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

June 18, 2014

2014 AMERICAN COMMUNITY SURVEY RESEARCH AND EVALUATION REPORT MEMORANDUM SERIES #ACS14-RER-16

MEMORANDUM FOR	ACS Research and Evaluation Advisory Group
From:	Charles Nelson (approved June 5, 2014) Acting Chief, Social, Economic, and Household Statistics Division
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Subject:	Testing Alternative Relationship and Marital Status Questions on the 2013 American Community Survey-Questionnaire Design Test

Attached is the final American Community Survey Research and Evaluation report for "Testing Alternative Relationship and Marital Status Questions on the 2013 American Community Survey-Questionnaire Design Test." As part of the American Community Survey-Questionnaire Design Test (ACS-QDT), we quantitatively tested revised relationship and marital status questions developed through focus groups and cognitive testing.

If you have any questions about this report, please contact Rose Kreider (3-6059) or Jamie Lewis (3-4535).

Attachment

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American Community Survey Research and Evaluation Program

June 18, 2014

Testing Alternative Relationship and Marital Status Questions on the 2013 American Community Survey-Questionnaire Design Test

FINAL REPORT

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Testing Alternative Relationship and Marital Status Questions on the 2013 American Community Survey-Questionnaire Design Test

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Keywords: *Data Collection; Data Quality; Household & Family Type; Marital Status*

Executive summary

An important shift in American family life is greater recognition of same-sex couples. Measurement of relationship and marital status must keep pace with this change to ensure the relevance, accuracy, and quality of our data on same- and opposite-sex married and unmarried couples. In this report, I review quantitative testing of revised relationship and marital status items in the 2013 American Community Survey-Questionnaire Design Test (ACS-QDT). Specifically, I compare results from a control questionnaire containing the relationship and marital status items currently used in production to those from an experimental questionnaire containing revised items. I find that unit response rates do not vary according to the version of the relationship and marital status items used. Further, I find no evidence that respondents receiving the revised relationship and marital status items are less likely to respond to these items in particular. Indeed, nonresponse on the marital status item is slightly lower in the test panel compared to the control panel. Also important, distributions on the relationship and marital status items do not differ by panel. Finally, consistency of couples' reports of relationship and marital status does not differ between the control and test panels. A weakness is that, because same-sex married and unmarried couples comprise a very small percentage of households, the ACS-QDT contains a small number of these couples. Although I find data quality to be comparable when using the current versus revised relationship and marital status items, I am uncertain whether data quality is truly comparable or the limited sample size inhibited the detection of differences in quality. For this reason, additional testing of the revised relationship and marital status questions using still larger samples is needed.

Problem statement

In 2004, the state of Massachusetts became the first in the nation to legalize same-sex marriage. As of the start of April 2014, 17 states and the District of Columbia have passed laws or issued rulings recognizing same-sex marriage, and other states are working toward similar legislation. To ensure the relevance, accuracy, and quality of our data, researchers at the Census Bureau have worked to improve existing relationship and marital status questions in light of new marriage laws and evolving family forms. To date, researchers have conducted focus groups and cognitive interviews to determine needed changes to content and questions on the American Community Survey (ACS) and other surveys.

Under the guidance of an Office of Management and Budget (OMB) working group to improve the measurement of relationships on federal surveys, the next step is to investigate how newly developed relationship and marital status questions perform in the field. The new questions were included in the 2013 Survey of Income and Program Participation Event History Calendar (SIPP-

EHC) test, as well as the 2013 American Housing Survey (AHS). The SIPP-EHC test was relatively small—less than 4,000 households that have been interviewed for three consecutive years. The AHS had a sizeable (N=120,000), nationally representative sample.

The ACS-Questionnaire Design Test (ACS-QDT) presents an opportunity to test newly developed relationship and marital status questions on the ACS. The methodology for the ACS-QDT was driven by the main purpose—to investigate form design differences. Although the ACS-QDT was not designed specifically to research variations in the relationship question, it is an opportunity to learn more about what will work best in our attempt to collect data that better reflect the actual relationship situation of married and unmarried couples, whether same- or opposite-sex.

The new questions appeared on their own panel of the ACS-QDT. Another panel on the same size questionnaire contained the currently-used ACS relationship and marital status questions and served as the control. Materials were sent to 9,995 households selected for the control panel and 9,995 households selected for the test panel. Each version of the questionnaire, test and control, was administered in two modes—paper and Internet. A push Internet mailing strategy was used, meaning that the first mailing to respondents provided the URL for the online survey, but the paper questionnaire was not sent until the second mailing. For both the test and control panels, the paper form was a 36-page form. Although both an English and Spanish version of the Internet instrument was fielded, I only use data from the English-language version in my evaluation. The Spanish translations require additional cognitive testing, and thus are not yet ready for quantitative analysis. In addition, there were very few Spanish Internet returns. Returns were received from 4,501 households in the control panel, with information on 10,181 individual respondents. The test panel contains returns from 4,579 households, with information on 10,434 individual respondents.

The current research and evaluation project seeks to assess the overall quality of the relationship and marital status content obtained from the test panel as compared to control panel data. It also aims to, where relevant, gauge quality by mode. The project further seeks to understand if item nonresponse on the relationship and marital status questions or the unit response rate on the ACS varies significantly when including the new content. Four items were evaluated: relationship to householder, marital status, cohabitation status, and domestic partnership/civil union. Whereas the first two items appeared on both the control and experimental panels, albeit with different wording, the latter two items were new to the test panel.

The questions currently used in production, as well as the new questions, are listed below for reference.

Current questions (control questionnaire):

How is this person related to Person 1? *Mark (X) ONE box.*

- ☐ Husband or wife
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roomer or boarder
- ☐ Housemate or roommate
- ☐ Unmarried partner
- ☐ Foster child
- ☐ Other nonrelative

What is this person's marital status?

- ☐ Now married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married ➔ *SKIP to* I *on the next page*

Source: ACS-QDT, Form ACS-1(X)QD36

Revised questions (experimental questionnaire):

How is this person related to Person 1? *Mark (X) ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roomer or boarder
- ☐ Housemate or roommate
- ☐ Foster child
- ☐ Other nonrelative

a. What is this person's current marital status? *Mark (X) ONE box.*

- ☐ Now married → *SKIP to question 21*
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married

b. Is this person currently living with a boyfriend/girlfriend or partner in this household?

- ☐ Yes
- ☐ No

c. Is this person currently in a registered domestic partnership or civil union?

- ☐ Yes
- ☐ No

Source: ACS-QDT, Form ACS-1(X)QDRM

Research questions and methodology/metrics used to answer questions

Critical elements include items 1, 3, 7, and 9. Item 1 on unit response is critical to ensure that respondents receiving the revised relationship and marital status items participate in the survey at a similar rate to those receiving the items currently used in production. Item 3 assesses whether nonresponse on the relationship and marital status items themselves differs according to the version of the items. Together, items 1 and 3 evaluate public reaction to and comfort with the revised items. Items 7 and 9 on relationship-marital status consistency are critical to ensure that reports on these variables are at least as consistent when using the revised relationship and marital status items versus the current questions. It is important to have a high level of consistency between reports on relationship and marital status for both same-sex married couples—the smallest and most difficult to measure couple type—and opposite-sex married couples—the largest group of couples.

Except where noted otherwise, all analyses are based on unedited, weighted, data.[1] I test significant differences at the 90% confidence level.

Comparing response rates: test panel against control panel

1. ***Critical element:*** *Is unit response, combined across modes, for the test panel significantly different from the control panel?*

   I answer this question by noting if unit response for the test panel is significantly higher than for the control panel, considering both the paper and Internet modes. The unit response rate represents the percentage of mailable and deliverable addresses[2] with a non-blank mail response[3] or a complete or sufficient partial Internet response,[4] as follows:

$$\text{Unit response rate} = \frac{\text{\# of mailable and deliverable sample addresses that provided a non-blank return by mail or TQA}^{5}\text{, or a complete or sufficient partial response by Internet}}{\text{Total \# of mailable and deliverable sample addresses}} * 100$$

   I use t-tests to test for significant differences between panels.

[1] The ACS-QDT data are unedited in that they did not go through the edit programs used in production ACS. However, as noted elsewhere, the Internet instrument prefills the marital status item for reported spouses and corresponding householders.

[2] Unless a response was received, I removed any address where the initial or second mailing was returned by the Postal Service as Undeliverable As Addressed from the universe of mailable and deliverable addresses.

[3] A blank form is one in which there are no data defined persons and no usable telephone number provided by the respondent. To qualify as a data defined person, enough data must be provided for the person to meet certain minimum requirements established for the ACS.

[4] A sufficient partial Internet response is one in which the respondent reached the *pick next person* screen for households with two or more persons OR the *place of birth* screen for households with one person, but did not reach the *presummary* screen.

[5] As is done in ACS production, Telephone Questionnaire Assistance (TQA) responses are included with mail responses.

2. *Is unit response, by mode, for the test panel significantly different from the control panel?*

   I answer this question by noting if unit response for the test panel is significantly higher than for the control panel. I compare the test and control panels by mode, separately assessing response to the paper questionnaire and Internet instrument.[6] I calculate the mail response rate as:

$$\text{Mail response rate} = \frac{\text{\# of mailable and deliverable sample addresses that provided a non-blank return by mail or TQA}}{\text{Total \# of mailable and deliverable sample addresses}} * 100$$

   I calculate the Internet response rate as:

$$\text{Internet response rate} = \frac{\text{\# of mailable and deliverable sample addresses that provided a complete or sufficient partial response by Internet}}{\text{Total \# of mailable and deliverable sample addresses}} * 100$$

   Once more, I use t-tests to test for significant differences between panels. In addition, I note whether unit response for the paper mode differs from the Internet instrument.

3. ***Critical element:*** *Is item nonresponse, combined across modes, for relationship or the marital status item significantly different on the test panel versus the control panel?*

   I answer this question by noting if item nonresponse on the relationship and marital status question on the test version of the form is significantly different from the control version of the form. I consider both the paper and Internet modes combined. The cohabitation and domestic partnership/civil union items are new for the test panel. Although I cannot compare these questions to the control panel, I assess the level of item nonresponse on these new questions. The item nonresponse rate is computed as follows:

$$\text{Item nonresponse rate} = \frac{\text{\# of missing responses to question, over all modes}}{\text{\# of people in question's universe, over all modes}} * 100$$

   I use t-tests to test for significant differences between panels.

4. *Is item nonresponse, by mode, for relationship or the marital status item significantly different on the test panel versus the control panel?*

   I answer this question by noting if item nonresponse on the relationship and marital status question on the test version of the form is significantly different from the control version of the form. I compare the test and control panels by mode. I also assess, by mode, the level of item nonresponse for the cohabitation and domestic partnership/civil union questions. I calculate the mail item nonresponse rate as:

[6] If a household responded by both mail and Internet, it was counted as a mail response only.

$$\text{Mail item nonresponse rate} = \frac{\text{\# of missing responses to question, for mail mode}}{\text{\# of people in question's universe, for mail mode}} * 100$$

I calculate the Internet item nonresponse rate as:

$$\text{Internet item nonresponse rate} = \frac{\text{\# of missing responses to question, for Internet mode}}{\text{\# of people in question's universe, for Internet mode}} * 100$$

Again, I use t-tests to test for significant differences between panels. In addition, I note whether item nonresponse on all four items differs for the paper mode versus the Internet instrument.

Note that the Internet instrument included some check screens and prefills not found in the paper questionnaire. For example, if a respondent leaves the relationship item blank on the online form, a message appears asking them to "answer this important question".[7] Also, reported spouses and corresponding householders never receive the marital status item on the Internet instrument. Instead, their marital status is prefilled as "Now married."

Comparing distributions: test panel against control panel

5. *Are the overall distributions for the relationship and marital status item significantly different on the test and control panels, combined across modes?*

   I answer this question by evaluating the Rao-Scott chi-square for the distributions of the relationship and marital status question on the test versus the control version of the form, considering both the paper and Internet modes. Further, I assess the distributions for the cohabitation and domestic partnership/civil union items.

   In addition to performing Rao-Scott chi-square tests of the overall response distributions, I conduct t-tests to assess differences in the individual item categories.

6. *Are the overall distributions for the relationship and marital status item significantly different on the test and control panels, by mode?*

   I answer this question by evaluating the Rao-Scott chi-square for the distributions of the relationship and marital status question on the test versus the control version of the form. I compare the test and control panels by mode, separately assessing response to the paper questionnaire and Internet instrument. I further assess, by mode, the distributions for the cohabitation and domestic partnership/civil union items.

[7] This message does not appear if a respondent leaves blank the marital status, cohabitation, or domestic partnership/civil union item.

In addition to performing Rao-Scott chi-square tests of the overall response distributions, I conduct t-tests to assess differences in the individual item categories. I also note whether item distributions differ for the paper mode versus the Internet instrument.

Comparisons of consistency levels among items, comparing test content with control content

For all consistency checks, I define couple type (i.e., same-sex married couple, same-sex unmarried couple, opposite-sex married couple, or opposite-sex unmarried couple) in the control panel by responses on relationship and sex. For the test panel, couple type is defined solely by responses on relationship. The relationship categories were revised for the test panel, splitting options for spouse and unmarried partner into options for opposite-sex and same-sex spouse and unmarried partner.

7. ***Critical element:*** *Among* ***same-sex married couples****, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

   I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on marital status, considering both the paper and Internet modes. For reference, past analysis of ACS data from mail forms indicates that approximately 80 percent of reported same-sex married couples—that is, couples consisting of a householder and spouse reporting the same sex—have spouses reporting a marital status of "Now married" (Lofquist 2012).

   I conduct Rao-Scott chi-square tests to determine if the distribution of consistency—consistent, inconsistent, or missing—differs by panel. In addition, I conduct t-tests to assess differences in the individual consistency categories.

   Note that those who reported as spouses on the relationship question, as well as corresponding householders, were not asked their marital status in the Internet version of the ACS-QDT. Instead, this automated instrument prefilled these respondents' marital status as married. However, they were asked marital status in the mailout/mailback form. In this report, I discuss relationship-marital status consistency of couples where both members provided their marital status, excluding those for whom marital status was automatically assigned. Thus, I only assess relationship-marital status consistency for same-(and opposite-)sex married couples in the paper form.

8. *Among* ***same-sex unmarried partners****, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

   I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on marital status, considering both the paper and Internet modes. For reference, past analysis of ACS data indicates that approximately 98

percent of reported same-sex unmarried partners have partners reporting a marital status of something other than "Now married" (Lofquist 2012).

Once more, I conduct Rao-Scott chi-square tests to determine if the distribution of consistency—consistent, inconsistent, or missing—differs by panel. In addition, I conduct t-tests to assess differences in the individual consistency categories.

9. ***Critical element:*** *Among* ***opposite-sex married couples****, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

   I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on marital status, considering both the paper and Internet modes. I conduct Rao-Scott chi-square tests to determine if the distribution of consistency—consistent, inconsistent, or missing—differs by panel. In addition, I conduct t-tests to assess differences in the individual consistency categories.

10. *Among* ***opposite-sex unmarried partners****, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

    I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on marital status, considering both the paper and Internet modes. Again, I conduct Rao-Scott chi-square tests to determine if the distribution of consistency—consistent, inconsistent, or missing—differs by panel. In addition, I conduct t-tests to assess differences in the individual consistency categories.

11. *Among* ***same-sex married couples*** *(male/male and female/female) in the test panel, how consistent are responses on relationship and sex, combined across modes?*

    I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on sex, considering both the paper and Internet modes. Although I cannot evaluate consistency on relationship and sex for the control panel, I do this for the test form.

12. *Among* ***same-sex unmarried couples*** *(male/male and female/female) in the test panel, how consistent are responses on relationship and sex, combined across modes?*

    I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on sex, considering both the paper and Internet modes. Although I cannot evaluate consistency on relationship and sex for the control panel, I do this for the test form.

13. *Among **opposite-sex married couples** in the test panel, how consistent are responses on relationship and sex, combined across modes?*

    I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on sex, considering both the paper and Internet modes. Although I cannot evaluate consistency on relationship and sex for the control panel, I do this for the test form.

14. *Among **opposite-sex unmarried couples** in the test panel, how consistent are responses on relationship and sex, combined across modes?*

    I answer this question by flagging inconsistencies on responses to the relationship question relative to the couple's answers on sex, considering both the paper and Internet modes. Although I cannot evaluate consistency on relationship and sex for the control panel, I do this for the test form.

Results

Comparing response rates: test panel against control panel

Critical element: *Is unit response, combined across modes, for the test panel significantly different from the control panel?*

Unit response rates are displayed in Table 1. Combined unit response—which includes both mail and Internet responses—for the test panel is not significantly different from that for the control panel. In both panels, about 52 percent of respondents receiving a paper questionnaire or Internet log-in provided a return.

Is unit response, by mode, for the test panel significantly different from the control panel?

Unit response rates by mode are also contained in Table 1. As was found for combined unit response, both mail and Internet unit response do not differ by panel. The mail unit response rate is about 24 percent in both the control and experimental panels, and the Internet unit response rate for both is around 29 percent. Note, however, that Internet unit response is higher than mail unit response, regardless of panel. This is likely due to the push Internet mailing strategy used in the ACS-QDT, as well as production. Under this strategy, the first mailing to respondents provides the URL where respondents can take the survey online, but lacks the paper questionnaire. The paper questionnaire is sent as part of the second mailing. This strategy aims to increase Internet response relative to mail response, thereby reducing mailing and data capture costs.

Critical element: *Is item nonresponse, combined across modes, for relationship or the marital status item significantly different on the test panel versus the control panel?*

Item nonresponse rates in both the control and experimental panels are shown in Table 2. In the control panel, respondents received the version of the item currently used in production ACS, whereas those in the experimental panel received the test version of the relationship item. The percentage of respondents that did not provide a response does not differ in the experimental panel compared to the control panel. In both panels, information on relationship is missing for under 1 percent of respondents.

Let us turn now to marital status. In the control panel, we see that among those eligible to receive the question—that is, those aged 15 or older, 7 percent of respondents failed to provide their marital status. Fewer respondents in the experimental panel are missing on marital status (6 percent).

Recall that the items for cohabitation status and domestic partnership/civil union are new and appear only in the experimental panel. Although I cannot compare nonresponse on these items between the control and test panels, I can assess the level of item nonresponse in the test panel. Unmarried respondents aged 15 or older were eligible for the cohabitation item. Out of eligible respondents, 14 percent did not provide their cohabitation status. Similar to the cohabitation item, those now married or under the age of 15 were not asked the domestic partnership/civil union question. In addition, I limited the universe to respondents reporting a cohabiting partner on the cohabitation item.[8] From Table 2, we see that 1.4 percent of eligible respondents failed to answer this question.

Is item nonresponse, by mode, for relationship or the marital status item significantly different on the test panel versus the control panel?

In addition to showing item nonresponse rates combined across modes, Table 2 also contains this information by mode. As was found when looking at all respondents, nonresponse for the relationship item does not differ between the control and test panels in the mail or Internet returns. About 1 percent of mail respondents failed to provide their relationship in both the control and experimental panels. Nonresponse on the relationship item is lower for Internet respondents, at less than 1 percent, compared to mail respondents, regardless of panel.

Although nonresponse on marital status is lower in the test panel for all respondents, it is no different between the control and experimental panels when looking specifically at mail or Internet returns. In both panels, about 10 percent of eligible mail respondents are missing information on marital status. Among Internet respondents, a smaller proportion (about 4 percent) did not provide their marital status.

[8] In the Internet instrument, respondents were automatically skipped over the domestic partnership/civil union item if they indicated having no cohabiting partner. This skip was deemed too complicated for the mail questionnaire, and thus mail respondents were asked the domestic partnership/civil union item even if they indicated having no cohabiting partner. However, for my analysis I exclude all respondents saying they had no cohabiting partner, as well as those who did not provide their cohabitation status.

Turning to the items appearing only in the experimental panel, we see that nonresponse on the cohabitation item differs by mode. Nonresponse is around 18 percent for those completing the paper form and 10 percent for those responding via the Internet. Finally, about 3 percent of eligible mail respondents failed to answer the domestic partnership/civil union question. No eligible Internet respondents are missing on this item.

Thus, the Internet instrument yields lower item nonresponse than the mail form. This likely results from the check screens, prefills, and skip patterns included in the Internet instrument. As noted previously, if a respondent leaves the relationship item blank on the online form, a message appears asking them to "answer this important question". Also, recall that reported spouses and corresponding householders never receive the marital status item on the Internet instrument. Instead, their marital status is prefilled as "Now married." For skips that appear in both forms, it is likely relevant that, whereas the skip is automated in the Internet instrument, mail respondents must read and follow written skip patterns. Differences between those responding by mail versus Internet may also affect item nonresponse.

Comparing distributions: test panel against control panel

Are the overall distributions for the relationship and marital status item significantly different on the test and control panels, combined across modes?

Table 3 displays distributions for relationship in both panels. From the unweighted frequencies, we see that a very small number of same-sex relationships are reported in the test panel—16 spouses and 15 unmarried partners. This is expected, given that the ACS-QDT sample size is smaller than that used in production ACS. Further, the percentages of same-sex spouses and unmarried partners are minute, with spouses at 0.2 percent and cohabiting partners at 0.1 percent of respondents. This is consistent with previous research demonstrating that same-sex couples comprise a very small proportion of households (O'Connell and Feliz 2011). The Rao-Scott chi-square test statistic indicates that the overall distribution of relationship status does not differ between the control and test panels. Further, t-tests of each category indicate that both versions of the item yield similar proportions of householders (42 percent), spouses (23 percent), and those with some other relationship to the householder (32 percent). However, the proportion of unmarried partners is higher in the experimental panel (2.2 percent) compared with the control panel (1.9 percent). This likely relates to the different placement of the unmarried partner category in the control and test questions. In the control question, this option appears near the end of the list of response categories among other nonrelative categories. In the revised question, categories for opposite- and same-sex unmarried partners appear much earlier in the list near those for spouses. Thus, unmarried partners receiving the test question are more likely to choose the correct category because 1) they are more likely to read it, and 2) they are more likely to read it in conjunction with the other romantic relationship category (spouse).

Looking at Table 4, we can compare the weighted percent distributions for marital status in the control and test panels. Both the chi-square and t-test statistics indicate that the distributions for marital status in the two panels do not differ. In each panel, about 55 percent of respondents eligible to receive the item are married, 5 percent are widowed, around 9 percent are divorced, only 1 percent are separated, and 22 percent have never married. It is unsurprising that the

distributions in the control and experimental panels do not differ, given that only a minor change (the addition of the word "current") was made to the marital status item.

As mentioned previously, I can only observe the distribution of cohabitation status and domestic partnership/civil union in the experimental panel. Turning to Table 5, we see that a minority of eligible respondents, at about 13 percent, reported having a cohabiting partner. For domestic partnership/civil union (Table 6), only 4 percent of respondents reporting a cohabiting partner were in a registered domestic partnership or civil union.

Are the overall distributions for the relationship and marital status item significantly different on the test and control panels, by mode?

Table 3 contains the distribution of relationship by mode in addition to combined across modes. As was found when looking at all returns, the overall distribution does not differ between the control and test panels of either mail or Internet respondents. Also consistent with the findings combined across modes, t-tests of individual categories reveal that, in the mail mode, the proportion of unmarried partners is slightly greater in the experimental panel (2.3 percent) than in the control panel (1.8 percent). This proportion, however, does not differ by panel in the Internet mode. Note also that the distribution of relationship does differ for mail versus Internet respondents. Among mail respondents, about 47 percent of respondents are householders, 22 percent are spouses, 2 percent are unmarried partners, and 28 percent have some other relationship to the householder. For those responding via the Internet, about 39 percent were identified as a householder, 24 percent as spouses, 2 percent as unmarried partners, and around 35 percent as having some other relationship.[9]

Turning to marital status (Table 4), as was found when reviewing all returns, the distribution does not differ between the control and test panels for either mode. Mode differences are observed, however. In each panel, about 48 percent of mail respondents eligible to receive marital status are married, 9 percent are widowed, around 11 percent are divorced, only 2 percent are separated, and 20 percent have never married. Among eligible Internet respondents, 60 percent were reported as married, 3 percent as widowed, 8 percent as divorced, 1 percent as separated, and about 23 percent as never married.[10]

As was observed when reviewing all respondents, a minority of eligible respondents reported having an unmarried partner for both the mail (11 percent) and Internet (14 percent) modes (Table 5). In contrast, 70 percent of mail respondents and 76 percent of Internet respondents reported having no partner. Both chi-square and t-test statistics signify that the distribution for cohabitation status differs significantly for mail versus Internet respondents. Finally, about 4 percent of eligible mail and Internet respondents reported being in a registered domestic partnership or civil union (Table 6). Ninety-two percent of mail respondents and 96 percent of Internet respondents said they were not in this type of arrangement. A Rao-Scott chi-square test statistic could not be computed for the domestic partnership/civil union item, due to an empty cell (There are no missing cases observed in the Internet instrument.). For this reason, I cannot

[9] The proportion of unmarried partners among mail versus Internet respondents is not significantly different.
[10] For the control panel, the proportion separated among mail versus Internet respondents is not significantly different.

test whether the overall distribution for this item differs by mode. However, t-tests for the specific categories indicate no mode differences in the percentage of respondents that are or are not in a domestic partnership or civil union.

Thus, with the exception of the domestic partnership/civil union item, item distributions differ between mail and Internet returns. Recall that respondents have some choice regarding which mode to complete. Distribution differences by mode are likely explained by the characteristics of those who chose to respond by Internet versus mail. For example, Matthews et al. (2012) determined that Internet respondents are younger than mail respondents are. This likely explains the lower proportion of widows and widowers among Internet returns.

Comparisons of consistency levels among items, comparing test content with control content

*Among **same-sex married couples**, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

Table 7 provides information on the consistency between relationship and marital status for the four couple types—same-sex marrieds, same-sex cohabiters, opposite-sex marrieds, and opposite-sex cohabiters, by panel. First, I assess consistency for same-sex married couples. Marital status is considered inconsistent if one or both spouses reported being not married (including widowed, divorced, separated, and never married).[11] Recall that same-sex married couples are defined differently in the control and test panels. In the control panel, same-sex married couples are defined as those where one person was identified as the householder and the other as the 'husband or wife' and both reported the same sex. Whereas both the relationship and sex items are needed in the control panel, couple type in the experimental panel can be determined using only the relationship item. Here, same-sex married couples are those where one person was identified as the householder and the other as a 'same-sex husband/wife/spouse'.

Also, recall that the Internet instrument prefilled as married the marital status of those who reported as spouses on the relationship question, as well as corresponding householders. Because I discuss relationship-marital status consistency of couples where both members provided their marital status, I only assess consistency for same-(and opposite-)sex married couples in the paper form.

A Rao-Scott chi-square test statistic could not be computed for same-sex married couples, due to an empty cell (No inconsistent cases are observed in the control panel). For this reason, I cannot test whether the overall distribution for relationship-marital status consistency differs for same-sex married couples in the control versus test panels. However, t-tests of the individual consistency categories do not find any differences in the proportion of same-sex married couples that provide consistent, inconsistent, or missing information on relationship-marital status consistency.

[11] Note that proxy reporting, whereby one member of a household reports information for another household member, occurred frequently in the ACS-QDT. Thus, in many cases, one person reported the relationship and marital status of both members of a couple. However, this does not pose a great concern for the items analyzed here, as different household members would likely provide the same information on a person's relationship and whether or not that person is married. Further, the proxy reporter is usually one of the couple members.

Note that the sample sizes for same-sex married couples in the paper form are very small, with 5 such couples identified in the control panel and 6 found in the experimental panel. Sample sizes for same-sex married couples are so small that it is not possible to draw conclusions from the comparison of relationship-marital status consistency between the control and test panels. A difference of 1 or 2 couples between the panels may be attributable to statistical noise rather than the version of the question used.

*Among **same-sex unmarried partners**, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

As was done for same-sex married couples, I can assess relationship-marital status consistency among same-sex unmarried couples (See Table 7.). For these couples, responses on marital status are conflicting if one or both partners reported being married. Recall once more that couple type is defined using both relationship and sex in the control panel, but only through relationship in the test panel.

Both chi-square and t-tests indicate that the distribution for relationship-marital status consistency among same-sex unmarried couples does not differ by panel. In both the control and experimental panels, around 80 percent of these couples reported both partners as something other than married. Note that, although they outnumber same-sex married couples, the number of same-sex unmarried couples is also small, with 22 in the control panel and 15 in the test panel.

*Among **opposite-sex married couples**, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

Although I am primarily concerned with whether revised relationship and marital status questions better measure same-sex couples, I also aim for accurate estimates of opposite-sex couples. Table 7 contains information on the consistency between opposite-sex married couples' responses on relationship and marital status, by panel. As a reminder, marital status is considered inconsistent if one or both spouses report being not married (including widowed, divorced, separated, and never married). Also, bear in mind that couple type is measured differently in the control and experimental panels. Opposite-sex married couples are defined in the control panel as those where one person was identified as the householder, the other as the 'husband or wife', and one identified as male and the other as female. In the experimental panel, these couples are those where one member was marked as the householder and the other as an 'opposite-sex husband/wife/spouse'.

The Rao-Scott chi-square test suggests that the overall consistency distribution does not differ in the control versus the test panel. However, t-tests indicate differences in individual consistency categories. A somewhat larger proportion of opposite-sex married couples consistently marked both the householder and spouse as married in the test panel (91 percent) compared with the control panel (88 percent). In addition, opposite-sex married couples in the test panel were less likely to have missing information on the marital status item, at 8 percent, compared with 11 percent of these couples in the control panel. Thus, problems with relationship-marital status consistency for opposite-sex marrieds are reduced when using the revised relationship item.

*Among **opposite-sex unmarried partners**, is the consistency of responses on relationship and marital status significantly different on the test and control panels, combined across modes?*

Finally, opposite-sex cohabiting couples' responses on marital status are conflicting if one or both partners report being married. Again, recall that couple type is defined using both relationship and sex in the control panel, but only the revised relationship item in the test panel. As was found for both types of same-sex couples, relationship-marital status consistency among opposite-sex cohabiters does not differ by panel. About 85 percent of these couples provided consistent reports of marital status in both the control and experimental panels. Thus, as was observed for opposite-sex married couples, the vast majority of opposite-sex cohabiting couples provide consistent reports on relationship and marital status, regardless of whether the current or revised version of the relationship item is used.

*Among **same-sex married couples** (male/male and female/female) in the test panel, how consistent are responses on relationship and sex, combined across modes?*

In addition to relationship-marital status consistency, for the test panel, I can assess whether couple members' sex is reported consistently on the relationship and sex items.[12] This is possible due to the expansion of categories for spouse and unmarried partner on the test relationship question to opposite-sex spouse, opposite-sex partner, same-sex spouse, and same-sex partner. Table 8 provides information on the consistency between relationship and sex for each of the four couple types—same-sex marrieds, same-sex cohabiters, opposite-sex spouses, and opposite-sex unmarried couples. Looking first at same-sex married couples, note that these couples identified one person as the householder and the other as a 'same-sex husband/wife/spouse' on the revised relationship item. Sex is considered inconsistent if the spouses reported being of the opposite sex (i.e., one male and one female).

For the 16 couples reporting a same-sex married relationship, more than half (56 percent) provided consistent responses on sex. Further, no couples are missing data on sex. Although I cannot assess relationship-sex consistency in the control panel, previous research on the 2010 Census—which measured relationship similarly to the control panel—estimated that 62 percent of same-sex married couples were likely to be opposite-sex (O'Connell and Feliz 2011). This is true for about 44 percent of these couples in the ACS-QDT. However, the number of same-sex married couples captured in the ACS-QDT sample is too small to assess whether the level of this error has truly dropped, or what the level is likely to be in a larger sample. Although I cannot estimate the precise level of relationship-sex consistency, there is clearly some inconsistency among same-sex married couples. Additional research is needed to determine whether couples provide incorrect answers on relationship, sex, or both.

[12] As noted above, due to proxy reporting, in many cases one person reported the relationship and sex of both members of a couple. Again, this does not pose a great concern for the items analyzed here, as different household members would likely provide the same information on a person's relationship and sex.

*Among **same-sex unmarried couples** (male/male and female/female) in the test panel, how consistent are responses on relationship and sex, combined across modes?*

Let us turn to relationship-sex consistency among same-sex unmarried couples (Once more, see Table 8.), defined as those that marked one person as the householder and the other as a 'same-sex unmarried partner.' Recall that responses on sex are conflicting if the partners reported being of the opposite sex. Among the 15 couples reporting a same-sex unmarried relationship, a full 93 percent provided consistent responses on sex. None of these couples is missing data on sex. Previous research using 2010 Census data estimated that 7 percent of same-sex unmarried couples were likely to be of the opposite sex (O'Connell and Feliz 2011). This proportion is also at 7 percent in the ACS-QDT. However, I cannot assess relationship-sex consistency in the ACS-QDT, as the number of same-sex unmarried couples is too small.

*Among **opposite-sex married couples** in the test panel, how consistent are responses on relationship and sex, combined across modes?*

Now, let us assess relationship-sex consistency for opposite-sex married couples—those who marked one person as the householder and the other as an 'opposite-sex husband/wife/spouse'. For these couples, responses on sex are inconsistent if the spouses reported being of the same sex (i.e., both male or both female). Among the 2,296 couples reporting as opposite-sex married on the relationship item, nearly 99 percent provided consistent answers on sex, and only about 1 percent failed to indicate the sex of one or both spouses (Table 8).

*Among **opposite-sex unmarried partners** in the test panel, how consistent are responses on relationship and sex, combined across modes?*

Finally, relationship-sex consistency among opposite-sex unmarried couples is also found in Table 8. These couples designated one person as the householder and the other as an 'opposite-sex unmarried partner'. Again, responses are conflicting if the partners reported being of the same sex. We see that among the 212 couples reporting as opposite-sex unmarried partners on the revised relationship item, around 99 percent have consistent responses on sex, and about 1 percent did not provide the sex of one or both partners. These results are similar to those reported for opposite-sex married couples.

Conclusion

American families and relationships are growing increasingly complex, and it is essential that relationship measurement keeps pace with this change. A particularly important change in relationships is the increasing recognition of same-sex married couples. Census Bureau researchers have been working to develop improved relationship and marital status questions designed to better capture this group while maintaining quality measurement of other living arrangements.

The current report evaluates the performance of revised relationship and marital status questions on the ACS-QDT. As prior evaluation has used qualitative methods including focus groups and cognitive interviews, the ACS-QDT presents a much-needed opportunity for quantitative testing.

Here, I compare results obtained using the currently-used ACS relationship and marital status questions, my control panel, to those procured using revised questions, my experimental panel.

I find that unit response rates do not vary according to the version of the relationship and marital status items used. This is true for the combined response rate as well as mail and Internet response rates. Thus, there is no evidence that respondents receiving the revised relationship and marital status questions are less likely to complete the survey. Also important, I find no evidence that respondents receiving the revised relationship and marital status items are less likely to respond to these items in particular. Indeed, nonresponse on the marital status item is slightly lower in the test panel compared to the control panel.

My results indicate that distributions on the relationship and marital status items do not differ by panel. Thus, both respondents receiving the current and the revised items answer these questions in a similar way. This is true for mail, Internet, and combined responses.

Results on the consistency between couples' reports provide further evidence that data quality is maintained when using the revised relationship and marital status items. Consistency of reports of relationship and marital status does not differ between the control and test panels for same-sex married couples, same-sex cohabiting couples, or opposite-sex cohabiting couples. For opposite-sex married couples, relationship-marital status consistency is somewhat greater when using the test relationship and marital status items.

A weakness of the current report is the limited sample size in the ACS-QDT. Again, the original purpose of the ACS-QDT was to test form design differences rather than revised relationship and marital status items. Because same-sex married and unmarried couples comprise a very small percentage of households, the ACS-QDT contains a small number of these couples. The control panel contained only 17 same-sex married couples and 22 same-sex unmarried couples, and the experimental panel had only 16 married couples and 15 cohabiting couples of the same sex. For this reason, I caution readers against drawing conclusions based on the results presented here. Although I find data quality to be comparable when using the current versus revised relationship and marital status items, I am uncertain whether data quality is truly comparable or the limited sample size inhibited the detection of differences in quality. Thus, although this study is informative regarding the performance of revised relationship and marital status questions, additional quantitative testing using large samples is needed.

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Table 1.
Unit Response Rates in Control and Experimental Panels

Response Rate	Control Panel	Experimental Panel
Total responding households	**4,501**	**4,579**
Combined response rate	**51.9**	**52.7**
(SE)	(0.5)	(0.6)
Mail[1]	23.3 ^	24.1 ^
(SE)	(0.4)	(0.4)
Internet	28.6 ^	28.6 ^
(SE)	(0.5)	(0.5)

+ Control vs. experimental panel significant at alpha=0.1 level.

^ Mail vs. internet significant at alpha=0.1 level.

[1] Includes Telephone Questionnaire Assistance (TQA) responses.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 2.
Item Nonresponse Rates in Control and Experimental Panels

Nonresponse Rate	Control Panel	Experimental Panel
Relationship		
Combined		
Total respondents	**10,181**	**10,434**
Item nonresponse rate	0.6	0.8
(SE)	(0.1)	(0.1)
Mail		
Total respondents	**4,019**	**4,143**
Item nonresponse rate	0.9 ^	1.3 ^
(SE)	(0.2)	(0.2)
Internet		
Total respondents	**6,162**	**6,291**
Item nonresponse rate	0.5 ^	0.4 ^
(SE)	(0.1)	(0.1)
Marital Status		
Combined		
Total respondents 15 years and older	**8,601**	**8,708**
Item nonresponse rate	7.0 +	6.0 +
(SE)	(0.4)	(0.4)
Mail		
Total respondents 15 years and older	**3,540**	**3,618**
Item nonresponse rate	10.5 ^	9.0 ^
(SE)	(0.8)	(0.6)
Internet		
Total respondents 15 years and older	**5,061**	**5,090**
Item nonresponse rate	4.6 ^	3.9 ^
(SE)	(0.4)	(0.4)

See footnotes at end of table.

Table 2.
Item Nonresponse Rates in Control and Experimental Panels (Cont.)

Nonresponse Rate	Control Panel	Experimental Panel
Cohabitation Status		
Combined		
Total respondents eligible for item	**X**	**3,862**
Item nonresponse rate	X	13.9
(SE)	(X)	(0.7)
Mail		
Total respondents eligible for item	**X**	**1,833**
Item nonresponse rate	X	18.5 ^
(SE)	(X)	(1.2)
Internet		
Total respondents eligible for item	**X**	**2,029**
Item nonresponse rate	X	9.8 ^
(SE)	(X)	(0.9)
Domestic Partnership/Civil Union		
Combined		
Total respondents eligible for item	**X**	**486**
Item nonresponse rate	X	1.4
(SE)	(X)	(0.6)
Mail		
Total respondents eligible for item	**X**	**206**
Item nonresponse rate	X	3.4 ^
(SE)	(X)	(1.4)
Internet		
Total respondents eligible for item	**X**	**280**
Item nonresponse rate	X	0.0 ^
(SE)	(X)	(X)

+ Control vs. experimental panel significant at alpha=0.1 level.
^ Mail vs. internet significant at alpha=0.1 level.
X Not applicable.
Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 3.

Percent Distribution of Relationship in Control and Experimental Panels

Value	Control Panel			Experimental Panel		
	Unweighted Frequency	Percent	SE of Percent	Unweighted Frequency	Percent	SE of Percent
Combined						
Total respondents	**10,181**	**100.0**		**10,434**	**100.0**	
Householder	4,331	42.5	0.3	4,373	41.9	0.4
Husband or wife	2,347	23.1	0.3	2,371	22.7	0.3
Opposite-sex husband/wife/spouse	X	X	X	2,355	22.6	0.3
Same-sex husband/wife spouse	X	X	X	16	0.2	0.0
Unmarried partner	192	1.9 +	0.1	233	2.2 +	0.1
Opposite-sex unmarried partner	X	X	X	218	2.1	0.1
Same-sex unmarried partner	X	X	X	15	0.1	0.0
Other relationship[1]	3,248	31.9	0.5	3,378	32.4	0.5
Missing	63	0.6	0.1	79	0.8	0.1
Mail						
Total respondents	**4,019**	**100.0**		**4,143**	**100.0**	
Householder	1,893	47.1 ^	0.6	1,929	46.6 ^	0.5
Husband or wife	876	21.8 ^	0.4	897	21.7 ^	0.5
Opposite-sex husband/wife/spouse	X	X	X	891	21.5	0.5
Same-sex husband/wife spouse	X	X	X	6	0.1	0.1
Unmarried partner	72	1.8 +	0.2	96	2.3 +	0.2
Opposite-sex unmarried partner	X	X	X	91	2.2	0.2
Same-sex unmarried partner	X	X	X	5	0.1	0.1
Other relationship[1]	1,143	28.4 ^	0.8	1,168	28.2 ^	0.8
Missing	35	0.9 ^	0.2	53	1.3 ^	0.2
Internet						
Total respondents	**6,162**	**100.0**		**6,291**	**100.0**	
Householder	2,438	39.6 ^	0.4	2,444	38.8 ^	0.4
Husband or wife	1,471	23.9 ^	0.3	1,474	23.4 ^	0.4
Opposite-sex husband/wife/spouse	X	X	X	1,464	23.3	0.4
Same-sex husband/wife spouse	X	X	X	10	0.2	0.0
Unmarried partner	120	1.9	0.2	137	2.2	0.2
Opposite-sex unmarried partner	X	X	X	127	2.0	0.2
Same-sex unmarried partner	X	X	X	10	0.2	0.0
Other relationship[1]	2,105	34.2 ^	0.7	2,210	35.1 ^	0.6
Missing	28	0.5 ^	0.1	26	0.4 ^	0.1

+ Control vs. experimental panel significant at alpha=0.1 level.

^ Mail vs. internet significant at alpha=0.1 level.

Panel tests: Combined χ^2=5.7 with 4 degrees of freedom, p=0.22; mail χ2=5.8 with 4 degrees of freedom, p=0.21; internet χ2=2.1 with 4 degrees of freedom, p=0.72.

Mode tests: Control χ^2=62.0 with 4 degrees of freedom, p<0.0001; experimental χ2=99.3 with 4 degrees of freedom, p<0.0001.

X Not applicable.

[1] Includes the following: biological son or daughter, adopted son or daughter, stepson or stepdaughter, brother or sister, father or mother, grandchild, parent-in-law, son-in-law or daughter-in-law, other relative, roomer or boarder, housemate or roommate, foster child, and other nonrelative.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 4.
Percent Distribution of Marital Status in Control and Experimental Panels

Value	Control Panel		Experimental Panel	
	Percent	SE	Percent	SE
Combined				
Total respondents 15 years and older	**8,601**		**8,708**	
Married	54.9	0.6	55.7	0.6
Widowed	5.4	0.2	5.5	0.3
Divorced	9.2	0.3	9.5	0.4
Separated	1.3	0.1	1.3	0.1
Never married	22.2	0.5	22.1	0.5
Missing	7.0 +	0.4	6.0 +	0.4
Mail				
Total respondents 15 years and older	**3,540**		**3,618**	
Married	47.5 ^	0.8	49.3 ^	0.9
Widowed	8.6 ^	0.5	8.6 ^	0.4
Divorced	11.0 ^	0.5	11.7 ^	0.6
Separated	1.4	0.2	1.7 ^	0.2
Never married	21.0 ^	0.7	19.7 ^	0.7
Missing	10.5 ^	0.8	9.0 ^	0.6
Internet				
Total respondents 15 years and older	**5,061**		**5,090**	
Married	60.0 ^	0.8	60.1 ^	0.8
Widowed	3.2 ^	0.2	3.2 ^	0.3
Divorced	7.9 ^	0.4	8.0 ^	0.4
Separated	1.3	0.1	1.0 ^	0.1
Never married	23.0 ^	0.7	23.8 ^	0.6
Missing	4.6 ^	0.4	3.9 ^	0.4

+ Control vs. experimental panel significant at alpha=0.1 level.

^ Mail vs. internet significant at alpha=0.1 level.

Panel tests: Combined χ^2=6.7 with 5 degrees of freedom, p=0.24; mail χ2=6.9 with 5 degrees of freedom, p=0.23; internet χ2=5.0 with 5 degrees of freedom, p=0.42.

Mode tests: Control χ^2=250.0 with 5 degrees of freedom, p<0.0001; experimental χ2=255.5 with 5 degrees of freedom, p<0.0001.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 5.

Percent Distribution of Cohabitation Status in Experimental Panel

Value	Percent	SE
Combined		
Total respondents eligible for item	**3,862**	
Yes	12.6	0.7
No	73.5	0.9
Missing	13.9	0.7
Mail		
Total respondents eligible for item	**1,833**	
Yes	11.2 ^	0.9
No	70.3 ^	1.4
Missing	18.5 ^	1.2
Internet		
Total respondents eligible for item	**2,029**	
Yes	13.8 ^	0.9
No	76.4 ^	1.2
Missing	9.8 ^	0.9

^ Mail vs. internet significant at alpha=0.1 level.

Mode test: χ^2=37.7 with 2 degrees of freedom, p<0.0001.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 6.

Percent Distribution of Domestic Partnership/Civil Union in Experimental Panel

Value	Percent	SE
Combined		
Total respondents eligible for item	**486**	
Yes	3.9	1.1
No	94.7	1.2
Missing	1.4	0.6
Mail		
Total respondents eligible for item	**206**	
Yes	4.4	1.9
No	92.2	2.5
Missing	3.4 ^	1.4
Internet		
Total respondents eligible for item	**280**	
Yes	3.6	1.5
No	96.4	1.5
Missing	0.0 ^	X

^ Mail vs. internet significant at alpha=0.1 level.

Mode test: χ^2=X (Not applicable due to empty cells.).

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 7.

Consistency in Reports of Relationship and Marital Status in Control and Experimental Panels, by Couple Type

Value	Control Panel		Experimental Panel	
	Percent	SE	Percent	SE
Total same-sex married couples[1]	**5**		**6**	
Consistent	60.0	25.1	66.7	20.9
Inconsistent	0.0	X	16.7	16.7
One or both missing	40.0	25.1	16.7	15.8
Total same-sex unmarried couples	**22**		**15**	
Consistent	81.8	8.7	80.0	10.5
Inconsistent	4.5	4.4	13.3	8.7
One or both missing	13.6	7.8	6.7	6.7
Total opposite-sex married couples[1]	**790**		**837**	
Consistent	88.1+	1.2	91.0+	0.9
Inconsistent	0.9	0.3	0.8	0.3
One or both missing	11.0+	1.2	8.1+	1.0
Total opposite-sex unmarried couples	**168**		**212**	
Consistent	86.3	2.9	84.9	2.6
Inconsistent	1.2	0.8	1.4	0.8
One or both missing	12.5	2.8	13.7	2.4

+ Control vs. experimental panel significant at alpha=0.1 level.

Panel tests: Same-sex married χ^2=X (Not applicable due to empty cells.); same-sex unmarried $\chi 2$=1.5 with 2 degrees of freedom, p=0.48; opposite-sex married $\chi 2$=4.0 with 2 degrees of freedom, p=0.14; opposite-sex unmarried $\chi 2$=0.1 with 2 degrees of freedom, p=0.93.

X Not applicable.

[1] Those who reported as married in the relationship question were not asked their marital status in the internet mode. However, they were asked marital status in the paper form. I only show couples where both members reported their marital status.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.

Table 8.

Consistency in Reports of Relationship and Sex in Experimental Panel, by Couple Type

Value	Percent	SE
Total same-sex married couples	**16**	
Consistent	56.3	14.1
Inconsistent	43.8	14.1
One or both missing	0.0	X
Total same-sex unmarried couples	**15**	
Consistent	93.3	6.8
Inconsistent	6.7	6.8
One or both missing	0.0	X
Total opposite-sex married couples	**2,296**	
Consistent	98.6	0.2
Inconsistent	0.4	0.2
One or both missing	1.0	0.2
Total opposite-sex unmarried couples	**212**	
Consistent	98.6	0.8
Inconsistent	0.0	X
One or both missing	1.4	0.8

X Not applicable.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, July to August 2013.