

## **Improving Measurement of Same-sex Couples**

**SEHSD Working Paper 2015-13**

**Daphne A. Lofquist and Jamie M. Lewis<sup>1</sup>**

**U.S. Census Bureau**

**Issued June 2015<sup>2</sup>**

### **ABSTRACT**

Since the latter half of the 20<sup>th</sup> century, marital and household relationships in the U.S. have become more complex. Important shifts in American family life include a growth in cohabiting couples and greater recognition of same-sex couples. Since 2004, thirty-six states and the District of Columbia have passed laws or issued rulings recognizing same-sex marriage. In this paper, we review four research projects aimed at further enhancing the measurement of same-sex couples. Overall, we found that public reaction to the revised relationship question was muted, and did not result in lower levels of response to either the surveys overall, or the relationship item in particular. Our findings from the largest test, the 2013 American Housing Survey, indicate there is still a high proportion of same-sex married couples whose reports of sex indicate they may be opposite-sex married couples who have marked sex or the same-sex relationship category in error. The administrative linkage projects confirm that there is a serious problem with opposite-sex married couples who misreport sex and artificially inflate the estimates of same-sex married couples. The problem is not as pronounced in the ACS as it was in the 2010 Census, but it is still a serious problem. Our findings show that the measurement of relationships among household members is complex and that we need to continue researching this topic.

---

<sup>1</sup> This report is released to inform interested parties of ongoing research and to encourage discussion of work in progress. The views expressed on statistical or methodological issues are those of the authors and not necessarily those of the U.S. Census Bureau.

<sup>2</sup> An earlier version of this paper was presented at the 2014 Annual Meeting of the Population Association of America.

## **INTRODUCTION**

Since the latter half of the 20<sup>th</sup> century, marital and household relationships in the U.S. have become more complex. Some important shifts in American family life include a decrease in families consisting of married couples with children, an increase in one-person households, and corresponding decrease in household size (Vespa, Lewis, and Kreider 2013). Other trends include a growth in cohabiting couples and greater recognition of same-sex couples. A variety of social and economic factors help account for this change, and the operation of these factors is complicated.

Data from the U.S. Census Bureau are used in a variety of applications including research on family change, stability, and instability. Although American family life has changed, measures of household and family relationships have failed to keep pace. Demographic surveys must adapt measures that reflect the complexity of contemporary relationships so that they can accurately portray and better understand American households and families. In addition, better measures are necessary to evaluate and administer government programs impacting families at the national, state, and local levels.

One change that has accelerated in the early 21<sup>st</sup> century is the recognition of same-sex couples. Starting in 2004, same-sex couples were legally able to marry in the state of Massachusetts, and many other states have followed suit. Currently thirty-seven states (or equivalents) recognize same-sex marriage. Several more states have received judicial rulings against a ban on same-sex marriage, though these decisions have been stayed pending appeal. In addition, some other states recognize domestic partnerships or civil unions between partners of the same sex. Since same-sex marital and nonmarital relationships are receiving greater recognition, researchers have started to focus on how same-sex couples report their relationship and marital status on demographic surveys.

The June 2013 Supreme Court ruling on the Defense of Marriage Act (DOMA) heightened the need for research on this topic. Although this ruling upheld state determination of legal recognition of marriage, it simultaneously struck down DOMA as a means to deny federal benefits to same-sex married couples. Because the federal government has extended benefits to same-sex spouses, federal agencies may find estimates of same-sex married couples useful for programmatic purposes, since there are some 1,100 federal regulations that include marital status.

The Census Bureau continues to work to improve measurement of same-sex unmarried and married couples. In this paper, we discuss results from four recent quantitative research projects at the Census Bureau.

## **BACKGROUND**

### **History**

In its demographic surveys, the Census Bureau collects the relationship of each member of the household to the householder (the person who owns or rents the home). In 1990, the category “unmarried partner” was added to the relationship item in the decennial census to measure the growing complexity of American households and the increasing tendency for couples to live together before

getting married. The “unmarried partner” category was also added to the Current Population Survey (CPS) in 1995, the Survey of Income and Program Participation (SIPP) in 1996, and has been on the American Community Survey (ACS) since it was fully implemented in 2005. Same-sex unmarried partners were first reported in the 1990 decennial census, and Census 2010 marked the first published reports in decennial data of those who identified themselves as same-sex married couples. Data from Census 2000 reported all same-sex couples as unmarried couples, as no states performed same-sex marriages at that time. The Census Bureau has also released yearly estimates of those who reported as same-sex married couple households in ACS going back to 2005.

The Census Bureau edits data to correct inconsistencies and protect respondent confidentiality. The procedure for editing the responses of those who report being married to a same-sex partner has changed over time. In Census 2000 and 2010 public use data, for cases where no imputations were made due to non-response on either the person’s relationship or gender, a same-sex partner who reported being a *spouse* of the householder was changed to an *unmarried partner* of the householder. This procedure was also in place for the ACS between 2005 and 2012. Beginning with the 2013 ACS, same-sex spouses are retained in couples with complete information on relationship and gender.<sup>3</sup> Previously, in the 1990 Census, the relationship category remained the same (spouse), but the sex of the partner was changed.

### Previous Research

The Census Bureau conducts ongoing research to improve measurement. For this topic, recent work began in earnest in the mid-2000s, when studies began to investigate whether estimates of same-sex couples based on the sex and relationship questions were inflated due to accidental mismarking of sex by a very small proportion of opposite-sex married couples. Since opposite-sex couples are far larger in number than same-sex couples, this would result in a large overcount of same-sex couples.

**ACS.** Census Bureau research has shown that form layout changes made in the ACS, along with processing changes, resulted in a decline in the number of same-sex spouses reported between 2007 and 2008. These changes appeared to reduce mismarks on sex by opposite-sex married couples. Two basic kinds of change occurred between 2007 and 2008: 1) processing and editing changes, and 2) formatting changes to the questionnaire. The first reflects technological improvements in data collection by interviewers and efforts to make the processing and editing more consistent between data in the ACS and the 2010 Census. The second changed the layout of the gender question to make it more difficult to accidentally mark both male and female. The drop in the reported number of same-sex couples between 2007 and 2008 can be attributed to these changes, which have resulted in a more reliable estimate of same-sex couple households.

**Decennial Census.** Issues were also found with the 2010 Census. Initial comparisons between the 2010 Census and the 2010 ACS indicated the 2010 Census number of same-sex couple households was 52

---

<sup>3</sup> Plans to revise the edit in the Survey of Income and Program Participation and Current Population Survey are also underway.

percent higher than the ACS estimate (O’Connell and Feliz 2011). Further investigation of this discrepancy indicated that the form structure of the 2010 Census for the follow-up component of data collection may have caused sufficient data capture errors in the gender item that inflated the Census counts, especially for the numbers of same-sex spousal households. These errors likely included mismarks in the gender item by opposite-sex couples. In particular, the form problems identified in the pre-2008 ACS questionnaire were present in the non-response follow-up (NRFU) form of the 2010 Census.

The 2010 Census estimates were adjusted using the probability that the first names of the couple members were the sex reported for them. For example, when a name had at least a 95 percent chance of being male, but female was reported, the gender of that spouse was changed. This adjustment reduced the number of same-sex married couples reported, since the mismarks had inflated the number by roughly 28 percent (O’Connell and Feliz 2011). Using this method, an adjusted (labeled as “preferred”) set of estimates was released.

The Census Bureau conducted focus groups and cognitive interviews to learn more about how same-sex couples answer relationship and marital status questions on Census Bureau surveys (DeMaio, Bates, and O’Connell 2013). Although research to date has been informative, leading to the development of revised items on relationship and marital status, additional quantitative testing is needed. Since the incidence of some household relationships—such as same-sex couples—is relatively low in the general population, these revised items need to be tested with large, representative samples prior to routinely including them in data collection instruments.

## RECENT TESTING

This paper summarizes findings from four projects at the Census Bureau. The first three projects involve quantitative tests of the proposed relationship and marital status questions in surveys administered by the Census Bureau. These surveys include the 2013 American Community Survey-Questionnaire Design Test (ACS-QDT), the 2013 American Housing Survey (AHS), and the 2013 Survey of Income and Program Participation-Event History Calendar (SIPP-EHC). The fourth project linked administrative and survey data in order to compare reports of sex for coupled households.

### Data Collection and Approach

**ACS-QDT.** The ACS-QDT is a test version of the American Community Survey (ACS), a repeated cross-sectional survey providing annual information on American communities in order to aid planning by communities, state governments, and federal programs.<sup>4</sup> Data collection for the QDT took place from June through August 2013. It featured multiple panels, including a control panel with the relationship and marital status questions currently used in production, and a test panel with the revised questions. The original sample for the test was 50,000 households, with about 10,000 households receiving the

---

<sup>4</sup> From here on out, QDT will be used to refer to the ACS-QDT.

revised questions. Respondents provided information through either a mail questionnaire or an internet instrument. The mail questionnaire was English-only, whereas the internet instrument was offered in both Spanish and English. However, we only use data from the English-language version in our evaluation. The Spanish translations require additional cognitive testing, and thus are not yet ready for quantitative analysis. For the analyses in this paper, the data have been weighted using replicate weights.

**AHS.** The AHS, sponsored by the Department of Housing and Urban Development (HUD), is a national housing survey collecting information on a variety of housing topics, including the size and composition of the U.S. housing inventory. The AHS test data were collected in the summer of 2013, and was comprised of both national and metropolitan samples. It was a split-panel test, with about half of the original sample of 170,000 households receiving the control version of the relationship and marital status questions, and the other half receiving the revised items. However, it is important to note that, because the AHS is a panel survey, those in the control group were asked the full relationship and marital status items only if 1) the household was new to the survey, or 2) a change in household composition had occurred since the previous wave. Otherwise, the interviewer simply confirmed relationship and marital status indicated at the previous wave. The AHS was interviewer-administered, using Computer-Assisted Personal Interviewing (CAPI). The interviewer could use the CAPI instrument to conduct interviews in-person or over the phone. The instrument was offered in both English and Spanish. As was for the QDT, we limit our analysis to cases using the English-language instrument.

Once more, the main aim of the QDT and AHS projects was to quantitatively test the revised questions developed through focus groups and cognitive interviews. In particular, we plan to compare results from the control and test panels in order to assess the data quality of the revised items. We use weighted data from both surveys to evaluate unit non-response, item non-response, and item distributions. When looking at consistency between items, we use weighted QDT data and unweighted AHS data.<sup>5</sup> Unweighted AHS data is used when assessing inconsistency for two reasons. First, we are concerned with investigating couples for whom responses on the relationship and sex items do not match, rather than making statements generalizable to the larger population. Second, even with the large size of the overall AHS sample, sample sizes for couples with inconsistent responses on relationship and sex are small. Because there are separate weights for households in the national versus metropolitan samples, several couples with errors would be dropped from analysis were only one of the weights and its corresponding sample used. All comparative statements in this paper have undergone statistical testing, and, unless otherwise noted, all comparisons are statistically significant at the 90 percent confidence level.

**SIPP-EHC.** The SIPP-EHC is a longitudinal survey representing the civilian, noninstitutionalized population. As its name implies, the primary purpose of the survey is to describe the income and program participation of U.S. individuals and households. This information is used to determine the

---

<sup>5</sup> The results using unweighted AHS data may not fully account for the sample design. For this reason, some results could relate to the sample design rather than question wording. Methodological documentation is accessible from the AHS methodology website (<https://www.census.gov/programs-surveys/ahs/about/methodology.html>).

effectiveness of and estimate future costs of government programs. The 2013 test was in the field February through May, and all respondents answered the revised relationship and marital status questions. The 2013 SIPP-EHC had a sample of 3,727 households, and was administered via CAPI interviewing. The instrument was only available in English: interviewers must translate on the fly when necessary.

**Administrative Linkage.** The administrative linkage project was composed of two analyses, both of which combine survey and administrative data. The first linked data from the 2010 decennial Census to the 2010 Social Security (Numident) data, an administrative data set containing information on sex and other selected characteristics. We assessed how well reports of sex in Census 2010 matched the sex entries in the Numident file. In the second analysis, we linked the 2010 ACS with the 2010 Numident data and compared the consistency of sex reports.

### Example Questions

We present examples of the revised relationship and marital status items below, highlighting improvements. The question wording we present here is from the QDT. Question wording in the AHS and SIPP-EHC is very similar, with only minor, nonsubstantive differences.

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

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

Figure 1: Revised Relationship to Householder Question from QDT, Form ACS-1(X)QDRM

Figure 1 displays the revised relationship to householder question. It incorporates gender-neutral language by expanding the response for “husband or wife” to include the term “spouse.” Moving the category for “unmarried partner” directly under that for “husband/wife/spouse” signals to respondents that we recognize these as salient relationships. Further, adding separate categories for opposite-sex and same-sex couples provides an additional check on gender, which should reduce the occurrence of opposite-sex couples misreporting gender. Note that, in the interviewer-administered AHS, Field Representatives (FRs) were instructed to read aloud all answer categories. However, there was no flashcard visually displaying the categories for the respondent.

**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

Figure 2: Revised Marital Status Series from QDT, Form ACS-1(X)QDRM

The revised marital status series is presented in Figure 2. The first question in the marital status series is very similar to items currently in use. This similarity means that data users will be able to make comparisons between new and historical data. However, we expanded the marital status series by adding two new questions, one on cohabitation and one on domestic partnerships and civil unions. These new questions allow respondents to report legally registered partnerships other than marriage.

## RESEARCH QUESTIONS

Our review of these research projects investigates the following research questions:

- ***What is the public reaction to the revised questions?***
- ***Does survey or item response vary between control and test questions?***
- ***Do estimates or distributions vary between control and test questions?***
- ***Does response consistency vary between control and test questions? Is there consistency between relationship to householder, sex and marital status?***
- ***How well do reports of sex in surveys match with Social Security records for sex?***

## FINDINGS

### ***What is the public reaction to the revised questions?***

In general, we found no evidence that the public has a strong aversion to the revised relationship questions or new items on cohabitation and domestic partnerships/civil unions. This was true for the SIPP-EHC, QDT, and AHS. As part of AHS data collection, we requested Field Representatives (FRs), who

are responsible for conducting interviews, to complete a feedback questionnaire on the relationship, cohabitation, and domestic partnership questions. In particular, FRs were asked to share any respondent questions, comments, or concerns regarding these questions.

For the revised relationship question, a minority of AHS FRs reported respondent comments. The concern raised most frequently involved the high number of categories to be read to respondents, rather than the wording used. However, this is also a concern for the relationship item currently in use. Further, the need for a manageable number of response categories needs to be balanced with respondents' desire for specific categories for their relationship type. Although some FRs reported that respondents would ask the reasoning behind the 'opposite-sex' and 'same-sex' relationship categories, they reported positive reactions about as often as negative ones.

Some FRs were concerned that the cohabitation item may make some respondents uncomfortable. In the CPS, where the question has been asked since 2007, it is only asked if an unmarried nonrelative age 15 or older is in the household. In addition, a few FRs reported respondents wanting to know why the question was being asked.

With regards to the item on domestic partnerships/civil unions, some FRs also reported respondents wanting to know why the question was being asked. Otherwise, a small number of FRs noted that this question sometimes required clarification, as respondents may be unfamiliar with these types of relationships.

Although we did not provide a debriefing form to SIPP-EHC FRs, they did not report respondent complaints related to the revised relationship and marital status questions. Because the QDT was self-administered, there was no interaction between FRs and QDT respondents. However, QDT respondents had the opportunity to contact staff for Telephone Questionnaire Assistance (TQA). Through TQA, respondents were able to seek help answering questions, as well as to make comments. TQA staff did not report complaints related to the revised items.

Beyond these anecdotal reports, please note that the SIPP-EHC did not provide us with a large enough sample to conduct quantitative analysis of same-sex couples. In particular, there are very, very few same-sex couples—our focal group—in these data. For this reason, we rely solely on the QDT and AHS data to evaluate our remaining research questions on the quantitative performance of the revised questions.

### ***Does survey or item response vary between control and test questions?***

Recall that in the control panel of the QDT and AHS, respondents received the version of the item currently used in production, whereas those in the test panel received the revised version of the relationship item. In the QDT, we have data from approximately 9,000 households, with about half of the households in the control panel and about half in the test panel. The control panel included 2,284 married-couple and 190 unmarried-partner households, whereas the test panel included 2,312 married-couple and 227 unmarried-partner households. The AHS has data from about 167,000 households, although only those in the national sample (about 84,000 households) were used in the weighted

analysis. Like the QDT, about half of AHS households are in each panel. When considering both the national and metropolitan AHS samples, the control panel included 27,066 married-couple and 3,209 unmarried-partner households, and the test panel included 27,321 married-couple and 3,088 unmarried-partner households.

Survey response rates for the QDT and AHS are provided in Table 1. The QDT response rate represents the proportion of mailable and deliverable addresses with a non-blank mail or internet response, and the AHS response rate indicates the share of occupied, eligible housing units that was interviewed. In both surveys, there is no difference in the survey response rates of the control and test panels. Around 52 percent of respondents in each QDT panel provided a valid return, and this was true of about 88 percent of AHS respondents in each panel. Although the production ACS includes CATI and CAPI follow-up, this stage of data collection was not included in the QDT. This explains why the QDT response rate is significantly lower than that in the AHS. That survey response does not appear to differ across the control and test panels provides additional evidence that the public did not react adversely to the revised relationship and marital status questions. Had respondents found the new question wording confusing or offensive, they may have been less likely to complete the surveys.

Table 1 also shows item nonresponse and distributions in the control and experimental panels in the QDT and AHS. For both surveys, there is no difference between the control and test panels in nonresponse to the relationship item. In both panels of both the QDT and AHS, less than 1 percent of respondents did not provide a response to the relationship question.<sup>6</sup> Regarding marital status, a smaller proportion of eligible respondents—that is, those aged 15 or older—are missing responses in the QDT experimental panel (6.0 percent), compared to the control panel (7.0 percent). In the AHS, nonresponse on marital status does not differ between panels, with about 1 percent of respondents failing to provide this information.<sup>7</sup>

For both surveys, only those in the experimental panel were asked the new cohabitation and domestic partnership/civil union questions. In the QDT, to be eligible for the new cohabitation and domestic partnership/civil union questions, respondents had to be aged 15 years or older and have a marital status of something other than “now married.” We also limited the universe for the domestic partnership/civil union item to respondents reporting a cohabiting partner on the cohabitation item.<sup>8</sup>

---

<sup>6</sup> In both panels, nonresponse on the relationship item is lower in the AHS than the QDT. This likely occurs because the AHS is interviewer-administered, whereas the QDT is self-administered. In the QDT internet instrument, respondents who try to skip the relationship question receive a message saying ‘Please answer this important question.’ If they try to skip the question again, the instrument moves forward. This message is not activated for the other items we analyze, and helps reduce non-response on this item.

<sup>7</sup> Regardless of panel, nonresponse on marital status is lower in the interviewer-administered AHS than in the self-administered QDT.

<sup>8</sup> In the QDT 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 our analysis we exclude all respondents saying they had no cohabiting partner, as well as those who did not provide their cohabitation status.

Almost 14 percent of eligible respondents in the QDT did not provide their cohabitation status. About 1 percent of eligible respondents failed to answer the domestic partnership/civil union question.

Because the AHS used a CAPI instrument, more complicated skip patterns were possible, and the universes for the cohabitation and domestic partnership/civil union items are more restrictive than in the QDT. In addition to excluding those under age 15 or married from the universe of both items, the AHS universe also excludes respondents that refused marital status or did not have an eligible partner present. The universe for the domestic partnership/civil union question further excludes respondents that did not have a cohabiting partner or did not provide their cohabitation status. About 44 percent of eligible AHS respondents are missing on cohabitation status, and around 1 percent of eligible respondents failed to provide their domestic partnership/civil union status. Note that the high level of nonresponse on the cohabitation item is largely due to an instrument error. The skip pattern for this item did not operate correctly, with some eligible respondents being skipped and some ineligible respondents receiving the question.

***Do estimates or distributions vary between control and test questions?***

When assessing the distribution of relationship status (Table 1), we see that the percentages of adults reporting as same-sex spouses and unmarried partners are minute. Same-sex spouses comprise 0.2 percent of respondents in the experimental panel of the QDT and 0.1 percent of those in the AHS test panel. Also in the experimental panel, same-sex unmarried partners make up 0.1 percent of QDT respondents and 0.2 percent of AHS respondents.<sup>9</sup> This is consistent with other estimates demonstrating that same-sex couples comprise a very small proportion of households (O’Connell and Feliz 2011).

The distribution of relationship status looks similar between the control and test panels in each survey. Both versions of the item yield similar proportions of householders, spouses, unmarried partners, and those with some other relationship to the householder. Rao-Scott Chi-Square tests confirm that the distribution does not differ between QDT or AHS panels.

As noted previously, for the cohabitation and domestic partnership/civil union questions, we cannot make comparisons between panels, as these items only appeared in the experimental panel. We can only describe these items’ distributions. A minority of unmarried adults reported having a cohabiting partner in both the QDT (13 percent) and AHS (22 percent). Of those with a partner, 4 percent of QDT respondents and 17 percent of AHS respondents reported that the partnership was legally registered.<sup>10</sup>

---

<sup>9</sup> Same-sex spouses and unmarried partners are not statistically different from each other in the QDT or AHS. Nor do estimates of same-sex spouses or partners differ statistically when comparing the QDT and AHS.

<sup>10</sup> The distributions of the cohabitation and domestic partnership/civil union items should not be compared between the QDT and AHS, as the surveys use different universes for these items.

***Is there consistency between reported relationship to householder and sex?***

Given the small sample size of the QDT, only a small number of households reported as same-sex couples. The larger sample size of the AHS provided us with a greater number of same-sex couples. The control panel for the QDT had only 17 same-sex married couples, while the experimental panel included 16. The AHS included 207 same-sex married couples in the control panel and 213 in the experimental panel. In terms of same-sex unmarried partners, there were 22 included in the QDT control panel and 15 in the experimental panel. In the AHS, there were 279 same-sex unmarried couples in the control panel and 237 in the experimental panel.

For the experimental panels in the QDT and AHS, we can assess whether couple members' sex was reported consistently on the relationship and sex items (Table 2). 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. For same-sex married couples, around 44 percent have inconsistent responses on sex in the QDT, while about 56 percent were inconsistent in the AHS. Relationship-sex inconsistency is much lower among same-sex unmarried couples. About 7 percent of these couples in the QDT and 13 percent in the AHS provided inconsistent answers on the relationship and sex questions. Relationship-sex inconsistency was even lower for opposite-sex couples. For opposite-sex married couples, relationship-sex inconsistency was less than 1 percent of couples in both the QDT and AHS. Although there was no inconsistency between relationship and sex for opposite-sex unmarried partners in the QDT, approximately 2 percent of these couples provided inconsistent responses in the AHS.<sup>11</sup>

Although we cannot assess relationship-sex inconsistency in the control panel for either survey, previous research on the 2010 Census—which measured relationship similarly to the control panel—estimated that 62 percent of same-sex married couples and 7 percent of same-sex unmarried partners were likely to be opposite-sex (O'Connell and Feliz 2011).<sup>12</sup> Thus, relationship-sex inconsistency appears to be similar or somewhat lower when using the revised relationship item. Although the number of same-sex couples captured in the QDT is too small to assess whether the level of this error truly decreased, we are more confident in the results from the larger AHS. In general, we can see that there is a similar pattern in relationship-sex inconsistency in both surveys.

***Is there consistency between relationship to householder, sex and marital status?***

Table 3 shows the consistency between answers to the relationship and marital status questions for the control and test panels of both surveys. For married couples, marital status is considered inconsistent if one or both spouses reported being not married (including widowed, divorced, separated, and never

---

<sup>11</sup> Same-sex married, same-sex unmarried partner, and opposite-sex married couples are not statistically different between the QDT and AHS.

<sup>12</sup> Same-sex married and unmarried partners are not statistically different between the percentages found by O'Connell and Feliz (2011) and the QDT.

married). In contrast, unmarried couples' responses are inconsistent if one or both partners were reported as married.

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 QDT or in the AHS. Instead, these automated instruments prefilled these respondents' marital status as married. However, they were asked marital status in the QDT's mailout/mailback form. Here, we discuss relationship-marital status consistency of couples where both members provided their marital status, excluding those for whom marital status was automatically assigned. Thus, we only assess relationship-marital status consistency for same- and opposite-sex married couples in the QDT's mailout/mailback form.

In addition, in the AHS respondents in the control panel who provided their relationship in a previous interview were not asked their relationship. AHS respondents in both panels who provided their marital status in a previous interview were only asked to verify their marital status, and did not receive the full question with all response categories. We only review relationship-marital status consistency of AHS cohabiting couples where both members provided, rather than verified, their relationship and marital status.

In general, there is similar or higher consistency between relationship and marital status using the test relationship question, compared to the control item. In the QDT, for example, about 91 percent of opposite-sex married couples in the test panel provided consistent answers, compared to 88 percent in the control panel. In the AHS, these items are consistent for about 98 percent of same-sex unmarried couples in the test panel and 95 percent in the control panel. All other comparisons of relationship-marital status consistency between the control and test panels are not statistically different.

Also noteworthy, relationship-marital status consistency for both types of cohabiting couples was generally higher in the AHS than in the QDT, which may be due to the lack of nonresponse follow-up in the QDT. For instance, approximately 80 percent of same-sex unmarried couples in the QDT experimental panel consistently reported both as not married, compared to 98 percent in the AHS experimental panel.

Once more, we caution readers against drawing strong conclusions from these comparisons of relationship-marital status inconsistency between the QDT control and test panels, due to the small sample sizes for same-sex couples in the survey. Differences between the panels may be attributable to statistical noise rather than the version of the question used. We are more confident in results from the larger AHS.

In general, relationship-marital status consistency does not differ between opposite- and same-sex couples, regardless of couple type, panel, or survey. One exception is for cohabiting couples in the AHS experimental panel. Here, consistency was greater for same-sex unmarried couples (98 percent) compared to their opposite-sex counterparts (96 percent).

**Administrative Linkage.** We use the unedited relationship and sex items in ACS data to identify people who report being in same-sex and opposite-sex couple households. There were 1,999,996 people who were reported as a householder, spouse or partner. Of these, 86,433 could not be matched to the Numident. So we were able to match about 96 percent of the records overall. Since we consider couples during most of this analysis, further description of the sample is in those terms. There were 999,084 unweighted couples<sup>13</sup> in the 2010 ACS. Out of these couples, we drop 8,511 in which either the householder and/or the partner is missing on the sex item in the ACS. Of the remaining 990,573 couples, we also drop 1,615 households that report multiple spouses and/or partners. This leaves us with 988,958 unweighted coupled households in the ACS. We then drop 65,566 couples because in the Numident either the spouse and/or partner is missing on the sex item. We are left with 923,392 couples, about 92 percent of reported coupled households with valid sex entries in the Numident for both partners, and in which both members matched the Numident. Results presented in this study are not intended to represent the U.S. population.<sup>14</sup>

We use the unedited relationship and sex items in Census 2010 data to identify people who report being in same-sex and opposite-sex couple households. Similarly to ACS 2010, we were able to match about 95 percent of individual people who reported being a householder, spouse, or partner in households with a spouse or partner to the Numident file. Looking at those couples who matched the Numident, there were 63,107,488 couples<sup>15</sup> in Census 2010. Out of these couples, we drop 832,426 in which either the householder and/or the partner is missing on the sex item in Census 2010. Of the remaining 62,275,062 couples, we also drop 201,189 households that report multiple partners and/or spouses. This left us with 62,073,873 coupled households in Census 2010. We then drop 4,575,198 couples because in the Numident either the spouse and/or partner were missing on the sex item. Finally, we are left with 57,498,675 couples, about 91 percent of reported coupled households with a sex value in the Numident for both partners who could be matched to the Numident.

Table 4 shows unweighted numbers of coupled households by whether their gender report in the 2010 ACS or Decennial matched the Numident records. We used the unedited relationship and sex items in Decennial and ACS data to identify people who reported being in same-sex and opposite-sex couples. A high percentage of the couples who had unedited reports of sex and relationship to householder could be matched to the Numident file: about 92 percent in ACS and 91 percent in the decennial data. We matched 923,392 couples in the 2010 ACS with the Numident. In Census 2010, we matched 57,498,675 couples with the Numident (Table 4).

---

<sup>13</sup> At least one spouse or unmarried partner was reported in the household, and they matched to the Numident.

<sup>14</sup> Weights in the ACS are meant to produce representative estimates of the underlying population. However, it is not clear whether they would produce representative estimates of the underlying population that matches to administrative records. This is because the matching subset may be different from the ACS sample in a non-random manner. It could also be argued that this non-randomness may be exacerbated for the subset who can be matched.

<sup>15</sup> At least one spouse or unmarried partner was reported in the household.

Of the 2,411 households reported as same-sex married in ACS, 57 percent were opposite-sex in the Numident. In comparison, of households reported as opposite-sex married in ACS, about 1 percent were same-sex in the Numident. In the decennial census, about 73 percent of same-sex married couples were opposite-sex couples in the Numident. For opposite-sex married couples, 0.6 percent were same-sex couples in the Numident. For those reported as unmarried partner households, 7 percent of those who were same-sex unmarried in either the ACS or decennial census were opposite-sex in the Numident. The corresponding percentage of those who differed for opposite-sex unmarried partner households was about 2 percent in the ACS and about 1 percent in decennial.<sup>16</sup> Thus, the gender mismarks do not seem to be a big problem for same-sex and opposite-sex unmarried partners. The problem of opposite-sex married couples mismarking their gender and appearing to report as a same-sex married couple is still a very serious problem in ACS data, although it does appear to be lower than in Census 2010, where previous research has shown that the NRFU form was especially problematic. Although only a tiny fraction of opposite-sex married couples is misreporting their sex, it has a large effect on the estimates of same-sex married couples.<sup>17</sup>

Table 5 shows responses by mode in ACS (mailout/mailback or CATI/CAPI) and decennial census (mailout/mailback, nonresponse follow-up (NRFU) or other). In mail response, 59 percent of those reported as same-sex married couples in the ACS and 73 percent in the decennial census show up as opposite-sex couples in the Numident. This compares with 7 percent of those reported as same-sex unmarried couples in the ACS and 4 percent in the decennial census, whose sex reports do not match the Numident. Percentages of couples whose reports of sex do not match Numident are much lower for opposite-sex married couples, at 2 percent in the ACS and about 1 percent in the decennial census. The percentage of mismatch for opposite-sex unmarried couples was also low, at 3 percent in the ACS and about 1 percent in the decennial census. For those reported as opposite-sex couples in 2010 decennial, regardless of mode, mismatch rates between their decennial report and the Numident were very low—1.0 percent or less. This low rate was also regardless of whether the couple reported as spouses or unmarried partners.

Mismatch rates for CATI/CAPI responses were lower for same-sex married couples than in the paper form in the ACS, but higher than the paper form for other couple types: 46 percent for same-sex married couples, 13 percent for same-sex unmarried couples, 4 percent for opposite-sex married couples, and 5 percent for opposite-sex unmarried couples. The mismatch rates for Census 2010 NRFU were higher for all couple types than in the paper form: 87 percent for same-sex married couples, 26 percent for same-sex unmarried couples, 1 percent for opposite-sex married couples, and 1 percent for opposite-sex unmarried couples.

---

<sup>16</sup> The ACS and decennial numbers are not statistically different for same-sex unmarried couples who were opposite-sex in the Numident.

<sup>17</sup> Although the Numident is an administrative file, and is unlikely to contain many errors in the sex entry, the match between ACS data and the Numident is not done using a social security number, but an imperfect matching code. So there is also error coming from false positive matches between survey and administrative data. We do not have a way to estimate the extent of this error, although prior work found that false positive match rates for commercial data sets were as high as 13 percent (Layne, Wagner, and Rothhaas 2013).

Overall, the mismatch rate for same-sex married couples is much worse than we expected in ACS. The mismatch rates for Census 2010 are even higher, and may indicate that an even higher percentage than we suspected based on the names index comparison may have been misreported.

In order to evaluate our use of the names index to assign sex for those reporting as same-sex married couples in our adjusted estimates from Census 2010, we compared sex in 2010 as if it were assigned based on the reported first name with the sex entry in the Numident. We assigned sex based on the names index. If a first name was reported as female 95 percent of the time, the respondent was assigned as female, for example. We then compared the assigned sex with the report of sex in the Numident for those reported as householders, spouses or partners. In Table 6, for same-sex married householders, 96 percent of females in the Numident had a female name in Census 2010 and 97 percent of males in the Numident had a male name in decennial data. For opposite-sex married householders, these numbers increase to 98 percent for females and over 99 percent for males. Ninety-nine percent of same-sex and opposite-sex married spouses/partners assigned as female based on their first name were female in the Numident, while 98 percent of spouses/partners assigned as male based on their name were male in the Numident. Looking at unmarried householders and spouses/partners, we found that 99 percent of those with a female name were reported as female in the Numident and 99 percent of those with a male name were reported as male in the Numident for both same-sex and opposite-sex unmarried couple type.

A name is considered ambiguous if it is not reported as male or female at least 95 percent of the time. In calculations not shown, between 11 and 19 percent of householders or spouses/partners had an ambiguous name, regardless of couple type. The percentages of ambiguous names were a bit higher for same-sex married spouses/partners (19 percent), and same-sex married householders (15 percent) than for opposite-sex married and unmarried spouses/partners (14 percent). However, overall, it appears that the use of the first name index to assign sex in survey data is effective.

### **Updates**

This section of the paper provides an update on the other changes the Census Bureau is making that affect data for same-sex couple households.

**ACS Edit Change.** Editing the responses of those who reported being married to a same-sex partner has changed over time. In Census 2000 and 2010, for cases where no imputations were made due to non-response, for either person on the relationship or gender items, the partner who reported being a *spouse* of the householder was changed to an *unmarried partner* of the householder. The ACS also used this approach between 2005 and 2012. Previously, in the 1990 Census, the *relationship* category remained the same (spouse), but the *sex* of the partner was changed. Starting with the 2013 ACS 1-year data file, same-sex spouses are no longer edited to be same-sex unmarried partners. This change to the edit not only includes those same-sex spousal households in which for either person the relationship and gender items were not missing, but it will also include those couples where either the householder or spouse did not report their sex, and it was assigned based on their first name. A flag was released on the PUMS data set that identifies these two groups of same-sex married couples. These couples are now

shown in published AFF tables as part of the lines with 'husband or wife' or 'married couple households'. At this time, same-sex and opposite-sex spouses are shown together in tabulations rather than separately, due in part to the small relative size of the same-sex groups.

**Current Population Survey Annual Social and Economic Supplement (ASEC).** Implementation of the new revised relationship question is planned for the 2015 CPS ASEC. Depending on processing schedules, same-sex married couples may be shown as married couples in the edited data file starting with the 2017 CPS ASEC data release.

**Decennial Census.** We are currently testing the revised relationship question in the 2015 Census Tests, and intend to implement our improved item in the 2020 census.

**American Community Survey.** The new revised relationship answer categories are planned for testing in the ACS Content Test, currently planned for 2016. Due to budget and space restrictions, however, addition of the cohabitation and domestic partnership/civil union questions is not being considered at this time. An interagency group oversees the procedures for changes made to the ACS. As part of the process, the Content Test is conducted every 5 years. Content in the ACS cannot be revised without inclusion in this test. The recommendations for question changes that result from that test are scheduled for implementation in 2019.

**American Housing Survey.** The revised relationship question, as well as the cohabitation and domestic partnership/civil union items, were fully implemented in the 2015 AHS.

## CONCLUSION

The measurement of relationships among household members is complex. However, previous research shows that improvements in relationship measurement are needed.

This paper has outlined some of the results from several quantitative tests of the revised relationship question, a direct cohabitation question along with a follow-up about whether respondents in cohabiting partnerships have legally registered those relationships. Overall, we found that public reaction to the revised question was muted, and did not result in lower levels of response to either the surveys overall, or the relationship item in particular.

Our findings from the largest test, AHS, in terms of consistency between responses to the new relationship question and reports of sex for each member of the couple were not encouraging, since there is still a high proportion of same-sex married couples whose reports of sex indicate they are likely opposite-sex married couples who have marked sex or the same-sex relationship category in error. It is difficult at this point to know exactly why we are seeing this result. Other countries (e.g., Canada, New Zealand, and the United Kingdom) use this method of explicitly listing same-sex married and unmarried relationships. We are awaiting information on whether they have seen this issue, and if so, what steps they have taken to mitigate it. The administrative linkage projects confirm that there continues to be a problem with opposite-sex married couples who misreport sex and artificially inflate the estimates of

same-sex married couples. The problem is not as pronounced in ACS as it was in the 2010 Census, but it is still sizable. We have also shown that assigning sex based on the first name, as was done for the “preferred” estimates released from 2010 Census data, was a fairly effective way to adjust the estimates to get a more accurate sense of those who reported being same-sex married couple households in the decennial census.

## REFERENCES

- DeMaio, Theresa J., Nancy Bates, and Martin O’Connell. 2013. “Exploring Measurement Error Issues in Reporting of Same-Sex Couples.” *Public Opinion Quarterly*, 77:145-158.
- Kreider, Rose M. 2008. “Improvements to Demographic Household Data in the Current Population Survey: 2007.” *HHES Working Paper*. U.S. Census Bureau: Washington, DC.
- Layne, Mary, Deborah Wagner, and Cynthia Rothhaas. 2013. “Estimating Record Linkage False Match Rate for the Person Identification Validation System.” *CARRA Research Report Series*, CARRA-06-13. Center for Administrative Records Research and Applications, U.S. Census Bureau: Washington, DC.
- O’Connell, Martin and Sarah Feliz. 2011. “Same-Sex Couple Household Statistics from the 2010 Census.” *SEHSD Working Paper*, 2011-26. U.S. Census Bureau: Washington, DC.
- Vespa, Jonathan, Jamie M. Lewis, and Rose M. Kreider. 2013. “America’s Families and Living Arrangements: 2012.” *Current Population Reports*, P20-570. U.S. Census Bureau: Washington, DC.

**Table 1. Relationship and Marital Status Questions in the ACS-QDT and AHS**

	ACS-QDT		AHS	
	Control Panel	Experimental Panel	Control Panel	Experimental Panel
	Percent	Percent	Percent	Percent
<b>Response Rates</b>	<b>51.9</b>	<b>52.7</b>	<b>87.6</b>	<b>88.1</b>
<b>Total respondents</b>	<b>10,181</b>	<b>10,434</b>	<b>70,617</b>	<b>70,347</b>
Householder	42.5	41.9	40.5	40.4
Husband or wife	23.1	(X)	19.4	(X)
Opposite-sex husband/wife/spouse	(X)	22.6	(X)	19.4
Same-sex husband/wife spouse	(X)	0.2	(X)	0.1
Unmarried partner	1.9	(X)	2.5	(X)
Opposite-sex unmarried partner	(X)	2.1	(X)	2.1
Same-sex unmarried partner	(X)	0.1	(X)	0.2
Other relationship <sup>1,2</sup>	31.9	32.4	37.3	37.5
Missing	0.6	0.8	0.3	0.3
<b>Total respondents 15 years and older</b>	<b>8,601</b>	<b>8,708</b>	<b>56,693</b>	<b>56,523</b>
Married <sup>3</sup>	54.9	55.7	50.8	51.6
Widowed	5.4	5.5	5.5	5.8
Divorced	9.2	9.5	10.6	10.0
Separated	1.3	1.3	1.9	1.7
Never married	22.2	22.1	30.0	29.7
Missing	7.0	6.0	1.2	1.2
<b>Total respondents eligible for cohabitation item<sup>4,5</sup></b>	<b>(X)</b>	<b>3,862</b>	<b>(X)</b>	<b>3,170</b>
Yes	(X)	12.6	(X)	21.9
No	(X)	73.5	(X)	34.1
Missing	(X)	13.9	(X)	43.9
<b>Total respondents eligible for domestic partnership/civil union item<sup>6,7</sup></b>	<b>(X)</b>	<b>486</b>	<b>(X)</b>	<b>686</b>
Yes	(X)	3.9	(X)	17.2
No	(X)	94.7	(X)	82.2
Missing	(X)	1.4	(X)	0.6

(X) Not applicable.

<sup>1</sup> Includes the following in the ACS-QDT and the AHS experimental panel: 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.

<sup>2</sup> Includes the following in the AHS control panel: son or daughter, brother or sister, father or mother, grandchild, other relative, roomer or boarder, housemate or roommate, foster child, and other nonrelative.

<sup>3</sup> In AHS, includes married, spouse present and married, spouse absent.

<sup>4</sup> In ACS-QDT, excludes those under age 15 or married.

<sup>5</sup> In AHS, excludes those under age 15, married, who refused marital status, or who had no eligible partner present.

<sup>6</sup> In ACS-QDT, excludes those under age 15, married, without a partner, or who did not provide their cohabitation status.

<sup>7</sup> In AHS, excludes those under age 15, married, who refused marital status, who had no eligible partner present, without a partner, or who did not provide their cohabitation status.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, 2013; U.S. Census Bureau, American Housing Survey, 2013.

**Table 2. Inconsistency in reports of relationship and sex for the experimental panels in the ACS-QDT and AHS**

	ACS-QDT	AHS <sup>1</sup>
	Percent	Percent
<b>Total same-sex married couples</b>	<b>16</b>	<b>213</b>
Consistent	56.3	42.3
Not consistent	<b>43.8</b>	<b>55.9</b>
One or both missing	0.0	1.9
<b>Total same-sex unmarried couples</b>	<b>15</b>	<b>237</b>
Consistent	93.3	86.9
Not consistent	<b>6.7</b>	<b>12.7</b>
One or both missing	0.0	0.4
<b>Total opposite-sex married couples</b>	<b>2,296</b>	<b>27,108</b>
Consistent	98.6	99.1
Not consistent	<b>0.4</b>	<b>0.6</b>
One or both missing	1.0	0.3
<b>Total opposite-sex unmarried couples</b>	<b>212</b>	<b>2,851</b>
Consistent	98.6	98.1
Not consistent	<b>0.0</b>	<b>1.8</b>
One or both missing	1.4	0.1

<sup>1</sup> The results presented use unweighted AHS data and may not fully account for the sample design. For this reason, some results could relate to the sample design rather than question wording.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, 2013; U.S. Census Bureau, American Housing Survey, 2013.

**Table 3. Inconsistency in reports of relationship and marital status for the control and experimental panels in the ACS-QDT and AHS**

	ACS-QDT		AHS <sup>1</sup>	
	Control Panel	Experimental Panel	Control Panel	Experimental Panel
	Percent	Percent	Percent	Percent
<b>Total same-sex married couples<sup>2</sup></b>	<b>5</b>	<b>6</b>	<b>(X)</b>	<b>(X)</b>
Consistent	<b>60.0</b>	<b>66.7</b>	(X)	(X)
Not consistent	0.0	16.7	(X)	(X)
One or both missing	40.0	16.7	(X)	(X)
<b>Total same-sex unmarried couples<sup>3</sup></b>	<b>22</b>	<b>15</b>	<b>167</b>	<b>158</b>
Consistent	<b>81.8</b>	<b>80.0</b>	<b>94.0</b>	<b>97.5</b>
Not consistent	4.5	13.3	2.4	1.9
One or both missing	13.6	6.7	3.6	0.6
<b>Total opposite-sex married couples<sup>2</sup></b>	<b>790</b>	<b>837</b>	<b>(X)</b>	<b>(X)</b>
Consistent	<b>88.1</b>	<b>91.0</b>	(X)	(X)
Not consistent	0.9	0.8	(X)	(X)
One or both missing	11.0	8.1	(X)	(X)
<b>Total opposite-sex unmarried couples<sup>3</sup></b>	<b>168</b>	<b>212</b>	<b>2,056</b>	<b>2,263</b>
Consistent	<b>86.3</b>	<b>84.9</b>	<b>95.9</b>	<b>95.3</b>
Not consistent	1.2	1.4	1.8	2.5
One or both missing	12.5	13.7	2.4	2.2

(X) Not applicable.

<sup>1</sup>The results presented use unweighted AHS data and may not fully account for the sample design. For this reason, some results could relate to the sample design rather than question wording.

<sup>2</sup> Those who reported as married in the relationship question were not asked their marital status in the internet version of the ACS-QDT or in the AHS. However, they were asked marital status in the ACS-QDT's mailout/mailback form. We only show couples where both members reported their marital status.

<sup>3</sup> In the AHS, respondents in the control panel who provided their relationship in a previous interview were not asked their relationship. In addition, AHS respondents in both panels who provided their marital status in a previous interview were only asked to verify their marital status and did not receive the full question. We only show AHS couples where both members reported their relationship and marital status.

Source: U.S. Census Bureau, American Community Survey-Questionnaire Design Test, 2013; U.S. Census Bureau, American Housing Survey, 2013.

**Table 4. Coupled households by couple type: linked survey and administrative data**

Survey	Numident		Total
	Same-sex	Opposite-sex	
	Percent	Percent	
<b>ACS<sup>1</sup></b>			
Total	1.7	98.3	923,392
Married	1.0	99.0	843,202
Same-sex	42.7	<b>57.3</b>	2,411
Opposite-sex	<b>0.9</b>	99.1	840,791
Unmarried	8.7	91.3	80,190
Same-sex	93.0	<b>7.0</b>	6,265
Opposite-sex	<b>1.6</b>	98.4	73,925
<b>Decennial Census</b>			
Total	1.5	98.5	57,498,675
Married	0.7	99.3	51,321,524
Same-sex	27.5	<b>72.5</b>	306,587
Opposite-sex	<b>0.6</b>	99.4	51,014,937
Unmarried	7.6	92.4	6,177,151
Same-sex	93.0	<b>7.0</b>	456,979
Opposite-sex	<b>0.8</b>	99.2	5,720,172

<sup>1</sup>The results presented use unweighted ACS data and may not fully account for the sample design. For this reason, some results could relate to the sample design rather than question wording.

Source: U.S. Census Bureau, American Community Survey 2010 1-year data file, 2010; U.S. Census Bureau, 2010 Census; 2010 Numident.

**Table 5. Coupled households by couple type and mode: linked survey and administrative data**

	Same-sex		Opposite-sex		Total
	Married	Unmarried	Married	Unmarried	
<b>ACS<sup>1</sup></b>					
<i>Total</i>	2,411	6,265	840,791	73,925	923,392
Consistent	42.3	92.6	97.5	96.3	97.2
Not consistent	57.7	7.4	2.5	3.7	2.8
<i>Mailout/Mailback</i>	2,124	5,331	650,994	49,789	708,238
Consistent	40.8	93.5	97.8	96.7	97.5
Not consistent	59.2	6.5	2.2	3.3	2.5
<i>CATI/CAPI</i>	287	934	189,797	24,136	215,154
Consistent	53.7	87.5	96.5	95.5	96.3
Not consistent	46.3	12.5	3.5	4.5	3.7
<b>Decennial Census</b>					
<i>Total</i>	306,587	456,979	51,014,937	5,720,172	57,498,675
Consistent	27.3	92.9	99.4	99.2	98.9
Not consistent	72.7	6.4	0.6	0.8	1.1
<i>Mailout/Mailback</i>	173,878	375,400	40,825,451	4,026,757	45,401,486
Consistent	33.4	96.2	99.5	99.2	99.2
Not consistent	66.6	3.8	0.5	0.8	0.8
<i>NRFU</i>	109,487	63,233	7,499,585	1,419,473	9,091,778
Consistent	13.4	73.8	99.1	99.0	97.9
Not consistent	86.6	26.2	0.9	1.0	2.1
<i>Other</i>	23,222	18,346	2,689,901	273,942	3,005,411
Consistent	47.3	91.6	99.3	99.1	98.8
Not consistent	52.7	8.4	0.7	0.9	1.2

<sup>1</sup>The results presented use unweighted ACS data and may not fully account for the sample design. For this reason, some results could relate to the sample design rather than question wording. Source: U.S. Census Bureau, American Community Survey 2010 1-year data file, 2010; U.S. Census Bureau, 2010 Census; 2010 Numident.

**Table 6. Consistency between sex assigned based on first name and sex entry in administrative data, for householders, spouses, and partners**

People	Numident						
	Householder			Partner/Spouse			
	Total	Male	Female	Total	Male	Female	
<b>Married</b>							
Same-sex	306,587			299,817			
Name is female	80,379	100.0	3.7	183,251	100.0	0.9	<b>99.1</b>
Name is male	181,437	100.0	<b>97.2</b>	69,474	100.0	<b>98.1</b>	1.9
Name is ambiguous	44,771	100.0	63.9	47,092	100.0	25.9	74.1
Opposite-sex	51,014,937			50,991,626			
Name is female	7,064,282	100.0	1.7	36,959,893	100.0	0.3	<b>99.7</b>
Name is male	37,844,820	100.0	<b>99.7</b>	7,163,758	100.0	<b>98.0</b>	2.0
Name is ambiguous	6,105,835	100.0	80.9	6,867,975	100.0	15.7	84.3
<b>Unmarried</b>							
Same-sex	456,979			455,710			
Name is female	207,410	100.0	0.7	203,255	100.0	0.6	<b>99.4</b>
Name is male	196,724	100.0	<b>99.1</b>	193,484	100.0	<b>99.2</b>	0.8
Name is ambiguous	52,845	100.0	38.0	58,971	100.0	41.1	58.9
Opposite-sex	5,720,172			5,716,646			
Name is female	2,376,930	100.0	0.6	2,489,010	100.0	0.6	<b>99.4</b>
Name is male	2,609,449	100.0	<b>99.3</b>	2,430,339	100.0	<b>99.2</b>	0.8
Name is ambiguous	733,793	100.0	44.2	797,297	100.0	44.7	55.3

Source: U.S. Census Bureau, American Community Survey 2009-2013 3-year data file, 2013; U.S. Census Bureau, 2010 Census; 2010 Numident.