to be re-calibrated for each type of letter.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received each of these items in the mail at home and read them as you would normally read your mail.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

Pre-Notice Letter

Imagine that you are opening your mail at home and that you received the envelope that I am going to show you now. Please read it as you would at home, and remember to think aloud as you go through it.

Give them the Pre-Notice Letter.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Survey is coming   Can fill on paper   Can fill on Internet   Complete it

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

Introductory Letter

After a few days, you would receive this envelope in the mail at home. Please read it as you would at home and remember to think aloud as you go through it.

By observation, what did they look at

NOTES: Letter   Information Guide   Guide for ACS   Glossy ACS

Redirect them to the letter.

Go ahead and read the letter and think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

How does this letter say you should complete the American Community Survey? *IF they say by the Internet,*

probe: How do you feel about using the Internet to respond to the survey?

NOTES: Circle: Paper   Internet

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y   N

What would you do if you didn't have Internet access?

NOTES:

Based on this letter, would you think that a paper form was eventually going to come in the mail?

> NOTES: Circle: Y N

Please read aloud the second sentence in the second paragraph. *Point to sentence with unable to complete the survey online.* What does that mean in your own words?

> NOTES:

Replacement Letter

After a few weeks, you would receive this envelope in the mail if you had not yet responded to the survey. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

> NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

How does this letter say you should complete the American Community Survey? *IF they say by the Internet here and did not say it for the Introductory Letter, probe:* How do you feel about using the Internet to respond to the survey?

NOTES: Circle: Paper   Internet

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

> NOTES: Circle: Y   N

Reminder Postcard

After a few more weeks, you would receive this postcard in the mail. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the postcard:

What do you think the postcard is telling you? Anything else?

> NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this postcard, how soon did you think that the Census Bureau expects you to complete the survey?

> NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the postcard was confusing?

NOTES: Circle: Y   N

How does this postcard say you should complete the survey?

NOTES: Circle: Paper   Internet

General debriefing

1. Did you see the option for taking the survey online on this letter/postcard?

Go through each letter and postcard and ask if they saw it.

NOTES:

Introductory Letter: Yes   No DK

Replacement: Yes   No   DK

2. Did you see the sentence about how an interviewer for the Census Bureau will come to your house to conduct a personal interview if you do not complete the American Community Survey?

NOTES: Yes   No   DK

3. In your own words, what is a "personal visit?"

NOTES:

4. How would you feel about an interviewer conducting a personal visit at your home?

NOTES: Would Like   Would not like   No opinion

5. Would that sentence encourage you to complete the survey, or would it not affect you?

Why or why not?

NOTES: Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

> NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

6. *Give the Introductory letter back to the participant.* Did you see the message about saving taxpayers money by responding to the American Community Survey? Would that message encourage you to complete the survey? Why or why not?

> NOTES: See the message?   Yes   Not   DK
>
>
> Would it encourage? Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

> NOTES: Not at all strongly 1   2   3   4   5   6   7   8   9 Very strongly

7. Did you see the message about saving natural resources by responding to the American Community Survey online? Would that message encourage you to complete the survey? Why or why not?

> NOTES: See the message?   Yes   Not   DK
>
>
> Would it encourage? Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

NOTES: Not at all strongly 1 2 3 4 5 6 7 8 9 Very strongly

8. *Give the paper form to the respondent.* Did you see the Internet message on the paper ACS

form?

NOTES: See the message?   Yes   Not   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the letters or postcard?

NOTES:

After the participant has finished with the test of the letters and postcard, bring them in to testing Room A (5K509).

Hand them each letter packet for their assigned condition

Now we may proceed to the next part of the session.

Please complete the American Community Survey online for yourself only. I would like you to tell me your impressions and thoughts about the Web survey as you take it. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well.

Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me. Please focus on verbalizing what you are thinking as you take the survey.

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received this mail packet in the mail. Please respond to the survey online as you would at home. For the purposes of this study, please pretend that your name is Pat Smith and live at the address on this envelope. Otherwise, you may answer the questions as they apply to you in your real life.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

After the participant is finished, ask them to complete the satisfaction questionnaire.

Now you can complete the questionnaire on your experiences using the Web survey. The questionnaire is titled, "Questionnaire for User Interaction Satisfaction."

Debriefing Interview Questions

Go over any negatively rated items on the QUIS

<div style="border:1px solid black; background:#cccccc; padding:10px">

<u>NOTES:</u>

</div>

1. What was your overall impression of the survey?

NOTES:

2. Based on your experience with this online survey, would you be more likely to take this survey online if you receive it, less likely to complete it, or would you say that your likelihood of taking the survey was not affected?

NOTES: More likely to take it online   Less likely to complete it on line   Neither

3. How does this survey compare to the Web surveys that you have taken in the past in terms of visual appeal?

NOTES:

e?

NOTES:

5. On the Welcome Screen (pull it up), Aside from what information was provided on this screen, did you want to know anything else before starting the survey?

NOTES:

6. Based on the information on the Welcome Screen, did you think that your answers would be kept private?

NOTES: Yes   No   DK

7. Based on the information on the Welcome Screen, did you think that your answers would be kept secure?

NOTES: Yes   No   DK

8. *Redirect the respondent to the Information card.* Was the Internet instruction card helpful? Did you think anything was confusing on the Internet instruction card?

NOTES: Card was helpful?   Yes   No   DK

Anything confusing?   Yes   No   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the Web survey?

NOTES: No   Yes, please explain:

RESPONDENT#:

Push Modified Schedule Condition

RACE: White   Black   Hispanic   Asian   Other

AGE RANGE: $\leq$ 30   31-45   46-60   61+

GENDER: M   F

EDUCATION: HS/GED   Some Coll/AA   Bachelor's   Some grad

DATE OF INTERVIEW:

INTERVIEWER:

Control/Protocol for ACS Internet Letters Package

RESPONDENT #:	Condition= Production

General Introduction

Thank you for your time today. My name is XX, and I will be working with you today. We will be evaluating the design of the American Community Survey letters. We will be evaluating the American Community Survey itself by having you complete part of it after we are done with the letters and postcard. We are going to use your comments to give feedback to the developers of these American Community Survey materials. I did not create the materials or the survey, so please share both your positive and negative reactions to them. We are not evaluating you or your skills, but rather you are helping us see how well the letters explain things.

First, I would like to ask you to read and sign this consent form. It explains the purpose of the session and informs you that we would like to videotape the session, with your permission. Only those of us connected with the project will review the tape. We will use it mainly as a memory aid. We may also use clips from the tape to illustrate key points about the design of the letters.

We will also be using eye-tracking equipment to help us understand how you use the materials we will show you.

Explain the eye-tracking analysis to the participant if they ask about it.

Hand the participant the consent form; give time to read and sign; sign own name and date if you have not already done so.

Start the tape when the participant signs the consent form.

Before we get started, I would also like you to complete this short background survey.

Then, hand the participant the demographics and computer usage survey to complete.

I would like you to tell me your impressions and thoughts about the letters as you read them. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that

expectation as well. Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me.

You don't have to read the letters or postcard aloud if that is not what you normally would do, but we do want you to tell us what you are thinking as you read.

Before we get started, let's practice thinking aloud, since it's not something that you would normally do while reading letters. Can you tell me how many windows are in your house or apartment? *[PROBE as appropriate to the participant's responses to this question.]*

After think-aloud practice is complete:

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration. The eye tracker may need to be re-calibrated for each type of letter.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received each of these items in the mail at home and read them as you would normally read your mail.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

Pre-Notice Letter

Imagine that you are opening your mail at home and that you received the envelope that I am going to show you now. Please read it as you would at home, and remember to think aloud as you go through it.

Give them the Pre-Notice Letter.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Survey is coming   Can fill on paper   Can fill on Internet   Complete it

Did you think anything in the letter was confusing?

Introductory Letter

After a few days, you would receive this envelope in the mail at home. Please read it as you would at home and remember to think aloud as you go through it.

By observation, what did they look at

Redirect them to the letter.

Go ahead and read the letter and think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

133

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y   N

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y   N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y   N

Reminder Postcard

After a few more days, you would receive this postcard in the mail. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the postcard:

What do you think the postcard is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this postcard, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

135

Did you think anything in the postcard was confusing?

NOTES: Circle: Y   N

Replacement Letter

After a few weeks, you would receive this envelope in the mail if you had not yet responded to the survey. Please read it as you would at home and remember to think aloud as you go through it.

After they are finished reading the letter:

What do you think the letter is telling you? Anything else?

NOTES: Circle: Can fill on paper   Can fill on Internet   Complete it

Based on this letter, how soon did you think that the Census Bureau expects you to complete the survey?

NOTES: Circle: as soon as possible   don't know   Other – explain below

Did you think anything in the letter was confusing?

NOTES: Circle: Y N

Was there any sentence in the letter that would encourage you to complete the survey?

NOTES: Circle: Y N

After you receive the letter in the mail, would you complete the American Community Survey? Why or why not?

NOTES: Circle: Y N

General debriefing

2. Did you see the sentence about how an interviewer for the Census Bureau will come to your house to conduct a personal interview if you do not complete the American Community Survey?

NOTES: Yes No DK

3. In your own words, what is a "personal visit?"

> NOTES:

4. How would you feel about an interviewer conducting a personal visit at your home?

> NOTES: Would Like   Would not like   No opinion

5. Would that sentence encourage you to complete the survey, or would it not affect you?

Why or why not?

> NOTES: Yes, would encourage   No, would not encourage   Other

_ IF YES: On a scale of 1 to 9 with one being not at all and nine being very strongly, how strongly would that sentence encourage you to complete the survey?

> NOTES: Not at all strongly 1 2 3 4 5 6 7 8 9 Very strongly

9. Other than what we have already talked about, did you have any other comments or suggestions about the letters or postcard?

NOTES:

After the participant has finished with the test of the letters and postcard, bring them in to testing Room A (5K509).

Now we may proceed to the next part of the session.

Hand them an information card and a paper form.

Some households will receive an option to take the American Community Survey online. They would receive this information card and form. Please complete a portion of the American Community Survey online using this information card.

Complete the American Community Survey online for yourself only. I would like you to tell me your impressions and thoughts about the Web survey as you take it. I would like you to "think aloud" and talk to me about your impressions. If you expect to see some piece of information, tell me about that expectation as well.

Finally, during the session, I may remind you to talk to me if you get quiet, not to interrupt your thought process simply to remind you to talk to me. Please focus on verbalizing what you are thinking as you take the survey.

Now I am going to calibrate your eyes for the eye-tracking.

Do Calibration.

Now that we have your eyes calibrated, we are ready to begin. Please imagine that you have received this mail packet in the mail. Please respond to the survey online as you would at home. For the purposes of this study, please pretend that your name is Pat Smith and live at the address on this envelope. Otherwise, you may answer the questions as they apply to you in your real life.

Do you have any questions?

Start the eye-tracking software: Tobii Studio.

After the participant is finished, ask them to complete the satisfaction questionnaire.

Now you can complete the questionnaire on your experiences using the Web survey. The questionnaire is titled, "Questionnaire for User Interaction Satisfaction."

Debriefing Interview Questions

Go over any negatively rated items on the QUIS

<u>NOTES:</u>

1. What was your overall impression of the survey?

<u>NOTES:</u>

2. Based on your experience with this online survey, would you be more likely to take this survey online if you receive it, less likely to complete it, or would you say that your likelihood of taking the survey was not affected?

NOTES: More likely to take it online   Less likely to complete it on line   Neither

3. How does this survey compare to the Web surveys that you have taken in the past in terms of visual appeal?

NOTES:

e?

NOTES:

5. On the Welcome Screen (pull it up), aside from what information was provided on this screen, did you want to know anything else before starting the survey?

NOTES:

6. Based on the information on the Welcome Screen, did you think that your answers would be kept private?

NOTES: Yes   No   DK

7. Based on the information on the Welcome Screen, did you think that your answers would be kept secure?

NOTES: Yes   No   DK

8. *Redirect the respondent to the Information card.* Was the Internet instruction card helpful? Did you think anything was confusing on the Internet instruction card?

NOTES: Card was helpful?   Yes   No   DK

Anything confusing?   Yes   No   DK

9. Other than what we have already talked about, did you have any other comments or suggestions about the Web survey?

NOTES: No   Yes, please explain:

RESPONDENT#:

Production Condition

RACE: White   Black   Hispanic   Asian   Other

AGE RANGE: < 30   31-45   46-60   61+

GENDER: M   F

EDUCATION: HS/GED   Some Coll/AA   Bachelor's   Some grad

DATE OF INTERVIEW:

INTERVIEWER:

Appendix C: Consent Form (Round 2)

Consent Form

Usability Study of the American Community Survey
Letters, Postcard and Survey

Each year, the Census Bureau conducts many different usability evaluations. For example, the Census Bureau routinely tests the wording, layout and behavior of products, such as Web sites, online surveys, and letters sent through the mail in order to obtain the best information possible from respondents.

You have volunteered to take part in a study to improve the usability of letters, postcard, and survey associated with the American Community Survey (ACS). In order to have a complete record of your comments, your usability session will be videotaped. We plan to use the tapes to improve the design of the product. Staff directly involved in the usable design research project will have access to the tapes. We also plan to perform an eye-tracking analysis of your session. Your participation is voluntary and your answers will remain strictly confidential.

This usability study is being conducted under the authority of Title 13 USC. The OMB control number for this study is 0607-0725. This valid approval number legally certifies this information collection.

I have volunteered to participate in this Census Bureau usability study, and I give permission for my tapes to be used for the purposes stated above.

Participant's Name: _____

Participant's Signature:_____ Date:_____

Researcher's Name:_____ Date:_____

Researcher's Name:_____Date:_____

Appendix D: Questionnaire on Demographics and Computer and Internet Experience

Questionnaire on Statistical Background, Computer Use, Internet Experience

YOUR ANSWERS ARE CONFIDENTIAL

Demographics

1. What is your age? _____

2. Are you male or female?_____

3. What is your level of education?
   ___grade school
   ___some high school
   ___high school degree
   ___some college
   ___2-year college degree
   ___4-year college degree
   ___some postgraduate study (e.g., M.A., M.B.A., J.D., Ph.D., M.D., programs)
   ___postgraduate degree (e.g., M.A., M.B.A., J.D., Ph.D., M.D.)

Computer Experience

1. Do you use a computer at home, at work, or both?
   (Check all that apply.)
   ___Home
   ___Work
   ___Somewhere else, such as school, library, etc.

2. If you have a computer at home,
   a. What kind of modem do you use at home?
   ___Dial-up
   ___Cable
   ___DSL
   ___Wireless (Wi-Fi)
   ___Other _____
   ___Don't know _____

   b. Which browser do you typically use at home? Please indicate the version if you can recall it.
   ___Firefox
   ___Internet Explorer
   ___Netscape
   ___Other _____
   ___Don't know

   c. What operating system does your home computer run in?
   ___MAC OS
   ___Windows 95
   ___Windows 2000
   ___Windows XP

Appendix E: Satisfaction Questionnaire

<div style="border: 1px solid black; padding: 10px;">

Questionnaire for User Interaction Satisfaction (QUIS)

Please circle the numbers that most appropriately reflect your impressions about using the ACS Web survey.

1. Overall reaction to the Web Survey:

    terrible   wonderful

    1 2 3 4 5 6 7 8 9   not applicable

2. Screen Layouts:

    illogical   logical

    1 2 3 4 5 6 7 8 9   not applicable

3. Use of terminology throughout the survey:

    inconsistent   consistent

    1 2 3 4 5 6 7 8 9   not applicable

4. Instructions displayed on the screens:

    inadequate   adequate

    1 2 3 4 5 6 7 8 9   not applicable

5. Questions displayed on the screens:

    confusing   clear

    1 2 3 4 5 6 7 8 9   not applicable

6. Questions can be answered in a straight-
   forward manner:

    never   always

    1 2 3 4 5 6 7 8 9   not applicable

7. Organization of question, instructions,
   and response categories in the survey:

    confusing   clear

    1 2 3 4 5 6 7 8 9   not applicable

8. Forward navigation:

    difficult   easy

    1 2 3 4 5 6 7 8 9   not applicable

9. Overall experience of completing the survey:

    difficult   easy

    1 2 3 4 5 6 7 8 9   not applicable

10. Additional Comments:

</div>

Appendix F: Mailing Materials from the 2011 ACS Internet Test
Production Panel

ACS Internet Test – Letters for Production Panel   10/9/09

Pre-Notice Letter

Dear Resident:

In a few days your household will receive a questionnaire in the mail for a very important national survey, the American Community Survey. When the questionnaire arrives, please fill it out and mail it back promptly. The U.S. Census Bureau is conducting this survey and chose your address, not you personally, as part of a randomly selected sample.

The American Community Survey collects information about various topics like education, housing, and jobs. Information from this survey is used by federal, state, local, and tribal governments to meet the needs of communities across America. For example, community leaders use this information to decide where schools, highways, hospitals, and other services are needed. The survey also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

If you have access to the Internet and want to learn more about the American Community Survey, please visit the Census Bureau's Web site: www.census.gov/acs/www.

Thank you in advance for your help.

Sincerely,

Robert M. Groves
Director

Introductory Letter

Dear Resident:

I recently sent a letter to your household about the American Community Survey. Enclosed is a questionnaire and information about the survey. Please complete the questionnaire and mail it back as soon as possible in the postage-paid envelope.

This survey collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The U.S. Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help filling out the questionnaire, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

Reminder Postcard

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

Dear Resident:

A few days ago, you should have received an American Community Survey
questionnaire. If you have already mailed it back, thank you. If you have not, please
send it soon.

Local and national leaders use the information from this survey for planning schools,
hospitals, roads, and other community needs.

If you need help filling out the questionnaire or have questions, please call our toll-
free number (1-800-354-7271).

Sincerely,

Robert M. Groves
Director

Replacement Letter

Dear Resident:

About three weeks ago, the U.S. Census Bureau sent an American Community Survey questionnaire to your address. I asked you to help us with this very important survey by completing it and mailing it back. But, we have not received it yet.

If you have already mailed your questionnaire, thank you very much. If you have not mailed the questionnaire, please send it soon. I have included another questionnaire with this letter. This survey is so important that a Census Bureau representative may attempt to contact you by telephone or personal visit if we do not receive your questionnaire.

The information collected in this survey will help decide where new schools, hospitals, and fire stations are needed. The information also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help filling out the questionnaire, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

ACS Internet Test – Letters for Prominent Internet Offer Panel   10/9/09

Pre-Notice Letter

Dear Resident:

In a few days your household will receive a questionnaire package in the mail for a very important national survey—the American Community Survey. Please use the materials in that package to complete the survey online or fill out the questionnaire and mail it back. The U.S. Census Bureau is conducting this survey and chose your address, not you personally, as part of a randomly selected sample.

The American Community Survey collects information about various topics like education, housing, and jobs. Information from this survey is used by federal, state, local, and tribal governments to meet the needs of communities across America. For example, community leaders use this information to decide where schools, highways, hospitals, and other services are needed. The survey also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you want to learn more about the American Community Survey and its benefits, please visit our Web site: <http://www.census.gov/acs>.

Thank you in advance for your help.

Sincerely,

Robert M. Groves
Director

Introductory Letter

Dear Resident:

I recently sent a letter to your household about the American Community Survey (ACS). Enclosed is a questionnaire and information about the ACS. There are two ways to complete this survey. Please choose ONLY one.

> **Option 1:** Go to <http://www.respond.census.gov/acs> and complete the survey online.

> **Option 2:** Fill out and mail back the enclosed questionnaire.

The U.S. Census Bureau encourages you to respond on the Internet because collecting information this way will help us conserve natural resources, save taxpayers' money, and process your response more efficiently.

The ACS collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

Reminder Postcard

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

Dear Resident:

A few days ago, you should have received an American Community Survey (ACS) questionnaire. If you have already completed the survey, thank you. If you have not, please either mail the questionnaire back soon or complete the survey online at **<http://www.respond.census.gov/acs>**.

Local and national leaders use the information from the ACS for planning schools, hospitals, roads, and other community needs.

If you need help completing the survey or have questions, please call our toll-free number (1-800-354-7271).

Sincerely,

Robert M. Groves

Replacement Letter

Dear Resident:

About three weeks ago, the U.S. Census Bureau sent an American Community Survey (ACS) questionnaire to your address. I asked you to help us with this very important survey by completing it and sending it back. But, we have not received it yet.

If you have recently completed the survey, thank you very much. If you have not, please complete the survey soon using ONE of the following two options.

> **Option 1:** Go to **<http://www.respond.census.gov/acs>** and complete the survey online.

> **Option 2:** Fill out and mail back the enclosed questionnaire.

This survey is so important that a Census Bureau representative may attempt to contact you by telephone or personal visit if we do not receive your questionnaire.

The information collected in the ACS will help decide where new schools, hospitals, and fire stations are needed. The information also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

ACS Internet Test – Letters for Not Prominent Internet Offer Panel   10/9/09

Pre-Notice Letter

Dear Resident:

In a few days your household will receive a questionnaire in the mail for a very important national survey—the American Community Survey. When the questionnaire arrives, please fill it out and mail it back promptly. The U.S. Census Bureau is conducting this survey and chose your address, not you personally, as part of a randomly selected sample.

The American Community Survey collects information about various topics like education, housing, and jobs. Information from this survey is used by federal, state, local, and tribal governments to meet the needs of communities across America. For example, community leaders use this information to decide where schools, highways, hospitals, and other services are needed. The survey also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you want to learn more about the American Community Survey and its benefits, please visit our Web site: <http://www.census.gov/acs>.

Thank you in advance for your help.

Sincerely,

Robert M. Groves
Director

Introductory Letter

Dear Resident:

I recently sent a letter to your household about the American Community Survey (ACS). Using the enclosed instructions, please complete the survey online as soon as possible. The survey is available at:

<http://www.respond.census.gov/acs>

The U.S. Census Bureau is using the Internet to collect this information in order to conserve natural resources, save taxpayers' money, and process your response more efficiently. If you are unable to complete the survey online, please wait for a questionnaire that we will mail to you in a few weeks.

The ACS collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

ACS Internet Test – Letters for Not Prominent Internet Offer Panel   10/9/09

Replacement Letter

Dear Resident:

About three weeks ago, the U.S. Census Bureau sent an American Community Survey (ACS) questionnaire to your address. I asked you to help us with this very important survey by completing it and sending it back. But, we have not received it yet.

If you have already completed the survey, thank you very much. If you have not, please complete it and send it back soon. I have included another questionnaire with this letter. This survey is so important that a Census Bureau representative may attempt to contact you by telephone or personal visit if we do not receive your questionnaire.

The information collected in the ACS will help decide where new schools, hospitals, and fire stations are needed. The information also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

ACS Internet Test – Letters for Push Panel – Regular Schedule   **10/9/09**

Pre-Notice Letter

Dear Resident:

In a few days your household will receive an instruction package in the mail for a very important national survey—the American Community Survey. Using the materials in that package, please complete the survey online. The U.S. Census Bureau is conducting this survey and chose your address, not you personally, as part of a randomly selected sample.

The American Community Survey collects information about various topics like education, housing, and jobs. Information from this survey is used by federal, state, local, and tribal governments to meet the needs of communities across America. For example, community leaders use this information to decide where schools, highways, hospitals, and other services are needed. The survey also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you want to learn more about the American Community Survey and its benefits, please visit our Web site: <http://www.census.gov/acs>.

Thank you in advance for your help.

Sincerely,

Robert M. Groves
Director

Introductory Letter

Dear Resident:

I recently sent a letter to your household about the American Community Survey (ACS). Using the enclosed instructions, please complete the survey online as soon as possible. The survey is available at:

<http://www.respond.census.gov/acs>

The U.S. Census Bureau is using the Internet to collect this information in order to conserve natural resources, save taxpayers' money, and process your response more efficiently. If you are unable to complete the survey online, please wait for a questionnaire that we will mail to you in a few weeks.

The ACS collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

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Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures

Reminder Postcard

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

Dear Resident:

A few days ago, you should have received instructions for completing the American Community Survey (ACS) online. If you have already completed the survey, thank you. If you have not, you may wait for a questionnaire that we will mail to you in a few weeks. Otherwise, please complete the survey online at
<http://www.respond.census.gov/acs>.

Local and national leaders use the information from the ACS for planning schools, hospitals, roads, and other community needs.

If you need help filling out the survey or have questions, please call our toll-free number (1-800-354-7271).

Sincerely,

Replacement Letter

Dear Resident:

About three weeks ago, the U.S. Census Bureau sent instructions for completing the American Community Survey (ACS) to your address. I asked you to help us with this very important survey by completing it online. But, we have not received it yet.

If you have recently completed the survey, thank you very much. If you have not, please fill out and mail back the enclosed questionnaire as soon as possible. If you would prefer to complete the survey online, you may do so at <http://www.respond.census.gov/acs>.

This survey is so important that a Census Bureau representative may attempt to contact you by telephone or personal visit if we do not receive your questionnaire.

The information collected in the ACS will help decide where new schools, hospitals, and fire stations are needed. The information also is used to develop programs to reduce traffic congestion, provide job training, and plan for the healthcare needs of the elderly.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

Your response to this survey will help the Census Bureau collect data that better reflect the nation, states, cities, counties, and your community. If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–800–354–7271).

Thank you.

Sincerely,

Robert M. Groves
Director

Enclosures