

New Estimates of Same-Sex Couple Households from the American Community Survey

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Abstract:

The paper explores the reasons for the sharp decline in the number of same-sex spouses reported in the American Community Survey (ACS) between 2007 and 2008. Changes were made to the 2008 American Community Survey (ACS) questionnaire that reflected requests by agencies for additional questions on the survey. Modifications and improvements to existing questions also changed the format and layout of the questionnaire. In addition, technological improvements were made in the data collection and capture phase of the ACS. We believe that some of these design and processing changes may have contributed to the observed decline in the estimated number of same-sex partner households between 2007 and 2008 and suggests that the previous ACS surveys may have over-estimated the component of the total number of these households that were originally reported as same-sex spouses. This paper will provide possible explanations for this decline and examine the potential effect of these changes on overall estimates and characteristics of same-sex couple households between 2007 and 2008.

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.

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INTRODUCTION

The number of same-sex couples who report themselves either as unmarried partners or spouses is an example of a measure that tracks the nontraditional changes currently underway in the living arrangements of American households. The estimation of this measure is especially important in light of continuing changes in legislation by individual states regarding the issuance of marriage licenses to same-sex couples. Since there is no unified national statistical system that registers and reports on married same-sex couples, survey data is the principal way to monitor the growth and changes in these households.

After several years of relatively stable estimates of the percentage of same-sex couples reporting themselves as spouses (about 45 percent to 50 percent between 2005 and 2007), the percentage declined to 27 percent in 2008. Some researchers have suggested that previous estimates of same sex spouses from the ACS were too high, so this decline was, in fact, an improvement in the data.¹ This paper will explore the reasons for this decline and the potential impact that changes that occurred in the data collection, capture, and editing phases, and changes to the format of the paper questionnaire may have contributed to this decline.

¹ Gary J. Gates, "Same-Sex Couples and Unmarried Partners in the American Community Survey, 2008," The Williams Institute, October 2009, Appendix Table 2.
[http://www.law.ucla.edu/williamsinstitute/pdf/ACS2008_Final\(2\).pdf](http://www.law.ucla.edu/williamsinstitute/pdf/ACS2008_Final(2).pdf)

THE AMERICAN COMMUNITY SURVEY

Given the relatively small number of same-sex married couples (estimated to be about 32,000), analyzing this population from surveys may prove difficult. One survey that may prove useful providing these estimates is the Census Bureau's American Community Survey (ACS). The American Community Survey is a nationwide sample survey of approximately 3 million households collected every month with a monthly sample of about 250,000 households. The ACS is a critical part of the Census Bureau's effort to redesign the decennial Census by providing social, demographic, economic and housing data annually for local communities.² Since 2005, when the ACS increased its sample size to 3 million households, the ACS estimate of the total number of same-sex households has been between 753,618 and 779,867 for the period 2005 to 2007 (Table 1). These estimates can be found on the Census Bureau's American Factfinder.³

As in previous years, the current ACS editing routines for the relationship item assign respondents who originally reported being the same-sex spouse of the householder to being a same-sex unmarried partner. These assignments occurred despite the changing number of states legalizing same-sex marriages, and the back and forth court rulings in California and Maine. The data for the 2005 to 2007 period indicated that about 45 percent to 51 percent of all unmarried same-sex households were originally reported as same-sex spouses (Table 1). While the estimate of same-sex unmarried partners (414,787) in 2008 was not statistically different from the 2007 estimate (412,770), the

² For more detailed information about the American Community Survey, go the Census Bureau's website for the ACS at the following address: <<http://www.census.gov/acs/www/Sbasics>>

³ The American Factfinder, the Census Bureau's principal way to access published tables from the ACS, can be found at the following address: <http://factfinder.census.gov/home/saff/main.html?_lang=en>

number of couples reporting themselves as same-sex spouses was significantly less in 2008 (149,956) than in 2007 (340,848). This resulted in 27 percent of all same-sex couple households reporting that they were spouses in 2008 compared with 45 percent in 2007.

There were changes to the ACS questionnaire between 2007 and 2008 that may explain these differences. Changes were made to the 2008 ACS questionnaire that reflected requests by federal agencies to include additional questions on the survey, as well as modifications and improvements to existing questions requiring changes in the format and layout of the questionnaire. Changes to questions in 2008 were tested in the 2006 ACS Content Test program and were made after evaluating the items with the aim of improving the overall response to the items and the quality of the data.⁴ Items were tested on a person basis (such as gender) but categories such as same-sex partners were too small to identify in the test for any evaluation.

Changes were also made to the layout of the survey instrument to more closely resemble the 2010 Census questionnaire. Finally, technological changes were made in the data collection and capture phase of the ACS, including procedures in handling multiple markings of items on the survey that required only a single response.

We believe many of these design and collection changes may possibly explain the observed decline in the estimated number of same-sex spouses reported in the survey between 2007 and 2008, and in our opinion, improve the estimates of same-sex couple

⁴ For a detailed explanation of the content test program and specific evaluation reports, go to the following: http://www.census.gov/acs/www/AdvMeth/content_test/content_test_06.htm

households. The first part of this paper will offer possible explanations for the decline in the number of same-sex spouses in light of the changes that occurred in the survey instrument. The second part of this paper will examine the characteristics of same-sex spouses and unmarried partners for 2007 and 2008. This will help us understand how these instrument changes may have affected the characteristics of these two groups.

CHANGES IN THE SURVEY, 2007-2008

Changes that occurred between 2007 and 2008 could be categorized in two basic groups: (1) data collection, capture and editing changes and (2) formatting changes to the questionnaire. The first category reflects technological improvements in data collection and efforts to make the editing phases more consistent between data in the ACS and the 2010 Census. The second category reflects the basic realignment of the core demographic items on the ACS paper instrument to resemble the Census 2010 paper questionnaire and by modifications to several existing questions on the survey. It should be noted that the impact of any of these changes on the estimated number of same-sex households appears to be an ancillary result of these changes.

Matrix 1 provides a summary of the changes that occurred in the ACS survey between 2007 and 2008 that could have contributed to the decline in the estimated number of same-sex households. The figure indicates the type of change and the phase of the survey where the change occurred: at the time of interview, in the data collection and capture phase, or in the post-collection phase when the data were edited. We will first examine

the changes in the collection, capture and editing phases. Next we will examine the more difficult to quantify changes resulting from modifications in the questionnaire and how people answer the items.

Data collection, capture and editing changes

The sections listed below follow the changes numbered in Matrix 1.

Change 1-Keying

Keying is part of the post-collection step where staff members manually enter the responses from a paper questionnaire to an electronic data file. A change was made from keying responses from the paper form (change 1a) to recording data from an electronically captured image of the form (change 1b).⁵ This new procedure has the capability of reducing potential keying errors from the mailed paper questionnaires. It also allowed for imaging of the written responses on the paper questionnaire. This change began in June 2007 was completed by October 2007.

Change 2-Multiple Marks

Another part of the post-collection phase is dealing with multiple marks for an item when only one response is required. Although the relationship and gender items used to identify same-sex couple households anticipate only one marked response, respondents may inadvertently check more than one box. The handling of multiple marks on the relationship and gender items varied over time, with 2007 a transition year.

⁵ Write-in values are keyed from the image while checkbox responses are read by Optical Mark Recognition software.

Before June 2007, if staff keying the response from a paper form encountered a multiple mark for either the relationship or gender items, the first marked category was recorded prior to further editing of the data. In the case of the gender item, if both the male and female boxes were checked, “Male” was always keyed during processing. For the relationship item, if “Husband/wife” was marked as well as another response, “Husband/wife” was keyed in as the response because it appears as the first response category on the relationship item. In general, this was the basic principal used for most items on the ACS when multiple marks were encountered for an item requiring only a single response.

Between June and September 2007, data began to be recorded from the captured image of the paper form on a flow basis and this change was completed by October 2007. All multiple checkbox marks are now sent to the keyer for adjudication. If the marks are judged to be in error (not intended by the respondent as evident, for example, by erasures or cross-outs) those marks are disregarded as responses. Despite this adjudication step, multiple checkbox marks may still be evident. In these cases, multiple marks for the relationship and gender items are considered as blank responses to the questions and are allocated in the editing phase instead of being assigned the first recorded value by the keyer. This is the same procedure that will be used in the 2010 Census.

We believe the previous process of always keying in the first response—which would have been “Husband/wife” in the relationship item when “Husband/wife” was marked with another category, or “Male” in the gender item--could have erroneously created

same-sex households. This is suggested in Table 1 where consistently more male-male couples than female-female couples were found between 2005 and 2007. However in 2008 there are more female-female couples than male-male couples.

Change 3- Identifying the Reference Person

Before 2008, the respondent was forced to select who was the householder in a housing unit at the time of the interview (change 3a). Beginning in 2008, the CATI/CAPI instrument selected the householder (change 3b) if the respondent listed multiple people as householders. This situation could occur if respondents reported co-owners of a house or multiple people on a rental agreement. The selection algorithm in the instrument selected the first named respondent on the list who was 15 years or older. This is a general rule used in other Census Bureau surveys if the respondent cannot select the householder. Using the unweighted numbers of households in 2007, only 7 out of 12,784 same-sex households had the householder assigned as the reference person of which 5 were reported as spouses. In 2008, 5 out of 9,145 same-sex households were assigned of which 2 were reported as spouses. Given these few cases, no effect on the estimate of same-sex spouses is hypothesized by the use of this rule.

Change 4- Edit Changes

On the post-collection phase, all items in a survey are edited either for inconsistencies or imputed for missing responses. A change was made to all variables in the overall ACS editing system in 2008 in determining who would be identified as having an “as reported”

response. Both in 2008 and in prior years, a person's response to the sex item was edited first and followed by the edit with their relationship status.

Before 2008, if a couple reported in the ACS that they were householder and spouse and had final **edited** values indicating that they were of the same sex, they were designated as "reported as spouses." These couples have been included in the count of "same-sex spouses" in previous Census Bureau tables and reports.⁶ It did not matter if any of the spouses involved had their sex allocated during the editing process, meaning that at least one of them truly did not actually report that they were of the same sex.

Beginning in 2008, if a householder and spouse had final edited values for the sex item of the same sex and if **either** the householder or spouse had their sex response allocated, these couples would not be tabulated as being same-sex spouses (as they were in 2007) but would be recorded as being same-sex unmarried partners. The editing change was implemented to make the calculation of imputation rates consistent across all ACS variables in 2008. The effect of this rule change was to reduce the 2008 "as reported" estimate of same-sex spouses. The 2008 procedure is now consistent with how "as reported" same-sex spouses will be designated in the decennial census and will more accurately indicate the number of reported same-sex spousal households whose reports consist of no missing or allocated responses.

⁶ Martin O'Connell and Daphne Lofquist, "Counting Same-sex Couples: Official Estimates and Unofficial Guesses," Paper presented at the Annual Meetings of the Population Association of America, Detroit, MI, April 30, 2009. >><http://www.census.gov/population/www/socdemo/files/counting-paper.pdf><<

Measuring data collection, capture and editing changes

In order to measure the previously described changes to the collection/capture/editing phases, we will be using unweighted counts of households. We are doing this as some of the changes are based only on counts of keying events available and observable in the pre-edit phases and for only those parts of the year when the actual questionnaires were keyed from images instead of from the paper forms.⁷

Table 2 indicates the basic counts of the number of same-sex households in 2007 and 2008. The data show that while the numbers of unmarried partner households in the sample were about 6,600 in both 2007 and 2008, there was a sharp drop in the counts of same-sex spouses from 6,163 in 2007 to 2,544 in 2008.⁸

Table 3 shows how the change in the collection and editing rules could have potentially affected the counts of same-sex spouse households. The most straightforward change to estimate is the change in the editing (assignment/allocation) rule. If the 2008 rule was applied in 2007, we find that 477 same-sex spouses in 2007 would have been removed from this category and recoded as unmarried partners as was done in 2008 because either one or both respondents had their sex response allocated or assigned.

⁷ Stephanie Baumgardner and Sandra Clark of the Census Bureau's American Community Survey Office provided much of the data used in this section.

⁸ These counts when weighted produced the estimates for 2007 and 2008 in Table 1. The weighted estimates also show the stability of the estimated number of unmarried partners but a sharp decline in the number of same-sex spouses.

The effect of the changes to how multiple marks are handled requires a little more guesswork on our part as the identification of forms that had multiple marks is only available for the period beginning in October 2007 when the forms were electronically scanned. Using ratios of these part year data for 2007 and comparable periods for 2008, we can approximate the number of multiple-marked forms in 2007 that would have been blanked and allocated using the 2008 rules and which would have never have resulted in same-sex spouse households in 2007. These numbers are only illustrative of the potential problem in 2007 as they are based on only data for the last three months of the year.

About 498 households in 2007 had respondents of the same-sex and who marked more than one relationship category including the “Husband/wife” category. In 2007, prior to transition to keying from image, they would have been automatically keyed on the form as a same-sex spouse because the first relationship category “Husband/wife” was manually keyed as the response. Starting with the transition to keying from image in June 2007, the editing rules for multiple-marks would have *blanked* the relationship response for the person who reported “Husband/wife” and allocated some response other than “Husband/Wife.” This would have resulted in a final set of values that would not have produced a same-sex husband-wife household.

Likewise, among husband-wife households, there were 632 households with multiple marks for the sex item for either the householder or spouse. All of these responses in 2007 were keyed in as “Male.” Assuming that half of the multiple responses were made for respondents who were actually males and half for females and the multiple mark

responder was actually of the opposite sex of his/her spouse, we could have about 316 false same-sex spouse households caused by multiple marks in the gender box. This is all a very tenuous analysis since we have no way of knowing the true identity of their sex.

Using the above assumptions, there is the possibility that 21 percent of the same-sex spouse households in 2007 were incorrectly recorded as such because of the existing keying and editing rules in place. The remaining potential components of the 2007 same-sex spouse households shown in Table 3 will be discussed in the following section.

Formatting changes

The effects of formatting and questionnaire layout changes (items 5-8 in Matrix 1) are more difficult to evaluate since they are influenced by how people perceive and understand questions rather than by a specific and measurable change in the data collection, capture and editing rules. All of the following changes were initiated at the beginning of the 2008 ACS panel in January.

Change 5- Questionnaire Format

The most important format change was the switch from a grid-based questionnaire design to a more directed sequential ordering of questionnaire items.⁹ In 2007, the core items were spread over two pages. In addition, there were less specific instructions on how the respondent was to proceed, as there were no item numbers for each separate item for each

⁹ The ACS 2007 and 2008 questionnaires can be viewed at the following: for the 2007 questionnaire >><http://www.census.gov/acs/www/Downloads/SQuest07.pdf><< and for the 2008 questionnaire >><http://www.census.gov/acs/www/Downloads/SQuest08.pdf><<

separate person (Figure 1). A numbering sequence was shown only at the top of the page.

In 2008, all the core demographic responses for a single person were displayed in one vertical column with a distinct sequential numbering of questions (Figure 2). An important point to note is the change in the layout of the responses on the sex item. While an errant stroke may vertically mark both the male and female boxes in the pre-2008 forms, beginning in 2008, the two responses were arranged horizontally, making it more unlikely that an errant stroke would go across the entire width of the column and mark both boxes. An evaluation of the grid and sequential formats found that significantly higher proportions of persons reported themselves as male rather than female in the grid format.¹⁰

An in-house test was performed in the summer of 2009, albeit using only 12 respondents, to compare how respondents visually proceed when answering the items on the 2007 and 2008 ACS forms. The analysis suggested a more consistent sequential reporting of data on the 2008 form relative to the 2007 form—i.e., answering all the items for Person 1 before proceeding to answer the items for Person 2.¹¹ Using a Tobii 2150 eye-tracking computer monitor, Figure 3 indicates how a typical respondent viewed the items for the

¹⁰ See John Chestnutt, "Effects of Using a Grid versus a Sequential Form on the ACS Basic Demographic Data, Final Report" March 6, 2008 <http://www.census.gov/acs/www/Downloads/ACS-MP-09_Grid-Sequential_Test_Final_report.pdf>

¹¹ Kathleen T. Ashenfelter, "Eye-tracking Study Report: Examining User Patterns for Demographic Items on the 2007 and 2008 ACS Mail Forms," January 2010, Survey Methodology Study Series SSM2010-01. <<http://www.census.gov/srd/papers/pdf/ssm2010-01.pdf>>

2008 ACS form.¹² The circular images indicate the duration and sequence of how the respondent's eyes tracked or gazed over the questionnaire.

All of the respondents in the study read the 2008 ACS form questions in the same basic order (vertically down the page). However, the 6 participants answering the 2007 forms read the questions using 5 different strategies. The inconsistencies between participants' mental strategies for completing the survey indicate that the older design may have caused some respondent confusion. This confusion could have influenced both the accuracy and the non-sampling error of the survey,

Change 6- Re-ordering Items

Changes were made in the ordering of the basic demographic items. In 2007, the questions were asked in the following order: name, gender, age, and relationship. In 2008, the order was changed to name, relationship, gender, and age. This placed the relationship and sex items in closer proximity on the questionnaire and the flow of these items are now consistent with both the Census 2000 and the 2010 Census questionnaires. We have no specific data on how this change may have affected the responses.

Change 7- Item Instructions

In 2007, there were no instructions on the paper form specifying respondents to mark only one box each for relationship and gender items. In 2008, instructions were included

¹² Eye tracking works by reflecting invisible infrared light onto an eye, recording the reflection pattern with a sensor system, and then calculating the exact point of gaze using a geometrical model. Once the point of gaze is determined, it can be visualized and shown on a computer monitor. For more detailed explanations, see the following: < http://www.tobii.com/corporate/eye_tracking/what_is_eye_tracking.aspx>

instructing respondents to mark only one box each for the relationship and the gender items. Space limitations in 2007 prevented including this instruction. This instruction is now consistent with the 2010 Census questionnaire and could lead to improved responses by reducing intentional multiple marks if respondents were unsure of the most appropriate category to mark.¹³

Change 8- Expansion of Relationship Categories

The relationship item was expanded to include more categories of children and in-laws consistent with the 2010 Census questionnaire.

Before 2008, there were no detailed categories for biological, step- or adopted children, nor for parent-in-laws or son/daughter-in-laws. These categories were added in 2008, increasing the number from 12 to 15 categories. There is no expectation or presumption that this would affect the reporting of the number of same-sex spouses, as “Husband or wife” is listed as the first category in the relationship item on both the 2007 and 2008 questionnaires.

Evaluating formatting changes

The following discussion suggests how the various changes described in the preceding section could have possibly affected the ACS data. Table 4 shows how the proportion of

¹³ Also prior to 2007, there were no instructions to list the householder as person 1 on the form. Beginning in January 2007, the instructions were included on all forms.

spouses of all same-sex households has varied by mode of interview between 2006 and 2008. These numbers are for the entire calendar year and represent the weighted estimates.

Even though the CATI/CAPI forms remained largely unchanged from 2006 to 2008,¹⁴ there was a consistent decline in the percent of same-sex couples reporting themselves as spouses from 41 percent in 2006 to 28 percent in 2008.¹⁵ Declines occurred between 2006 and 2007 when no changes were made in either the CATI/CAPI instrument or the post-data collection-editing rules. As these interviews involved some verbal interaction between respondent and interviewer (either in person or by telephone), perhaps the increasing media coverage of same-sex marriages made both respondent and interviewer more attuned to the questions and answers.¹⁶

The pattern of change was very different for the mailout/mailback forms. Between 49 and 52 percent of same-sex couples reported themselves as spouses between 2006 and 2007; however, a sharp decline was noted between 2007 and 2008 from 49 percent to 26 percent.

Table 5 examines how the proportion of spouse and partner responses varied during key periods of changes between 2006 and 2008. Data in the ACS are processed each month

¹⁴ The exception as previously was the addition of additional categories added to the relationship item in 2008.

¹⁵ The 2008 decline in these edited data include the changes in the editing rules of assigning spouses to unmarried married partners.

¹⁶ It should also be noted that for all years, interviewer prompts, unseen to the respondent, appeared on the instrument instructing the interviewer to verify their recorded data entries to the relationship and gender items if a same-sex spouse household was recorded.

as received from the field so we were able to create a calendar similar to that shown in Matrix 1 that outlined when different changes occurred in the paper and computer instruments. These data are the actual summations of monthly unweighted, unedited returns for same-sex households, eliminating from the universe households with incomplete data or unusable data.¹⁷

The CATI/CAPI interviews indicate a continuous decline in the percentage of same-sex households reporting themselves as spouses between 2006, 2007 and 2008, but not much change within the year 2007. However, a very different pattern is detected when examining the paper form.

For the year 2006 and the period January-May 2007, when no changes were made other than to list the householder as person 1 on the paper form, the percent of same-sex households reporting themselves as spouses was 53 percent. During the transitional summer period when changes were made to the handling of multiple marks, the percent of couples reporting themselves as spouses was 47 percent. After all changes were completed by October, the percentage for the last 3 months of 2007 was at 46 percent. Are the declines in the paper form noted between the beginning and ending periods for 2007 and simultaneous with the collection and capture changes simply a coincidence?

¹⁷ The universe for this table dropped households with multiple partners, incomplete/multiple responses to the sex and relationship items, and respondents who did not indicate that they were at least 15 years old.

For the 2008 calendar year, when major changes were made in the paper form, about 27 percent of same-sex couples reported themselves as spouses, similar to the level reported on the CATI/CAPI instrument (28 percent).

Could changes to the form have made an improvement in responses to the sex item that reduced the number of false reports of same-sex spouse households? We would ideally need a re-interview of the 2007 households with the 2008 ACS form to determine that. However, we were able to examine the first names of spouses of same-sex couples on paper questionnaires from October 2007 (the first month when all keying changes were completed and using the old paper format) and October 2008 (using the new paper format). Three independent coders looked at the first names of the spouses in these same-sex households and were asked to tabulate if they thought the spouses were of the same sex or of the opposite sex (Table 6). The hypothesis was that if the form in 2007 was more problematic for the respondent to follow, as suggested by the eye-tracking test, we would find that the 2007 forms would yielded a potentially larger proportion of falsely recorded same-sex households than the 2008 forms.

All three coders found a smaller proportion of “false positives”—i.e., opposite-sex spouses as judged by their first names—in 2008 than in 2007. Although this is not conclusive evidence that the 2008 form was better in reducing non-sampling error, it adds to the overall impression that the decline in the number of spouses in the ACS between 2007 and 2008 is consistent with other researchers’ claims that Census numbers of same-

sex spouses have been too high in the past and are due to non-sampling errors when filling out the paper forms.¹⁸

The decline in the reported number of same-sex spouses at first may seem alarming, but is actually an improvement in this estimate. The cumulative number of legally married same-sex spouses through calendar year 2008, including those performed in Canada, is about 32,000 nationwide. In addition, 87,000 (some of whom may have also gotten married) may have reported themselves as spouses because they were in civil unions or domestic partnerships.¹⁹ This would bring the total number of spouses who would reasonably identify themselves as same-sex spouses in surveys to about 120,000 compared with the estimate of 150,000 in the 2008 ACS (Table 1).

CHANGES IN CHARACTERICS

Because so many changes occurred between 2007 and 2008 in the questionnaire format and in the data capture/collection/editing steps, it is important to document the impact of these changes on both the geographical patterns and socio-economic characteristics of the same-sex couple population. The remaining sections of this paper will examine how these characteristics may have been altered by the compositional change in the relative numbers of same-sex spouses and unmarried partners. We will further examine if any of

¹⁸ Gary Gates and Michael D. Steinberger, "Same-Sex Unmarried Partner Couples in the American Community Survey: The Role of Misreporting, Miscoding and Misallocation," Paper presented at the Annual Meetings of the Population Association of America, Detroit, MI, April 30, 2009.

¹⁹ Gary J. Gates, "Same-Sex Couples and Unmarried Partners in the American Community Survey, 2008," The Williams Institute, October 2009, Appendix Table 2.
[http://www.law.ucla.edu/williamsinstitute/pdf/ACS2008_Final\(2\).pdf](http://www.law.ucla.edu/williamsinstitute/pdf/ACS2008_Final(2).pdf)

the individual group characteristics changed both among same-sex spouses and same-sex unmarried partners.

Geographical changes

Figure 4 shows a map of the United States for 2007 that indicates the percent of all same-sex households that were reported as spousal households. The national average in 2007 was 45 percent of which 22 states reported higher averages than the United States. As evident from the map, there is a rather pronounced group of states with relatively high percentages running from the upper Midwest down through the Mississippi Valley to the Gulf, states not particularly identifiable with high proportions of same-sex couple households.²⁰

The next map in Figure 5 illustrates that the pattern clearly evident in 2007 dissolves in 2008, as only 10 of the states now have percentages significantly different from the US average. Only 6 states reported above average percentages in both years—Alabama, Massachusetts, New Jersey, Pennsylvania, South Dakota and Wyoming. Four states—Colorado, Florida, New York, and Washington—and the District of Columbia reported below average percentages in both years.

Which areas of the United States were more likely to provide information using the mail forms which may have been prone to the formatting issues previously discussed? Figure 6 shows that the northern states to a greater extent than in other parts of the country were more likely to have mail forms as a reporting base for the ACS data in 2008. Figure 7

²⁰ Gates, *ibid.*, p. 6.

also indicates that the midwestern area of the United States also had declines in reported same-sex spousal households higher than the national average of 18.6 percent. Were the somewhat inexplicably high percentages of spousal reports in the midsection of the United States in 2007, an area where same-sex households are found with only low frequency, related to the false positive spousal reports due to the above average use of mail forms in those areas?

Characteristics of Same-Sex Couples

The following section shows the characteristics of same-sex couples specific to the type of household and the sex of the partners based on the 2007 and 2008 calendar year data from the American Community Survey. Given the many changes in processing and formatting that occurred between 2007 and 2008, there were only a few changes in the demographics reported by respondents, mostly occurring among the spousal households and not those who stated they were living together as unmarried partners.

Overall changes

Table 7 shows the distribution of household characteristics of all same-sex couples, including those who reported themselves as spouses and those as unmarried partners. The findings indicate that there was a decrease in proportions of children and own children living in same-sex households between 2007 and 2008. These data also show a decrease in those respondents in the 55 to 64 years old age category. There was an increase in reports of both respondents being employed along with an increase in the household income by \$4,103. These data also show a decrease in the rates of home ownership. Some

of these changes may be attributed to the compositional change in the relative proportion of same-sex couples that were reported as spouses as previously outlined. Changes for both spouses and partners will be shown in the following sections.

Changes by relationship status

Next, we further examine the demographics of same-sex couples by showing their unedited relationship status—as either spouses (Table 8) or as unmarried partners (Table 9). It should be remembered that the characteristics shown for the reported spouses are an aggregation of several of the component groups previously mentioned²¹ and are not to be considered the true characteristics of all couples that have been legally married in the United States or immigrants from countries where a legal marriage ceremony has been performed.

Table 8 shows that both male and female spousal households showed a decrease in the proportion of households with the householder age 55 to 64 years. However, the proportion of female spousal householders 65 years and over doubled between 2007 and 2008. Overall, the average age of female householders and spouses increased by 5 years but no change was noted for male spousal households between 2007 and 2008. A significant decline occurred between 2007 and 2008 in the proportion of female households where both partners were employed (from 52 percent to 41 percent), a change consistent with the previous increase noted in the average age of the household partners as they approach retirement age and may start to exit from the labor force.

²¹ This could include domestic partners, couple in civil unions, commitment ceremonies, or those who identify themselves as living together as spouses without any legal recognition.

While there was no change between 2007 and 2008 in the proportion of male households with own children (about 32 percent), the proportion of female households with own children fell by a third, from 38 percent in 2007 to 27 percent in 2008. Both male and female same-sex spousal households reported a decrease in home ownership between 2007 and 2008 while the average household income decreased by \$7,088 for female spousal same-sex couples.

Table 9 shows the demographics of same-sex couples that reported being unmarried partners. This table indicates the characteristics of the unmarried partners were more stable between 2007 and 2008 than those who reported themselves as spouses. For example, while the average age of the female spouse changed by 5 years between 2007 and 2008, the difference between the female unmarried partners for the two periods was less than 1 year.

No significant changes were noted for females in unmarried partner households in the proportion of households where both were employed (about 68 percent in 2007 and 70 percent in 2008 as shown in Table 9) compared with the 11-percentage point drop among the spousal households (Table 8). No significant changes were noted between 2007 and 2008 either for male or female unmarried partner households in the proportion owning their own homes (between 70 and 72 percent in both years, Table 9) compared with declines in home ownership for the spousal households (Table 8).

The major change previously noted in the proportion of children living in households among female same-sex spousal households (an 11 percentage point decline) was not evident for unmarried female partner households (about 20 percent in 2007 and 21 percent in 2008).

Overall, the data for the unmarried partner households appear to exhibit less change than that of spousal households between 2007 and 2008. In both years, however, spousal couples do seem to have different characteristics than unmarried partners. The spouses were generally older than unmarried partners, more frequently had own children in the household, were less likely to have both members employed, and were more likely to own their own homes than their unmarried partner counterparts.

The changes that did occur for the same-sex couples could possibly be attributed to the lower proportion of same-sex couples reported as spouses in 2008 than in 2007. Most notably, the changes for female spouses indicated a loss of younger couples who were more likely to have children and be employed.

SUMMARY

We believe that the improvements to the ACS noted in this paper will make the ACS more consistent with the 2010 decennial census procedures and questionnaire format. In evaluating all of the changes to the ACS questionnaire and the different data collection/capture and editing steps, we found that although there was a decline in the

reported number of same-sex spouses, this is actually an improvement on the estimate of same-sex couples and more specifically same-sex spouses.

The changes in the capture/collection and editing phases reflect technological improvements in data collection and efforts to make them more consistent between the ACS and the 2010 Census. They include a switch from keying directly from paper forms to recording data from electronically captured image of the form, thus reducing the potential keying errors from the mailed paper questionnaires. With the change from keying from paper to keying from image, multiple marks were no longer edited to be the first marked category. Instead, multiple marks were examined and those determined to be in error (not intended by the respondent) were disregarded. If not resolvable by visual inspection, multiple marks were treated as blank and allocated during editing. This is consistent with the handling of decennial census paper forms.

An overall change to the ACS editing rules occurred in 2008 that also reduced the number of same-sex spouses who were classified with “as reported” responses compared with the prior ACS surveys. The magnitude of all these changes suggests that when 2007 data are treated like the 2008 data, there is the possibility that up to 21 percent of the same-sex spouse households were incorrectly recorded as such as a result of the existing keying and editing rules in place.

The changes in the formatting of the paper instrument were done to realign the core demographic items to resemble the Census 2010 paper questionnaire. The primary

change to the questionnaire format was a switch from the grid-based design to a directed sequential ordering of questionnaire items. This allowed for less confusion and therefore could have improved the accuracy of the responses to the survey.

The tables in this paper allow us to see how the changes that occurred between 2007 and 2008 could have influenced the socioeconomic characteristics of same-sex couples. In other words, it allowed us the opportunity to identify changes, if any, to same-sex couples by their unedited reporting status. The overall decline in the number of same-sex couples between 2007 and 2008 was due to a decline in those reporting being spouses. Despite this decline, there were no major changes in socioeconomic characteristics for same-sex couples as a whole. Overall, the most notable changes were a slight decline in the number of households reporting having children and own children, along with an increase in household income and a decline in home ownership.

For those couples reported as spouses, there was a decrease in homeownership for both male-male and female-female couples. For female spouses, there was also a decline in the proportion of both partners being employed, own children in the household, and household income for female-female couples. There were no major demographic changes between 2007 and 2008 for those same-sex couples reported as unmarried partners.

We believe that these changes allow us to portray a more accurate measure of the number of same-sex couple households, more specifically same-sex spouses. By getting a more accurate measure of same-sex couples we are able to get a better measure of the characteristics of this population.

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Matrix 1. Matrix of Changes in Data Collection and Processing That Could Have Affected Reporting or Estimation of Same Sex Households

Type of change	Timeline of changes					Phase when actions occur		
	2006 and prior years	January 2007- May 2007	Transition June-September 2007	October 2007- December 2007	January 2008 and after	Time of interview	Data collection and capture	Post-collection editing
DATA COLLECTION, CAPTURE AND EDITING CHANGES								
1. Keying specifications:								
a. Key from paper							X	
b. Key from image							X	
2. Multiple marks for relationship or sex on paper:								
a. Take the first marked response							X	
b. Blank the responses							X	
3. Multiple reference persons on CATI/CAPI:								
a. Force the respondent to chose one						X		
b. Accept multiples, instrument selects lowest PNUM						X		
4. Flagging changes in edit:								
a. Included as assigned spouses people with sex flagged								X
b. Excluded as assigned spouses if either had sex flagged								X
FORMATTING CHANGES								
5. Format change								
a. Grid format						X		
b. Sequential format						X		
6. Re-ordering of asking relationship and sex items								
a. Name, sex, age, relationship						X		
b. Name, relationship, sex, age						X		
7. Instruction changes for relationship, sex and listing								
a. No instruction on number of boxes to mark for rel and sex						X		
b. Instruction added to mark only one box for rel and sex						X		
c. No instruction to list householder as person 1						X		
d. Instruction added to list householder as person 1						X		
8. Change in relationship categories								
a. 12 categories						X		
b. 15 categories						X		

Color Code- Yellow- CATI/CAPI: Green-Mail Form: Red- All instruments

Table 1. Estimates of Same-Sex Households by Editing Status:
American Community Survey: 2003-2008

Survey year and sex of couple	Edited Responses ¹				
	Total same-sex couples	Reported as spouses			Unmarried partners ²
		Number	Percent	Std Errors	
2008					
Total	564,743	149,956	26.6	0.55	414,787
Male-Male	270,600	65,764	24.3	0.88	204,836
Female-Female	294,143	84,192	28.6	0.74	209,951
2007					
Total	753,618	340,848	45.2	0.51	412,770
Male-Male	395,572	190,004	48.0	0.73	205,568
Female-Female	358,046	150,844	42.1	0.76	207,202
2006					
Total	779,867	385,752	49.5	0.52	394,115
Male-Male	417,044	217,617	52.2	0.72	199,427
Female-Female	362,823	168,135	46.3	0.64	194,688
2005					
Total	776,943	392,314	50.5	0.44	384,629
Male-Male	413,095	214,477	51.9	0.69	198,618
Female-Female	363,848	177,837	48.9	0.70	186,011

Source: American Community Survey, 2005-2008.

Table 2. Unweighted Counts of Same-sex Unmarried Couples: 2007 and 2008

Couple type and sex of householder	2007	2008	Difference 2007 - 2008
Total	12,784	9,145	-3,639
Male	6,670	4,252	-2,418
Female	6,114	4,893	-1,221
Reported Spouses	6,163	2,544	-3,619
Male	3,405	1,017	-2,388
Female	2,758	1,527	-1,231
Unmarried Partner	6,621	6,601	-20
Male	3,265	3,235	-30
Female	3,356	3,366	10

Table 3. Potential Components of Error to Reports of Same-sex Spouse Households: ACS 2007
 (Numbers refer to numbers of interviewed reported same-sex spouse households)

Category	Number	Percent
Total same-sex spouse households in 2007	6,163	100
Reporting as spouse possibly due to data collection, capture and editing rules:	1,291	21.0
Assignment/allocation editing rules	477	7.7
Multiple relationship marks	498	8.1
Multiple gender marks	316	5.1
Remaining reported as spouse:	4,872	79.1
Intentionally reported as spouses	nd	nd
Reported as spouses in error due to:	nd	nd
Formatting of questionnaire	nd	nd
Reordering of questions	nd	nd
Change in instructions	nd	nd
Change in relationship categories	nd	nd
Temporary suspension of FEFU	nd	nd
All other unobservable changes	nd	nd

nd-not determinable.

Table 4. Distribution of Weighted Responses of Same-Sex Households by Form Type: ACS 2006 to 2008

Type of ACS form and reported relationship			
	2006	2007	2008
Total, all forms	779,867	753,618	564,651
CATI/CAPI	198,503	181,764	155,335
Unmarried partners	117,276	118,130	112,370
Reported spouses	81,227	63,634	42,965
Percent reported spouses	40.9	35.0	27.7
Standard Errors	1.35	1.29	1.56
Mailout/Mailback	581,364	571,854	409,316
Unmarried partners	276,839	294,640	302,421
Reported spouses	304,525	277,214	106,895
Percent reported spouses	52.4	48.5	26.1
Standard Errors	0.47	0.45	0.53

Source: ACS internal data files.

Note: 2008 data are slightly different from published estimates due to using a later version of the file.

Table 5. Unweighted Responses from Mailout/Mailback and CATI/CAPI Forms: ACS 2006 to 2008

Mode and response categories	2006	2007			2008
		Jan-May	Jun-Sep	Oct-Dec	
CATI/CAPI	1,921	911	588	200	1,487
Unmarried partners	1,176	616	398	137	1,093
Reported spouses	745	295	190	63	394
Percent reported spouses	38.8	32.4	32.3	31.5	26.5
Mailout/Mailback	10,953	4,799	3,190	2,129	7,164
Unmarried partners	5,077	2,277	1,692	1,151	5,178
Reported spouses	5,876	2,522	1,498	978	1,986
Percent reported spouses	53.6	52.6	47.0	45.9	27.7

Universe: Unedited and unweighted data after keying. Households are formed by selecting households where there is a reported same-sex householder and spouse or householder and unmarried partner and where both have an age 15 years and over and there is only one spouse or one partner in the household.

Data for each year include some respondents in November and December of the prior year who mailed in forms late and not were processed until the stated year. The prior year forms were counted as being coded in January.

Table 6. Coding of First Names of Spouses in Same-Sex Spouse Households:
October 2007 and October 2008 Panels of the ACS

Guess of Sex of Spouses	October 2007		October 2008	
	Number	Percent	Number	Percent
Total cases	573	100.0	310	100.0
Coder 1				
Same sex	195	34.0	161	51.9
Opposite sex	324	56.5	120	38.7
Not sure	54	9.4	29	9.4
Coder 2				
Same sex	184	32.1	132	42.6
Opposite sex	327	57.1	116	37.4
Not sure	62	10.8	62	20.0
Coder 3				
Same sex	184	32.1	147	47.4
Opposite sex	353	61.6	147	47.4
Not sure	36	6.3	16	5.2

Table 7. Unmarried Same-sex Couples: 2007 and 2008 American Community Survey
(Percent distribution. Includes both couples reported as spouses and as unmarried partners)

Household Characteristics	2007		2008		Difference	
	Percent		Percent			
	Percent	Std Error	Percent	Std Error		
All Respondents (number)	753,618	7,945	564,743	3,586	-188,875	
Age of Householder						
15 to 24 years	3.3	0.20	4.0	0.25	0.7	*
25 to 34 years	15.9	0.42	15.5	0.47	-0.4	
35 to 44 years	27.3	0.48	26.6	0.56	-0.7	
45 to 54 years	25.5	0.44	27.7	0.54	2.2	*
55 to 64 years	16.7	0.36	14.6	0.40	-2.1	*
65 years and over	11.3	0.29	11.6	0.35	0.3	
Average age of householder (years)	47.0	0.14	47.0	0.17	0.0	
Average age of spouse/partner (years)	45.2	0.14	45.3	0.17	0.1	
Race of householder						
White	84.5	0.41	86.3	0.45	1.8	*
Black or African American	5.9	0.27	6.1	0.32	0.2	
American Indian or Alaska Native	0.8	0.10	0.6	0.09	-0.2	
Asian	2.9	0.17	2.4	0.21	-0.4	
Native Hawaiian or Pacific Islander	0.1	0.03	--	0.03	-0.1	
Some Other Race	4.3	0.25	2.7	0.22	-1.7	*
Two or more races	1.5	0.13	1.9	0.16	0.3	*
Percent of couples interracial	10.5	0.32	11.2	0.40	0.7	
Hispanic Origin of householder						
Hispanic or Latino origin (of any race)	10.2	0.38	10.0	0.40	-0.2	
White alone, not Hispanic or Latino	79.2	0.46	79.6	0.53	0.4	
Educational Attainment						
Householder has at least a Bachelor's degree	45.7	0.51	47.6	0.61	2.0	*
Both partners with at least a Bachelor's degree	28.4	0.46	30.6	0.56	2.2	*
Employment Status ¹						
Householder employed	76.5	0.43	77.9	0.50	1.4	*
Both partners employed	59.8	0.51	63.5	0.58	3.7	*
Children in the Household ²	25.4	0.47	20.5	0.53	-5.0	*
Own Children in the Household	23.2	0.45	17.5	0.50	-5.6	*
Household income						
Less than \$35,000	15.1	0.39	15.0	0.44	0.0	
\$35,000 to \$49,999	10.9	0.33	10.8	0.39	-0.1	
\$50,000 to \$74,999	20.8	0.43	18.5	0.48	-2.3	*
\$75,000 to \$99,999	16.2	0.38	15.7	0.44	0.0	
\$100,000 or more	37.1	0.49	40.0	0.59	2.9	*
Average Household Income (dollars)	\$103,174	\$1,061	\$107,277	1,307	\$4,103	*
Home Tenure						
Own	76.5	0.48	72.8	0.58	-3.7	*
Rent	23.5	0.48	27.2	0.58	3.7	*

¹Employed or in the Armed forces. ² Includes own children and nonrelatives of the householder under 18 years.

Source: Unpublished tabulations from the American Community Survey.

Standard errors were derived using the Taylor Expansion method.

-- is equivalent or rounds to zero

* indicates a significant difference between 2007 and 2008

Table 8. Couples Reported as Same-sex Spouses: American Community Survey 2007 and 2008
(Percent distribution)

Household Characteristics	2007		2008		Difference	2007		2008		Difference
	Male-Male		Male-Male			Female-Female		Female-Female		
	Percent		Percent			Percent		Percent		
	Percent	Std Error	Percent	Std Error		Percent	Std Error	Percent	Std Error	
All Respondents (number)	190,004	3,926	65,764	1,435	-124,240 *	150,844	3,308	84,192	1,313	-66,652 *
Age of householder										
15 to 24 years	1.7	0.30	2.1	0.54	0.4	2.1	0.32	2.3	0.43	0.2
25 to 34 years	12.5	0.74	13.1	1.38	0.6	14.0	0.80	10.5	0.97	-3.5 *
35 to 44 years	19.0	0.85	24.4	1.76	5.4 *	23.2	0.96	18.2	1.28	-5.0 *
45 to 54 years	22.7	0.82	23.4	1.62	0.6	23.6	0.93	21.6	1.27	-2.0
55 to 64 years	23.1	0.83	15.5	1.24	-7.6 *	20.7	0.85	15.7	1.06	-5.0 *
65 years and over	21.0	0.75	21.5	1.47	0.6	16.5	0.76	31.7	1.31	15.1 *
Average age of householder (years)	52.2	0.31	50.9	0.60	-1.3 *	49.8	0.32	55.3	0.52	5.5 *
Average age of spouse/partner (years)	50.0	0.31	49.2	0.63	-0.8	48.1	0.33	53.4	0.54	5.3 *
Race of householder										
White	81.1	0.87	80.3	1.61	-0.8	84.4	0.83	82.4	1.16	-2.0
Black or African American	7.4	0.60	8.4	1.18	0.9	7.0	0.58	7.9	0.79	0.9
American Indian or Alaska Native	0.7	0.71	0.5	0.28	-0.3	0.4	0.16	0.6	0.18	0.2
Asian	4.0	0.39	4.8	0.89	0.7	3.7	0.42	3.8	0.63	0.1
Native Hawaiian or Pacific Islander	0.1	0.07	--	0.04	--	0.1	0.40	0.2	0.20	0.1
Some Other Race	5.4	0.58	4.0	0.78	-1.3	3.0	0.42	3.7	0.60	0.6
Two or more races	1.1	0.21	2.0	0.47	0.9 *	1.3	0.25	1.5	0.32	0.1
Percent of couples interracial	6.6	0.53	8.5	1.00	1.9 *	5.4	0.49	6.0	0.69	0.6
Hispanic Origin of householder										
Hispanic or Latino origin (of any race)	11.2	0.76	15.5	1.55	4.3 *	8.6	0.69	12.0	1.06	3.4 *
White alone, not Hispanic or Latino	75.6	0.95	69.5	1.89	-6.1 *	79.3	0.94	74.6	1.35	-4.7 *
Educational Attainment										
Householder has at least a Bachelor's degree	36.2	0.95	33.4	1.75	-2.8	37.8	1.05	33.8	1.42	-4.0 *
Both partners with at least a Bachelor's degree	20.9	0.78	22.0	1.52	1.1	24.0	0.92	21.5	1.26	-2.5
Employment Status ¹										
Householder employed	68.3	0.91	67.8	1.77	-0.5	69.8	0.99	60.8	1.44	-9.1 *
Both partners employed	46.8	1.01	51.3	1.91	4.5 *	51.9	1.09	41.0	1.49	-10.9 *
Children in the Household ²	32.4	0.98	33.9	1.90	1.5	38.6	1.08	27.9	1.41	-10.7 *
Own Children in the Household	31.8	0.98	32.0	1.88	0.2	37.5	1.07	26.8	1.40	-10.7 *
Household income										
Less than \$35,000	18.1	0.83	17.3	1.45	-0.8	19.0	0.90	24.4	1.28	5.3 *
\$35,000 to \$49,999	13.2	0.69	13.8	1.40	0.5	11.3	0.68	15.5	1.09	4.2 *
\$50,000 to \$74,999	20.4	0.78	18.1	1.47	-2.3	21.5	0.90	20.4	1.23	-1.1
\$75,000 to \$99,999	16.4	0.75	15.7	1.44	-0.7	16.4	0.82	12.7	0.98	-3.7 *
\$100,000 or more	31.8	0.92	35.1	1.78	3.3 *	31.7	1.00	27.0	1.32	-4.7 *
Average Household Income (dollars)	\$96,092	\$2,041	\$98,730	\$3,373	\$2,638	\$93,044	\$2,008	\$85,956	\$2,728	-\$7,088 *
Home Tenure										
Own	83.6	0.85	74.6	1.84	-9.0 *	83.1	0.92	79.2	1.34	-4.0 *
Rent	16.4	0.85	25.4	1.84	9.0 *	16.9	0.92	20.8	1.34	4.0 *

¹Employed or in the Armed forces. ² Includes own children and nonrelatives of the householder under 18 years.

Source: Unpublished tabulations from the American Community Survey.

Standard errors were derived using the Taylor Expansion method.

-- is equivalent or rounds to zero

* indicates a significant difference between 2007 and 2008

Table 9. Couples Reported as Same-sex Unmarried Partners: American Community Survey 2007 and 2008
(Percent distribution)

Household Characteristics	2007		2008		Difference	2007		2008		Difference
	Male-Male		Male-Male			Female-Female		Female-Female		
	Percent		Percent			Percent		Percent		
	Percent	Std Error	Percent	Std Error		Percent	Std Error	Percent	Std Error	
All Respondents (number)	205,568	3,800	204,836	2,076	-732	207,202	4,489	209,951	2,164	2,749
Age of Householder										
15 to 24 years	3.6	0.42	3.9	0.42	0.3	5.4	0.46	5.4	0.47	0.0
25 to 34 years	15.6	0.87	14.4	0.76	-1.2	20.5	0.88	19.2	0.85	-1.3
35 to 44 years	35.1	1.01	29.1	0.94	-6.0	30.0	0.93	28.1	0.92	-1.9
45 to 54 years	28.3	0.88	30.9	0.93	2.6	26.7	0.87	28.4	0.88	1.7
55 to 64 years	12.0	0.60	14.8	0.66	2.9	12.8	0.61	13.7	0.64	0.9
65 years and over	5.5	0.40	6.8	0.47	1.4	4.5	0.38	5.2	0.38	0.6
Average age of householder (years)	44.2	0.25	45.6	0.24	1.4	43.1	0.24	43.8	0.25	0.7
Average age of spouse/partner (years)	42.1	0.25	43.6	0.25	1.5	41.8	0.25	42.5	0.25	0.7
Race of householder										
White	86.9	0.77	89.9	0.67	2.9	85.3	0.76	86.3	0.74	1.0
Black or African American	3.5	0.44	3.2	0.39	-0.3	6.0	0.52	7.3	0.58	1.4
American Indian or Alaska Native	0.7	0.17	0.5	0.12	-0.2	1.2	0.25	0.8	0.16	-0.4
Asian	2.2	0.32	2.1	0.32	0.0	1.9	0.28	1.4	0.28	-0.5
Native Hawaiian or Pacific Islander	0.0	0.03	--	--	0.0	0.1	0.06	--	0.03	-0.1
Some Other Race	5.2	0.54	2.4	0.37	-2.8	3.5	0.40	2.0	0.31	-1.5
Two or more races	1.5	0.22	1.8	0.28	0.4	2.1	0.30	2.0	0.28	-0.1
Percent of couples interracial	15.1	0.73	14.1	0.71	-1.1	13.3	0.70	11.4	0.68	-2.0
Hispanic Origin of householder										
Hispanic or Latino origin (of any race)	12.5	0.87	9.2	0.65	-3.2	8.2	0.61	8.4	0.58	0.1
White alone, not Hispanic or Latino	80.2	0.97	83.6	0.82	3.4	81.5	0.84	80.9	0.84	-0.6
Educational Attainment										
Householder has at least a Bachelor's degree	54.9	1.05	54.9	1.02	0.0	50.8	1.01	50.5	1.01	-0.3
Both partners with at least a Bachelor's degree	31.5	0.94	33.7	0.95	2.2	35.2	0.94	33.9	0.93	-1.4
Employment Status ¹										
Householder employed	82.8	0.77	83.7	0.74	0.9	82.8	0.76	82.3	0.77	-0.5
Both partners employed	69.3	0.95	70.4	0.91	1.1	67.9	0.94	69.5	0.92	1.6
Children in the Household ²	10.1	0.71	7.4	0.56	-2.7	24.6	0.90	25.9	0.93	1.4
Own Children in the Household	8.3	0.66	5.6	0.50	-2.7	19.5	0.86	20.9	0.86	1.4
Household income										
Less than \$35,000	10.7	0.67	10.3	0.63	-0.4	13.7	0.71	15.2	0.75	1.5
\$35,000 to \$49,999	8.9	0.62	8.4	0.59	-0.5	10.3	0.62	10.2	0.63	-0.1
\$50,000 to \$74,999	19.2	0.90	16.1	0.76	-3.0	22.1	0.85	20.1	0.83	-2.0
\$75,000 to \$99,999	15.0	0.70	15.5	0.72	0.5	17.0	0.77	17.2	0.75	0.2
\$100,000 or more	46.2	1.03	49.7	1.01	3.5	36.9	0.95	37.2	0.95	0.4
Average Household Income (dollars)	\$124,054	\$2,670	\$129,607	\$2,690	\$5,553	\$96,325	\$1,436	\$96,719	\$1,672	\$394
Home Tenure										
Own	71.2	0.99	71.7	0.97	0.5	70.3	0.98	70.8	0.95	0.5
Rent	28.8	0.99	28.3	0.97	-0.5	29.7	0.98	29.2	0.95	-0.5

¹Employed or in the Armed forces. ² Includes own children and nonrelatives of the householder under 18 years.

Source: Unpublished tabulations from the American Community Survey.

Standard errors were derived using the Taylor Expansion method.

-- is equivalent or rounds to zero

* indicates a significant difference between 2007 and 2008

Appendix 1. Same-Sex Couple Households: American Community Survey 2007-2008

Area	2007 ACS			2008 ACS			Significance
	Total same-sex households	Percent of all same-sex households from reports as spouses	Std Err	Total same-sex households	Percent of all same-sex households from reports as spouses	Std Err	
	Number	Percent		Number	Percent		
United States	753,618	45.2	0.50	564,743	26.6	0.55	*
Alabama	7,589	55.8	5.25	4,850	38.3	6.72	*
Alaska	1,462	39.2	13.34	854	32.4	12.90	
Arizona	17,827	41.3	3.75	12,960	18.4	3.33	*
Arkansas	6,228	58.7	6.70	3,176	36.5	7.60	*
California	104,723	34.2	1.35	84,397	27.7	1.48	*
Colorado	15,272	38.5	3.59	11,635	19.8	3.96	*
Connecticut	9,546	49.5	3.89	6,865	34.6	4.83	*
Delaware	2,598	37.8	7.32	2,003	24.7	8.90	
District of Columbia	4,320	14.2	5.74	3,529	6.4	3.05	
Florida	53,648	40.5	1.72	39,641	23.1	1.97	*
Georgia	24,266	41.2	3.30	18,181	23.2	3.31	*
Hawaii	2,353	31.6	8.13	2,472	42.9	11.21	
Idaho	2,657	59.4	6.85	1,840	26.3	7.06	*
Illinois	30,524	44.9	2.53	22,141	29.0	3.00	*
Indiana	14,093	55.6	3.38	10,058	26.6	4.18	*
Iowa	6,124	56.8	5.13	4,817	35.6	6.44	*
Kansas	5,038	59.9	5.66	3,348	19.3	4.69	*
Kentucky	8,003	54.8	4.58	6,581	29.3	5.04	*
Louisiana	8,059	57.1	4.44	5,143	33.9	5.71	*
Maine	4,350	39.5	6.51	4,461	17.2	4.07	*
Maryland	15,640	47.7	3.66	9,361	19.1	3.49	*
Massachusetts	23,023	63.5	2.68	19,550	45.8	3.14	*
Michigan	23,072	50.2	2.20	13,774	29.3	2.98	*
Minnesota	13,084	51.6	3.16	8,218	21.1	2.78	*
Mississippi	4,407	75.9	5.78	2,360	38.1	7.94	*
Missouri	13,650	51.6	3.72	9,384	20.7	4.14	*
Montana	1,831	57.8	8.92	1,366	24.7	9.65	*
Nebraska	3,784	57.8	5.97	2,087	23.5	6.37	*
Nevada	7,398	53.1	5.64	4,820	36.5	6.71	*
New Hampshire	3,643	36.9	7.32	2,192	17.7	8.39	*
New Jersey	20,567	53.1	3.35	15,443	34.8	3.12	*
New Mexico	6,059	31.5	5.67	4,157	21.9	5.07	
New York	54,144	36.0	1.51	45,761	19.6	1.76	*
North Carolina	19,765	54.3	3.16	15,315	27.1	3.21	*
North Dakota	807	94.2	5.58	649	27.4	15.25	*
Ohio	24,973	49.4	2.27	18,854	23.9	2.61	*
Oklahoma	7,987	53.6	5.29	5,189	24.4	4.76	*
Oregon	13,227	36.4	3.52	10,704	21.1	4.44	*
Pennsylvania	29,792	49.9	2.32	20,656	31.4	2.72	*
Rhode Island	3,222	49.0	8.14	2,414	27.1	8.13	*
South Carolina	9,655	53.5	5.11	7,050	36.6	5.66	*
South Dakota	1,168	65.2	10.32	777	57.7	17.12	
Tennessee	13,827	48.8	3.99	10,546	23.5	3.94	*
Texas	48,179	45.5	2.16	37,557	26.8	2.18	*
Utah	4,549	47.1	6.31	3,861	51.4	7.89	
Vermont	1,905	37.6	9.08	1,524	44.5	8.32	
Virginia	18,144	49.8	3.31	12,639	25.2	4.08	*
Washington	21,307	39.1	2.98	17,756	16.2	2.14	*
West Virginia	3,795	65.0	7.34	1,902	40.2	9.83	*
Wisconsin	11,186	46.1	3.77	9,166	22.4	3.38	*
Wyoming	1,148	69.4	11.94	759	62.7	20.47	

List of Residents

READ THESE INSTRUCTIONS FIRST

This sample of info information about the people who are living or staying here for more than 2 months.

On the List of Residents -

- Include every one living or staying here for more than 2 months. It is a Person 1 even if one of the people living here who rents or owns the house or apartment. It includes household members or household members of the household who are staying here for more than 2 months.
- Include anyone staying here who does not have a postal box to stay, such as those who are for 2 months or less.
- Do not include anyone who is living in a temporary shelter or temporary shelter for 2 months, such as a college student living here.
- If you are starting here for residential 2 months, do not list any names in the List of Residents. Complete only pages 4, 5 and 6 and return the form.
- If you are not sure where to list, call 1-800-645-7231.
- If there are more than five people living or staying here, print their names in the spaces for Person 6 through Person 12. We may call you for more information about this.
- If you complete a List of Residents, please the question asked at the top of pages 2 and 3 for the first five people in the list.

<p>Person 1</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p>1 What is this person's sex?</p> <p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	<p>2 What is this person's age and what is this person's date of birth?</p> <p>Print numbers in boxes.</p> <p>Age (In years) _____</p> <p>Month Day Year of birth _____</p>	<p>3 How is this person related to Person 1?</p> <p><input type="checkbox"/> Resident</p> <p>(Person 1 is the person living or staying here in whose home this house or apartment is owned, being bought, or rented. If there is no such person, start with the name of any adult living or staying here.)</p>
<p>Person 2</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	<p>Age (In years) _____</p> <p>Month Day Year of birth _____</p>	<p>Relationship of Person 2 to Person 1</p> <p><input type="checkbox"/> Husband or wife <input type="checkbox"/> Son or daughter <input type="checkbox"/> Brother or sister <input type="checkbox"/> Father or mother <input type="checkbox"/> Grandchild <input type="checkbox"/> Niece <input type="checkbox"/> Other relative</p> <p><input type="checkbox"/> Roomer, boarder <input type="checkbox"/> Tenant in room with <input type="checkbox"/> Boarded partner <input type="checkbox"/> Live-in <input type="checkbox"/> Other nonrelative</p>
<p>Person 3</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	<p>Age (In years) _____</p> <p>Month Day Year of birth _____</p>	<p>Relationship of Person 3 to Person 1</p> <p><input type="checkbox"/> Husband or wife <input type="checkbox"/> Son or daughter <input type="checkbox"/> Brother or sister <input type="checkbox"/> Father or mother <input type="checkbox"/> Grandchild <input type="checkbox"/> Niece <input type="checkbox"/> Other relative</p> <p><input type="checkbox"/> Roomer, boarder <input type="checkbox"/> Tenant in room with <input type="checkbox"/> Boarded partner <input type="checkbox"/> Live-in <input type="checkbox"/> Other nonrelative</p>
<p>Person 4</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	<p>Age (In years) _____</p> <p>Month Day Year of birth _____</p>	<p>Relationship of Person 4 to Person 1</p> <p><input type="checkbox"/> Husband or wife <input type="checkbox"/> Son or daughter <input type="checkbox"/> Brother or sister <input type="checkbox"/> Father or mother <input type="checkbox"/> Grandchild <input type="checkbox"/> Niece <input type="checkbox"/> Other relative</p> <p><input type="checkbox"/> Roomer, boarder <input type="checkbox"/> Tenant in room with <input type="checkbox"/> Boarded partner <input type="checkbox"/> Live-in <input type="checkbox"/> Other nonrelative</p>
<p>Person 5</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p><input type="checkbox"/> Male <input type="checkbox"/> Female</p>	<p>Age (In years) _____</p> <p>Month Day Year of birth _____</p>	<p>Relationship of Person 5 to Person 1</p> <p><input type="checkbox"/> Husband or wife <input type="checkbox"/> Son or daughter <input type="checkbox"/> Brother or sister <input type="checkbox"/> Father or mother <input type="checkbox"/> Grandchild <input type="checkbox"/> Niece <input type="checkbox"/> Other relative</p> <p><input type="checkbox"/> Roomer, boarder <input type="checkbox"/> Tenant in room with <input type="checkbox"/> Boarded partner <input type="checkbox"/> Live-in <input type="checkbox"/> Other nonrelative</p>
<p>Person 6</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>			
<p>Person 7</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>			
<p>Person 8</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>			

4 What is this person's marital status?

Now married
 Widowed
 Divorced
 Separated
 Never married

5 In this person's Spanish/Spanish/Latino? Mark (X) for "Yes" for if not Spanish/Spanish/Latino

No, not Spanish/Spanish/Latino
 Yes, Spanish, Mexican Am., Chinese
 Yes, Puerto Rican
 Yes, Cuban
 Yes, other Spanish/Spanish/Latino - Print group _____

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

White
 Black or African American
 American Indian or Alaska Native - Print name, tribal affiliation or principal tribe _____

Asian Indian
 Chinese
 Filipino
 Japanese
 Korean
 Vietnamese
 Other Asian - Print race _____

English or American
 Guamanian or Chamorro
 Samoan
 Other Pacific Islander - Print race below ✓
 Some other race - Print race below ✓

NOTE: Please answer BOTH Questions 5 and 6.

<p>Person 9</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p>Person 10</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p>Person 11</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>	<p>Person 12</p> <p>Last Name (Please print) _____</p> <p>First Name _____ SS _____</p>
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Figure 1. ACS 2007 Mail Form (Grid Layout)

12/06/05

Person 1

(Person 1 is the person living or staying here in an unoccupied block or apartment building, being bought, or rented. If there is no such person, start with the name of an adult living or staying here.)

1 What is Person 1's name?
Last Name (Please print) _____ First Name _____ MI _____

2 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
 Family friend
 Son-in-law or daughter-in-law
 Other relative
 Sonner or boarder
 Housemate or roommate
 Unmarried partner
 Friend
 Other nonrelative

3 What is Person 1's sex? Mark (X) ONE box.
 Male Female

4 What is Person 1's age and what is Person 1's date of birth?
Please report dates in age if when the child is less than 1 year old.
 Age (in years) _____ Months _____ Day _____ Year of birth _____
Print last four of Social Security number if Social Security number is known.

5 Is Person 1 of Hispanic, Latino, or Spanish origin?
 No, not of Hispanic, Latino, or Spanish origin
 Yes, Mexican, Mexican Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, another Hispanic, Latino, or Spanish origin - Print name, for example, Argentinian, Colombian, Dominican, Salvadoran, Spanish, and so on.

6 What is Person 1's race? Mark (X) one or more boxes.
 White
 Black, African Am., or Negro
 American Indian or Alaska Native - Print name if identified or principal tribe
 Asian Indian Japanese Native Hawaiian
 Chinese Korean Guamanian or Chamorro
 Filipino Vietnamese Samoan
 Other Asian - Print race, for example, Filipino, Thai, Pakistani, Cambodian, and so on.
 Other Pacific Islander - Print race, for example, Fijian, Tongan, and so on.
 Some other race - Print race.

Person 2

1 What is Person 2's name?
Last Name (Please print) _____ First Name _____ MI _____

2 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
 Family friend
 Son-in-law or daughter-in-law
 Other relative
 Sonner or boarder
 Housemate or roommate
 Unmarried partner
 Friend
 Other nonrelative

3 What is Person 2's sex? Mark (X) ONE box.
 Male Female

4 What is Person 2's age and what is Person 2's date of birth?
Please report dates in age if when the child is less than 1 year old.
 Age (in years) _____ Months _____ Day _____ Year of birth _____
Print last four of Social Security number if Social Security number is known.

5 Is Person 2 of Hispanic, Latino, or Spanish origin?
 No, not of Hispanic, Latino, or Spanish origin
 Yes, Mexican, Mexican Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, another Hispanic, Latino, or Spanish origin - Print name, for example, Argentinian, Colombian, Dominican, Salvadoran, Spanish, and so on.

6 What is Person 2's race? Mark (X) one or more boxes.
 White
 Black, African Am., or Negro
 American Indian or Alaska Native - Print name if identified or principal tribe
 Asian Indian Japanese Native Hawaiian
 Chinese Korean Guamanian or Chamorro
 Filipino Vietnamese Samoan
 Other Asian - Print race, for example, Filipino, Thai, Pakistani, Cambodian, and so on.
 Other Pacific Islander - Print race, for example, Fijian, Tongan, and so on.
 Some other race - Print race.

2

ACS-12008(R), Page 2, Back (Black) ACS-12008(R), Page 2, Green Postcard 254 (2) and 60%

12/06/05

Person 2

1 What is Person 2's name?
Last Name (Please print) _____ First Name _____ MI _____

2 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
 Family friend
 Son-in-law or daughter-in-law
 Other relative
 Sonner or boarder
 Housemate or roommate
 Unmarried partner
 Friend
 Other nonrelative

3 What is Person 2's sex? Mark (X) ONE box.
 Male Female

4 What is Person 2's age and what is Person 2's date of birth?
Please report dates in age if when the child is less than 1 year old.
 Age (in years) _____ Months _____ Day _____ Year of birth _____
Print last four of Social Security number if Social Security number is known.

5 Is Person 2 of Hispanic, Latino, or Spanish origin?
 No, not of Hispanic, Latino, or Spanish origin
 Yes, Mexican, Mexican Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, another Hispanic, Latino, or Spanish origin - Print name, for example, Argentinian, Colombian, Dominican, Salvadoran, Spanish, and so on.

6 What is Person 2's race? Mark (X) one or more boxes.
 White
 Black, African Am., or Negro
 American Indian or Alaska Native - Print name if identified or principal tribe
 Asian Indian Japanese Native Hawaiian
 Chinese Korean Guamanian or Chamorro
 Filipino Vietnamese Samoan
 Other Asian - Print race, for example, Filipino, Thai, Pakistani, Cambodian, and so on.
 Other Pacific Islander - Print race, for example, Fijian, Tongan, and so on.
 Some other race - Print race.

Person 4

1 What is Person 4's name?
Last Name (Please print) _____ First Name _____ MI _____

2 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
 Family friend
 Son-in-law or daughter-in-law
 Other relative
 Sonner or boarder
 Housemate or roommate
 Unmarried partner
 Friend
 Other nonrelative

3 What is Person 4's sex? Mark (X) ONE box.
 Male Female

4 What is Person 4's age and what is Person 4's date of birth?
Please report dates in age if when the child is less than 1 year old.
 Age (in years) _____ Months _____ Day _____ Year of birth _____
Print last four of Social Security number if Social Security number is known.

5 Is Person 4 of Hispanic, Latino, or Spanish origin?
 No, not of Hispanic, Latino, or Spanish origin
 Yes, Mexican, Mexican Am., Chicano
 Yes, Puerto Rican
 Yes, Cuban
 Yes, another Hispanic, Latino, or Spanish origin - Print name, for example, Argentinian, Colombian, Dominican, Salvadoran, Spanish, and so on.

6 What is Person 4's race? Mark (X) one or more boxes.
 White
 Black, African Am., or Negro
 American Indian or Alaska Native - Print name if identified or principal tribe
 Asian Indian Japanese Native Hawaiian
 Chinese Korean Guamanian or Chamorro
 Filipino Vietnamese Samoan
 Other Asian - Print race, for example, Filipino, Thai, Pakistani, Cambodian, and so on.
 Other Pacific Islander - Print race, for example, Fijian, Tongan, and so on.
 Some other race - Print race.

3

ACS-12008(R), Page 3, Back (Black) ACS-12008(R), Page 3, Green Postcard 254 (2) and 60%

Figure 2. ACS 2008 Mail Form (Sequential Layout)

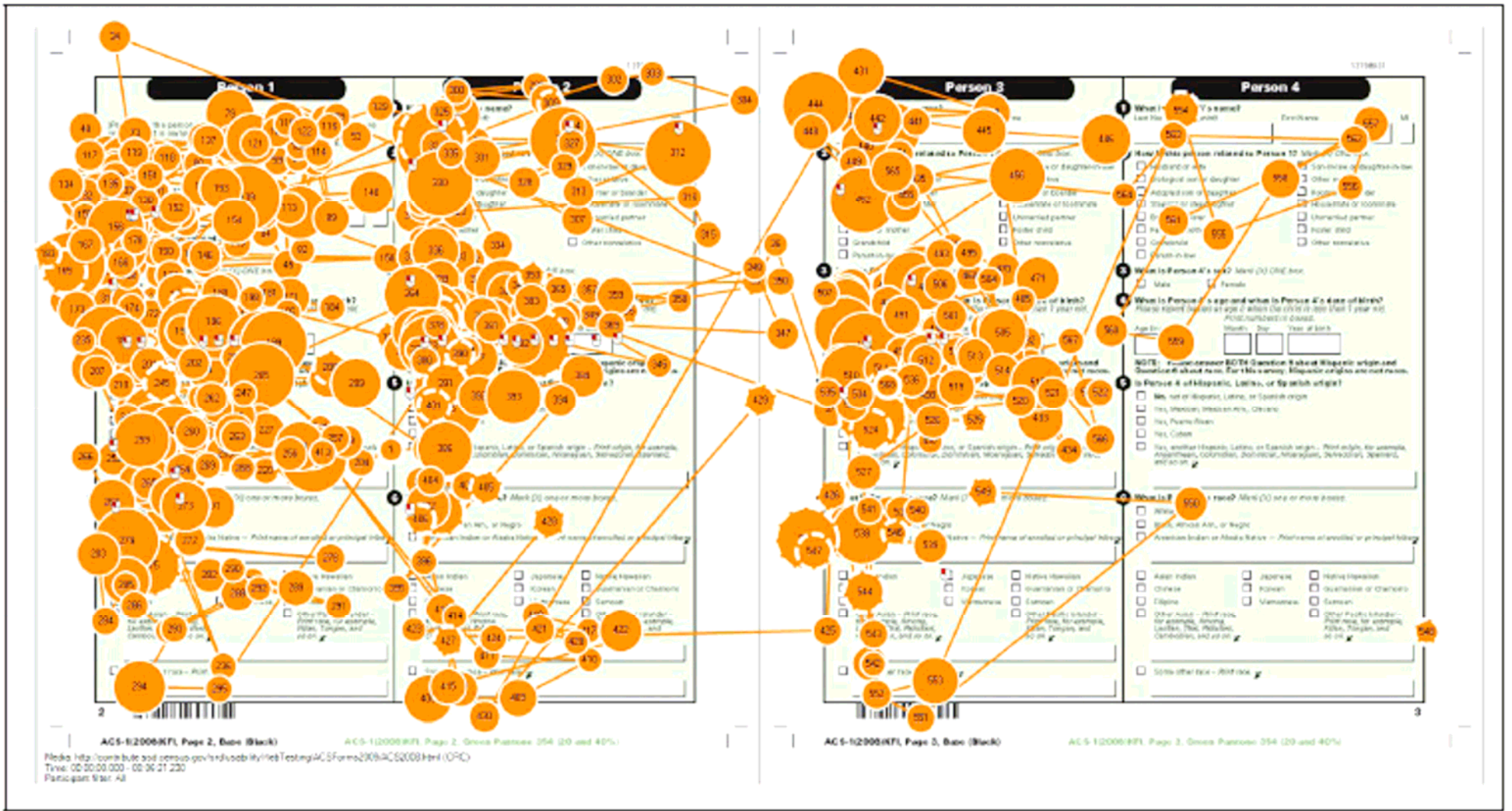


Figure 3. Gaze Plot for 2008 ACS

Figure 4. Percent of Same-Sex Couple Households Reported as Spouses: 2007

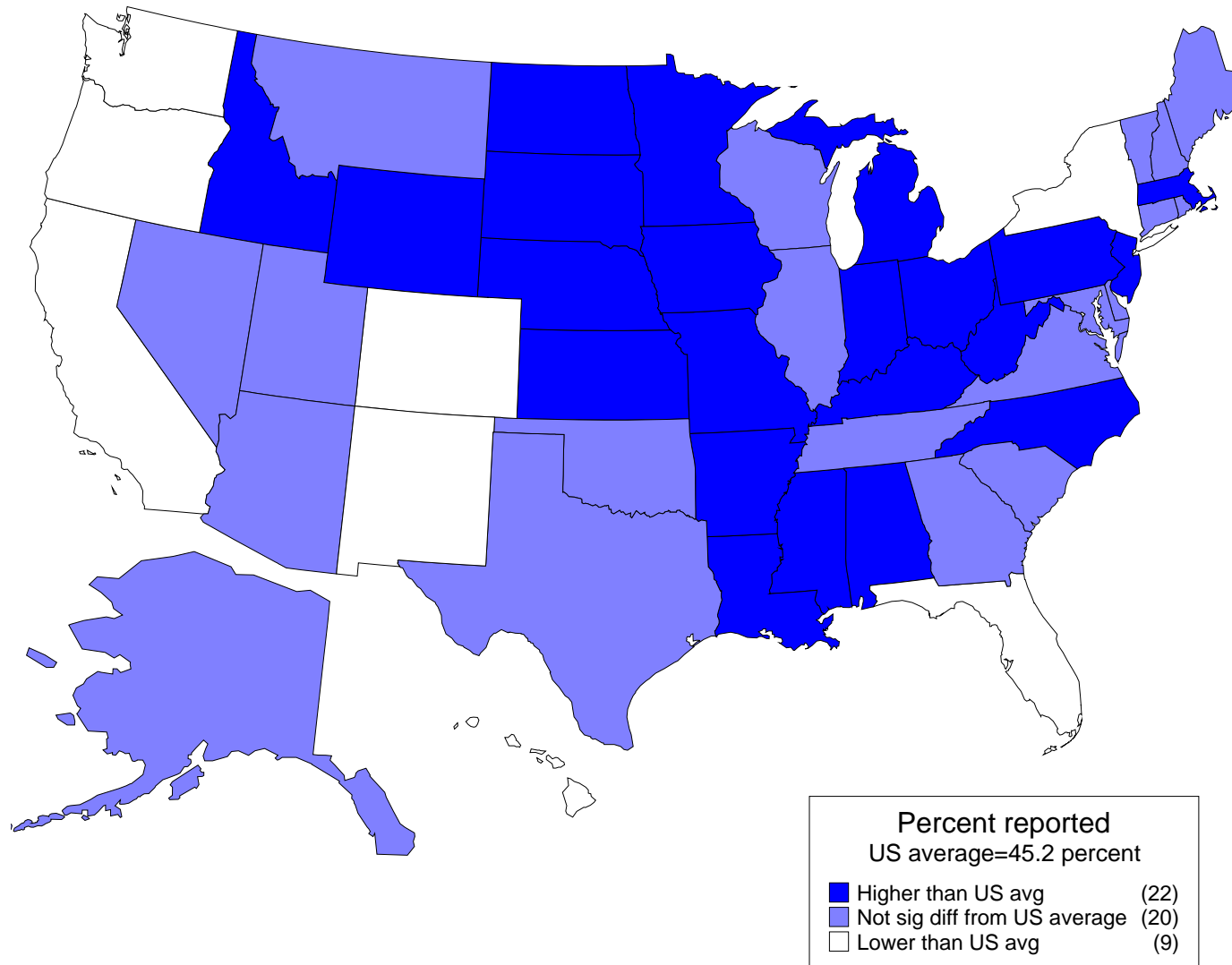


Figure 5. Percent of Same-Sex Couple Households Reported as Spouses: 2008

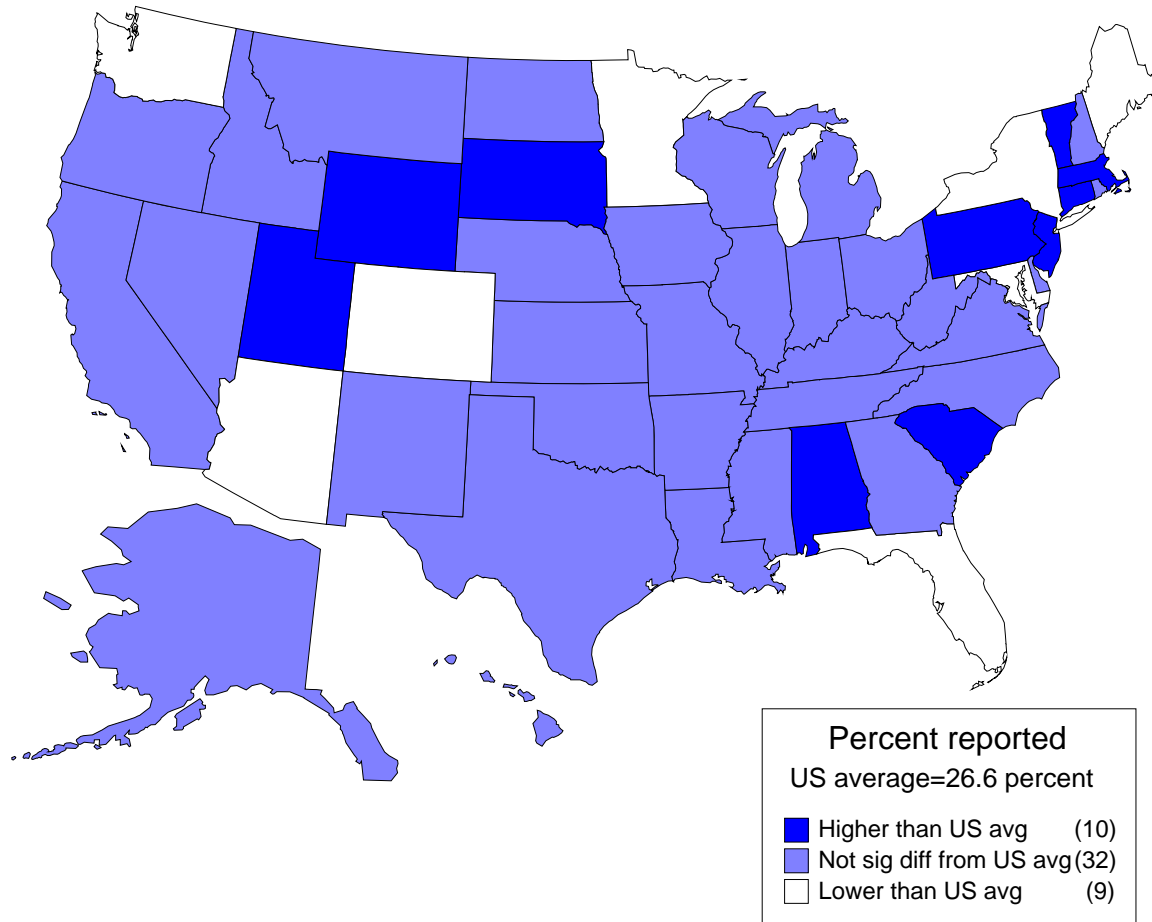


Figure 6. Percent of Households with Mail Forms: 2008

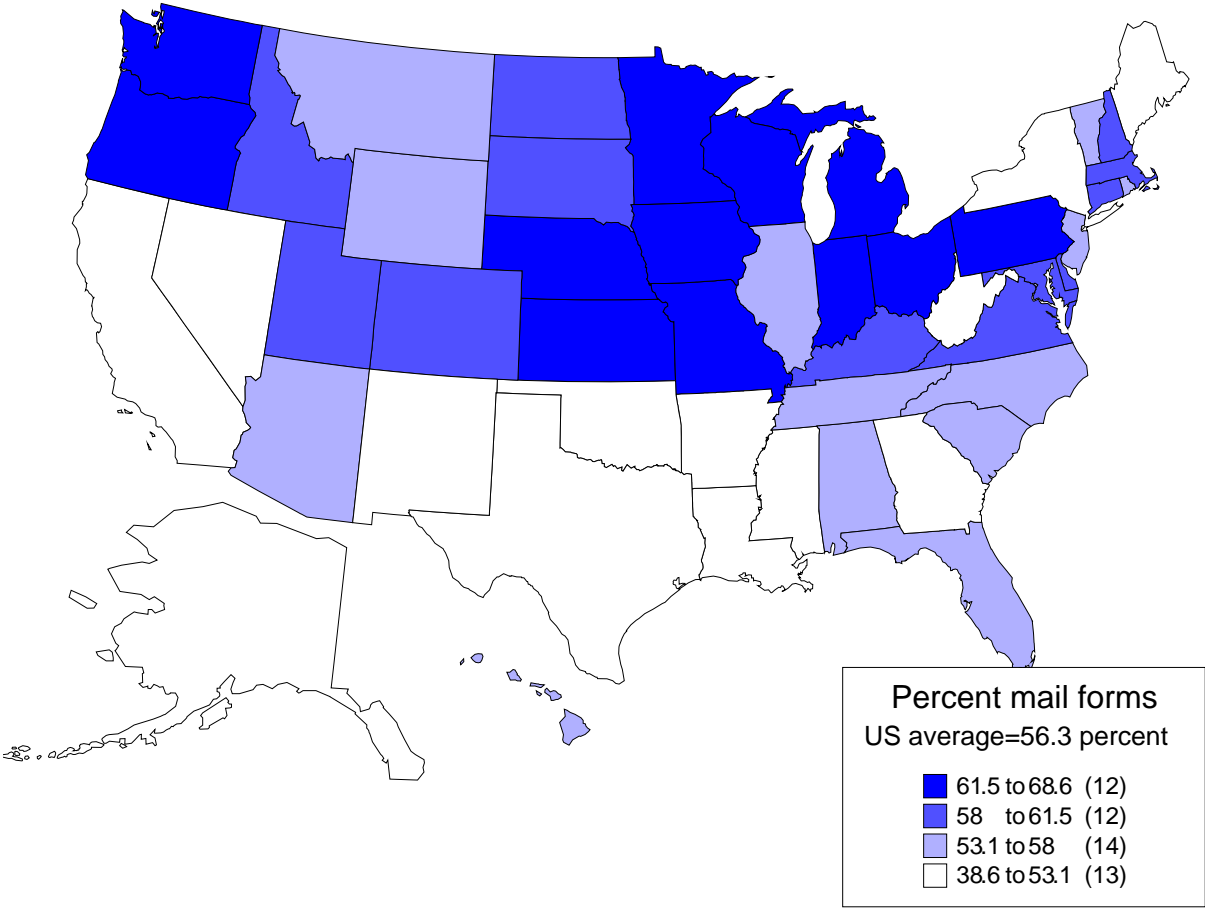


Figure 7. Percentage Point Decline in Same-Sex Couple Households Reported as Spouses: 2007-2008

