Same-Sex Unmarried Partner Couples in Census 2000: How many are Gay and Lesbian?

by

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Abstract

Dramatic increases in the reporting of same-sex unmarried partners, commonly understood to be gay and lesbian couples, emerged as one of the most publicized stories from the release of 2000 United States Decennial Census data. A portion of these "same-sex" couples may in fact be misclassified heterosexual couples. Failure to adjust properly for this problem will lead to biased estimates of demographic features of the same-sex couple population.

1. Introduction

Dramatic increases in the reporting of same-sex unmarried partners, commonly understood to be gay and lesbian couples, emerged as one of the most publicized stories from the release of 2000 United States Decennial Census data.[1] Tabulations of the 100 percent counts of the Census 2000 short forms (SF-1) indicate that there was a large increase in the number of identified same-sex unmarried partner households: 1990 Decennial Census short form data show 145,130 same-sex unmarried partner couples, while similar Census 2000 counts were 594,391 couples.

The promise of a significantly larger sample of same-sex unmarried partners bodes well for research on the demographic and economic aspects of the gay and lesbian population. Given that there is now only limited demographic information about the gay and lesbian population, and given the intense interest in such policy debates as gay civil rights, same-sex marriage, domestic partner benefits, and adoption rights in the United States, the upcoming release of the Census 2000 Public Use Micro Sample (PUMS) is certain to generate much academic work. We argue that researchers must exercise extreme caution in their use of these data, because as many as 30 to 35 percent of these "same-sex" couples may in fact be misclassified heterosexual couples. Failure to adjust properly for this problem will lead to severely biased estimates of demographic features of the same-sex couple population.

Both Gates (2000) and Black, Gates, Sanders, and Taylor (2000) demonstrate the value of using same-sex unmarried partners in the 1990 Census for studying gay and lesbian couples. One concern discussed in these studies is the possibility that some of these couples might in fact be heterosexual. They conclude that such "misclassification" is not particularly severe in the 1990 data. In this paper, we argue that the situation is somewhat different, and likely much worse, in the 2000 data. At issue is the treatment in data coding of apparently same-sex unmarried partner couples in which one of the partners is recorded as a "husband/wife" rather than an "unmarried partner" on their original Census form.

2. Measurement Error as a Central Empirical Issue

To demonstrate why measurement error is likely a major problem in Census 2000, we discuss the differences in the coding schemes the Census Bureau used in 1990 and 2000. There are two ways a

couple could be recorded as a same-sex couple in Census data. The first is that the head of household identifies the "relationship to head of household" (RHH) of a same-sex individual as an "unmarried partner" (UP). In both 1990 and 2000 these couples were included as such in the sub-sample of same-sex couples. The first two lines of Table 1 represent these same-sex couples. A second way a couple could be recorded as a same-sex couple is that a head of household identifies another same-sex individual as a "husband/wife." In 1990, the Census Bureau treated these data as a logical contradiction. In most such cases the sex of the husband/wife was changed and the couple counted as a heterosexual married couple. To better count same-sex unmarried partners, the Census Bureau adopted new coding procedures in 2000 in which the partner who is recorded as a husband/wife has the relationship status changed to unmarried partner, but the sex of each partner remains as recorded. Such a couple is then counted as same-sex couple. Lines 3 and 4 of Table 1 represent these couples.

Another ambiguity for the Census Bureau was how to handle the response of same-sex couples to question about their marital status (MS). The marital status question appeared on both the long and the short form in 1990, but only on the long form in 2000. In 1990, marital status of same-sex unmarried partners was left as recorded so that some same-sex unmarried individuals have MS recorded both as currently married and other than currently married (Lines 1 and 2 of Table 1). Since same-sex marriages are not legal in the US, in 2000 the Census Bureau allocated MS to a category other than married for any person who is recorded as being in a same-sex partnership *and* has a marital status recorded as married.

Because in the 1990 data few householders identified their partners as a same-sex unmarried partner *and* claimed to be currently married, we suspect that most respondents who reported a RHH as husband/wife also selected MS of married, and most respondents that reported a RHH as UP selected MS to be other than currently married.[2] If our supposition proves correct, then in Census 2000 a household in which MS is *allocated* for both the respondent and partner is in almost all cases a household that originally declared the RHH of the partner as a husband/wife (line 3 of Table 1). Similarly, in Census

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[1] A Lexis-Nexis search of articles about Census 2000 counts of same-sex unmarried partners revealed that 92 major American newspapers published stories on this subject in June, July, and August 2001. These include major outlets such as the *New York Times, Washington Post,* and *Los Angeles Times.*

[2] In the PUMS, an allocation flag is recorded if the Census Bureau has allocated a data element. Logical edits, however, are not regarded as allocation and hence are not recorded on PUMS data.

2000 when the MS of a respondent and his partner are *not allocated,* this strongly indicates that the couple originally declared the RHH of the partner as a UP (Line 1 of Table 1).

The major benefit of the change in classification procedures between 1990 and 2000 is the inclusion of gay and lesbian couples who indicate they are married. An unappreciated cost of the change is that this increases the likelihood of misclassification among same-sex couples from heterosexual couple miscoding of a respondent's sex. The problem is, simply, that when such sex reporting errors occur for a heterosexual couple, this household will be included among the sample of "same-sex" couples. Black et al. (2000) examined this misclassification error—the mixing of true gay and lesbian couples with miscoded heterosexual couples—and concludes that the problem was modest in the 1990 data. Misclassification was low in 1990 because the population at risk for being mixed in with same-sex couples—heterosexual unmarried partners (who were not legally married)—was a relatively small population. In Census 2000, *any* heterosexual couple, including married couples, could potentially be mistakenly misclassified as a gay or lesbian couple. Because there are many more heterosexual married couples than heterosexual unmarried partnerships, the impact of sex misreporting or miscoding potentially presents a far more serious problem in Census 2000 than in the 1990 Census. The resulting measurement error seriously distorts demographic inferences (e.g., concerning family income or presence of children in the home) about the gay and lesbian population. Given appropriate assumptions, it is possible to estimate the extent of the misclassification bias and to correct for it. While using Census 2000 to study the gay and lesbian population will undoubtedly be more difficult, done correctly it will be more representative as well.

3. Models for Correcting Measurement Error

Given the likely prevalence of misclassification in Census 2000, we present models that offer guidance for assessing the extent of the measurement error and a method of calculating reliable estimates of characteristics of gay and lesbian couples. The form of measurement error in the same-sex unmarried partner sample amounts to a mixing problem whereby the true sample of gay and lesbian couples is contaminated by miscoded heterosexual couples. Let θ_A be the fraction that is actually gay/lesbian among the sub-population of identified same-sex couples with *allocated* marital status, and let θ_N be the

corresponding fraction for those with *nonallocated* marital status. Then among the sub-population of identified same-sex couples with *allocated* marital status, the remaining proportion $(1-\theta_A)$ is comprised of heterosexual married couples for whom the sex of one member is miscoded. Similarly, among the sub-population of identified same-sex couples with *nonallocated* marital status, $(1-\theta_N)$ is the proportion that are actually heterosexual unmarried couples for whom the sex of one member is miscoded.

Suppose we are interested in learning about a mean demographic or economic characteristic of the households under study (e.g., household income or proportion of households with children present). Any mean observed outcomes for allocated and non-allocated same-sex couples, μ_A and μ_N respectively, can be decomposed as

$$\begin{aligned} \mu_A &= \theta_A \mu_{A,GL} + (1-\theta_A)\mu_{A,H} \\ \mu_N &= \theta_N \mu_{N,GL} + (1-\theta_N)\mu_{N,H} \end{aligned}, \tag{1}$$

where $\mu_{A,GL}$ and $\mu_{N,GL}$ are means for the gay/lesbian households, while $\mu_{A,H}$ and $\mu_{N,H}$ are corresponding means for the heterosexual population. The means (μ_A, μ_N) can easily be estimated. If we assume that those who miscode sex have the same mean as those who do not miscode sex, then $(\mu_{A,H}, \mu_{N,H})$ can be estimated from the observed heterosexual population. While this sample is contaminated by gay and lesbian couples who have mistakenly coded the sex of one member of the couple, the bias is miniscule because of the limited the number of such couples and the very low rate of miscoding sex. Other variables in system (1) cannot be identified because there are two equations and four unknowns $(\mu_{A,GL}, \mu_{N,GL}, \theta_A, \theta_N)$.

Researchers may in practice be tempted to achieve identification by assuming that $\theta_A = \theta_N = 1$, implicitly assuming no measurement error. Of course, the problem with this approach is that the population of heterosexual couples is very large relative to the population of same-sex couples; the unadjusted tabulations of the 2000 Census suggest there are 100 times more opposite-sex couples than same-sex couples. Thus, even a small error rate among the heterosexual population will significantly contaminate the gay and lesbian populations.

In what follows, we use two alternative sets of assumptions to estimate the means of interest. In each case we illustrate the central idea by studying the mean characteristic "presence of children in the household." In our first estimates we suppose that the rate of sex miscoding for heterosexual unmarried partners, θ_N, is the rate estimated in a 1970s Census validation study. We also assume that $\mu_{A,GL} = \mu_{N,GL} \equiv \mu_{GL}$, that is we assume that the presence of children among gay/lesbian households is the same for households with allocated and nonallocated marital status. With these two assumptions, we can estimate the unknown parameters (μ_{GL}, θ_A). In our second estimates we assume instead that the rate of sex miscoding is the same for both married and unmarried heterosexual partners, and rely on this assumption to solve the remaining unknown parameters $(\mu_{A,GL}, \mu_{N,GL})$.

In the first exercise, we assume a rate of sex miscoding only for the opposite-sex, unmarried partners. Because this group is small relative to the number of opposite-sex, married couples, these estimates are relatively insensitive to our assumption about the rate of miscoding of the sex variable. The primary disadvantage of the approach, however, is that the assumption $\mu_{A,GL} = \mu_{N,GL}$ is restrictive. In contrast, the second approach allows flexibility $\mu_{A,GL} \neq \mu_{N,GL}$, but this generality comes at the cost of having increased sensitivity to the assumption we make about the rate of miscoding of the sex variables.

In both approaches we take as a starting point the rate of miscoding of the sex variable. For this we use a US Census Bureau (1975) validation study that indicates that the error rate for sex miscoding is slightly less than 0.002 for each observation. We need to know the error rate not only of miscoding one's own sex, but also miscoding the sex of one's spouse or unmarried partner. Assuming the error rate is the same for miscoding one's own and one's partner's sex, then the error rate of household misidentification based on sex miscoding would be twice the error rate minus the product of the two. Our "best guess" error rate is between 0.003 and 0.004. We selected 0.0035 for our baseline analysis, and explore the sensitivity of results to this assumption.

4. Empirical Evidence from the Census 2000 Supplemental Survey

A. Estimates Assuming $\mu_{A,GL} = \mu_{N,GL} = \mu_{GL}$

The Census 2000 Supplementary Survey (C2SS) was fielded as a demonstration of the feasibility of collecting information typically found on the long form at the same time as, but separate from, the Decennial Census. The C2SS utilized the questionnaire and methods of the American Community Survey (ACS) to collect demographic, social, economic, and housing data from a national sample of 700,000 households. The primary collection method (US mail) and questions regarding household structure are the same for the C2SS and the decennial Census. The PUMS from the C2SS constitutes a sample of 371,618 individuals from 157,986 households. Of these, there are 1,060 same-sex unmarried partner couples in which both partners are over age 18 (569 male and 491 female) and 79,120 married couples.

We present statistics stratified on whether survey respondents and their partners had their marital status allocated in the left-hand column of Table 2. Marital status is *not allocated* if a couple claimed their relationship was as unmarried partners and their marital status was other than married. This sub-sample of *not allocated* same-sex partners is conceptually similar to the sample of same-sex couples collected in the 1990 Census—a sample largely of gay and lesbian couples "contaminated" with a small fraction of couples who were heterosexual unmarried partners *and* who had sex of one partner miscoded. Marital status is *allocated* when a gay or lesbian couple answers marital status as "married" or when a heterosexual married couple had the sex of one partner miscoded. Finally, there are a variety of special cases that might lead to marital status being *allocated* for one partner but not the other. These latter cases are rare and we ignore them in our analyses.

Table 2 also presents statistics on the presence of children in households. An interesting finding from the 1990 Census is that few gay male couples (less than 6 percent) reported the presence of children under age 18 in the household, but quite a high fraction (21 percent) of lesbian couples reported children in the household. The latter rate of children in lesbian households was surprising to some, and in fact is only slightly lower than the rate of children in the households of other unmarried women. Given the public policy debate surrounding the rights or restrictions on gay and lesbian couples to adopt children and the advances in *in vitro* fertilization, there is great interest in knowing how the presence of children in gay and lesbian households has changed and if changes are correlated with state policies. In the C2SS, the prevalence of children in same-sex households has increased to a remarkably high figure of 24 percent

for male couples and 34 percent for female couples, compared to 48 percent for heterosexual married couples and 44 percent for opposite-sex unmarried couples.

Of course the raw estimates of the presence of children in same-sex households potentially suffer from bias introduced by misclassification. We use equation (1) to estimate the amount of misclassification and resulting error in the rate at which same-sex couples have children, here assuming that $\mu_{A,GL} = \mu_{N,GL} = \mu_{GL}$ and assuming a value of θ_N consistent with a per-couple sex-miscoding rate of 0.0035. Consider first the male same-sex unmarried partners with neither partner allocated. Using sample weights that weight observations to US population estimates, the sample represents 4.49 million heterosexual unmarried partners, and 154,750 male same-sex unmarried partner couples in which neither partner has a marital status allocation. Given a sex miscoding error rate of 0.0035 among the heterosexual unmarried partner couples, we expect that 7,851 (5.1 percent) of these recorded male same-sex unmarried partners are actually heterosexual unmarried partners. In the C2SS, 0.44 of heterosexual unmarried partners have children present in the household. Given our assumption that the propensity to have a sex miscode is independent of the presence of children, we can back out the fraction of gay partners who have children by applying equation (1):

$$0.949\,\mu_{GL} + 0.051(0.44) = 0.143 \tag{2}$$

The fraction who have children among gay male couples, μ_{GL}, is found to be 0.127. This sample—same-sex unmarried partner with no marital status allocation—is directly comparable to the sample of gays and lesbians in the 1990 Census. Thus, our initial query indicates that there was likely an increase in the fraction of these gay male households with children, but that the increase is much smaller than a naïve analysis of the data suggests. Using analogous steps, we find that the impact of adjusting for sex miscoding is smaller for the female couples. The comparable calculation reduces the fraction of female couples with no marital allocation with children from 0.284 to 0.276. (See Table 3 for a summary of results with this model.)

Continuing with our example, we consider next the same-sex couples with marital status allocated. There are an estimated 53.1 million heterosexual married couples in the US, and 179,100 male same-sex married couples, as indicated by both partners having marital status allocated. Given our

assumption that the rate of having children in a gay household is the same for households with allocated and nonallocated marital status, we can then back out the fraction of reported male, same-sex couples that are truly same-sex couples by again applying equation (1) and solving for θ_A using

$$\theta_A (0.127) + (1 - \theta_A)(0.48) = 0.329 . \quad (3)$$

The fraction who are truly same-sex couples, θ_A, is 0.431. Using analogous steps we find that the comparable fraction for female couples is 0.343. These estimates imply an error process among married couples in which women are mistakenly classified as men at a rate of 0.0019 while men are misclassified as women at a rate of 0.0016, both consistent with validation study estimate of less than 0.002.

In sum, in the Census 2000 a very high fraction of reported same-sex couples are likely misclassified heterosexual couples. Our estimates imply that approximately 33 percent of all reported male same-sex couples and approximately 32 percent of all reported female same-sex couples are misclassified heterosexual couples. As a consequence of this misclassification, inferences about a demographic characteristic, like presence of children in the household, are likely to be severely biased unless researchers make the appropriate adjustments.

These estimates rely on our best guess error rate in sex miscoding among heterosexual unmarried partners—an assumption that may be critical. We examine the sensitivity of findings to a particular error rate and in doing so provide some estimates of the bounds that this error rate could logically take. Table 4 recalculates several of the statistics calculated above for sex miscoding rates ranging from zero to 0.006. Our results about the overall fraction of same-sex couples who are gay/lesbian and about the presence of children in the household are not particularly sensitive to the error rate that we assume. For example, over this range or miscoding, the overall level of contamination in the male same-sex partner sample varies from 0.296 to 0.354, while the corresponding level of miscoding for female same-sex partners varies between 0.288 and 0.346. Our ability to draw this robust conclusion of course stems directly from the maintained assumption that $\mu_{A,GL} = \mu_{N,GL} = \mu_{GL}$, the assumption that the presence of children is the same across same-sex couples regardless of whether the household indicates married or unmarried partner as their marital status.

B. Estimates Assuming a Constant Rate of Miscoding the Sex Variable

The estimates we provided in the last section relied on an assumption that the presence of children is on average the same among same-sex couples who claimed to be *married* as among those who indicate *unmarried* status. Of course, gay and lesbian couples who report being married might differ from those who indicate that they are unmarried partners.[3] A marital status report of married may for some same-sex couples represent a signal of relationship commitment, which in turn may correspond to important behavioral variation among these gay/lesbian couples.[4]

In this second exercise, we relax the assumption that $\mu_{A,GL} = \mu_{N,GL} = \mu_{GL}$. We assume instead that the rate at which sex is miscoded is the same for married and unmarried couples. In Table 5, we present these estimates assuming an error rate, at the couple level, of 0.0035 for the sex variable. The key inferences are quite similar with those drawn from Table 3. Both approaches lead to the conclusion that between 30 and 35 percent of reported same-sex couples are in fact misclassified heterosexual couples. Using our first approach we estimate that 12.7 percent of gay male couples and 27.6 percent of lesbian couples have children present. The second approach, in which we allow $\mu_{A,GL} \neq \mu_{N,GL}$, gives corresponding estimates of 14.2 percent for male couples and 26.7 percent for female couples.

Table 6 recalculates several of the statistics calculated above for sex miscoding rates of zero to 0.006. It is clear that in this approach, our inferences are greatly influenced by the assumed rate of sex miscoding. A sex-miscoding rate of 0.006 yields (impossible) negative results for some of the fractions shown, suggesting that this estimate is too high. In fact, per couple sex-miscoding rates above 0.0045 for men and 0.0042 for women yield negative estimates within Table 6, which in turn gives approximate upper bounds for the rates of sex miscoding.

5. Further Evidence from the 2000 Short-Form Data

The Census Bureau provided us with a special tabulation of same-sex unmarried partners (combined male and female couples) with children under age 18 in the households based on the Census 2000 SF-1 (Short

[3] Fields and Clark (1999) find evidence for the heterogeneity of "married" and "unmarried" partner couples; their data, however, are from Census field tests and may be subject to the same-sex misclassification issues we discuss.
[4] Moreover, "married" may have a different connotation for lesbians than for gay men. Some feminist and lesbian scholars have described "marriage" as a patriarchal institution, perhaps leading some lesbians to avoid this

Form-1) data file. This tabulation does not distinguish between allocated and nonallocated marital status so we cannot estimate our model that assumes $\mu_{A,GL} = \mu_{N,GL} = \mu_{GL}$.

We can, however, estimate the second model because the tabulations provide the total number of recorded same-sex unmarried partners both with and without children and similar numbers for married and heterosexual unmarried partner couples. For any assumed error rate, we can subtract the product of the error rate and the number of heterosexual couples with children from the number of same-sex unmarried partners with children, and use this to estimate the number of actual same-sex unmarried partnerships with children.[5] By making the same calculation for couples without children, we can estimate the total number of gay and lesbian couples.

The results of these calculations are shown in Table 7. We find that approximately 31 percent of recorded same-sex unmarried partners in the Census SF-1 data have children under 18 in the household. By adjusting the figures with per couple sex miscoded rates from 0.0025 to 0.045, we find that the proportion of same-sex unmarried couples with children decreases from 0.260 to 0.189. Focusing on our baseline assumed error rate of 0.0035, we estimate that 23 percent of gay and lesbian couples have children and about 65 percent of the reported same-sex couples are indeed same-sex. By way of comparison, both of the models we implement using the C2SS data imply that 20 percent of gays and lesbians have children in the household and that approximately 67 or 68 percent of the reported same-sex couples are indeed same-sex couples.

6. Conclusions

From our investigation of initial evidence, we argue that the naïve use of Census 2000 data to study same-sex unmarried partners may provide some incorrect inferences. Tabulations from the 1990 Census and Census 2000 indicate an apparent fourfold increase in the number of same-sex unmarried partners. Black et al., (2000) utilize the 1990 Census and indicate that approximately 9 percent of recorded same-sex unmarried partners are misclassified heterosexual couples. We estimate that in Census 2000 as much as

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designation. Our initial analysis suggests that while 37 percent of gay male couples checked that they were married, only 19 percent of lesbian couples identified themselves as such.

[5] We were not able to obtain the full counts of heterosexual unmarried couples with children from Census 2000 so we estimated this number by multiplying the fraction of these couples with children in the C2SS PUMS data by the number of heterosexual unmarried partners reported in Census 2000.

32 percent of the recorded same-sex unmarried partnerships in Census 2000 could be misclassified heterosexual couples. Thus naïve analyses that do not account for misclassification will overstate the change in reported same-sex partner households, and will be incorrect in examining demographic characteristics.

We have an additional caveat. The *level* of sex miscoding represents only one aspect of the measurement issue effecting estimates of gay and lesbian couples. There may well be an important correlation between sex misreporting and covariates of interest. Suppose, for example, that English language ability influences the rate at which survey data is collected accurately, and that immigrant households are therefore more likely than other households to have sex miscodes. As immigrants who speak English poorly (especially from Latin America) are more likely than other families to have children, miscoded married heterosexual couples may well have children present in higher rates than other married heterosexual couples. This obviously biases upward estimates of the presence of children among gay/lesbian households based on procedures presented in this paper.[6]

In addition to affecting estimates of the size of the gay and lesbian couple population in the US, the measurement error issues presented in this analysis affect a broad range of demographic issues regarding gay and lesbian couples. We have shown the effect of measurement error on the estimates of the presence of children in gay/lesbian households. Estimates of gay or lesbian income, education and labor force participation and a variety of other demographic characteristics could be substantially biased by the presence of heterosexual married couples in the sample. Further study to better assess the true error rate of sex miscoding in couples is clearly needed to provide the statistical tools necessary to correct the measurement error bias in the same-sex unmarried partner sample.

[6] For example, a special tabulation of same-sex partner location in the U.S. reveals a surprising number of apparent same-sex couples with children in counties in Texas contiguous with the Rio Grande. We suspect that in this area of the US, a disproportionately large number of married heterosexual couples with children may be miscoded as same-sex couples due to an unusually high rate of sex misreporting stemming from limited English proficiency.

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Table 1. Classification of Households with Couples Recorded as "Same-Sex," 1990 and 2000 Census

Relationship to Head of Household (RHH)	Marital Status (MS)[a]	1990	2000
1. Unmarried Partner (UP)	Other than Currently Married[b]	*Included*	*Included*
2. Unmarried Partner (UP)	Currently Married	*Included*	*Included* (MS allocated)
3. Husband/Wife (H/W)	Currently Married	*Deleted* (Sex of H/W Changed)	*Included* (RHH Changed to UP; MS allocated)
4. Husband/Wife (H/W)	Other than Currently Married[b]	*Deleted* (H/W's RHH allocated)	*Included* (RHH Changed to UP)

[a] Marital Status was asked on the short form in 1990 but only on the long form in 2000.
[b] Never Married, Divorced, Separated, and Widowed.
Included indicates that a reported same-sex couple was recorded as a same-sex couple after Census editing and allocation procedures were completed.

Table 2. Presence of Children by Marital Status Allocation in the C2SS PUMS

Panel A. Fraction of Households with Children at Home

Allocation of Marital Status	**Fraction with Children 18 or Younger**	
	Same-Sex Male Couples	*Same-Sex Female Couples*
Neither partner allocated (n=236 male, 254 female)	0.143	0.284
	(0.034)	(0.035)
One partner allocated (n=12 male, 16 female)	0.218	0.472
	(0.149)	(0.121)
Both partners allocated (n=321 male, 221 female)	0.329	0.410
	(0.027)	(0.036)
Total (n=569 male, 491 female)	0.242	0.345
	(0.021)	(0.024)
Heterosexual Couples with children in household		
Married Couples (n=79,120)	0.48	
	(0.002)	
Unmarried Partners (n=5,721)	0.44	
	(0.008)	

Notes: Authors' calculation, Census 2000 Supplementary Survey. Standard errors are shown in parenthesis.

Table 3. Estimated Classification Error of Same-Sex Couples Assuming Rate of Having Children in Gay and Lesbian Household is Independent of Marital Status Allocation

	Same-Sex Male Couples	*Same-Sex Female Couples*
Number of same-sex unmarried partners with *no* marital status allocation (weighted)	154,750	158,600
Estimated miscoded heterosexual unmarried partners	7,851	7,851
Estimated fraction of same-sex unmarried partners that are miscoded heterosexual	0.051	0.050
Estimated fraction of same-sex couples with children	0.127	0.276
Number of same-sex unmarried partners with marital status allocated (weighted)	179,100	128,950
Estimated miscoded heterosexual married couples	102,460	84,729
Estimated fraction of same-sex unmarried partners that are miscoded heterosexual	0.572	0.657
Estimated fraction of all same-sex couples with children	0.127	0.276
Estimated fraction of reported same-sex couples that are gay	0.670	0.678

Notes: Authors' calculation, Census 2000 Supplementary Survey. In these data the number of unmarried heterosexual partners (weighted) is 4,486,400 and the number of heterosexual married couples (weighted) is 53,100,000.

Table 4. Sensitivity of Analysis to the Rate of Miscoding the Sex Variable, C2SS

Assumed Rate of Sex Miscoding per Couple among Heterosexual Unmarried Partners	0.000	0.002	0.004	0.006
Panel A. Male Same-sex Unmarried Partners				
Fraction of Same-sex Couples with *Marriage Allocated* who are Gay	0.448	0.437	0.425	0.413
Fraction of Same-sex Couples with *Marriage not Allocated* who are Gay	1.000	0.978	0.942	0.913
Overall Fraction Gay	0.704	0.684	0.665	0.645
Fraction with Children among Gay Couples	0.143	0.134	0.125	0.115
Panel B. Female Same-sex Unmarried Partners				
Fraction of Same-sex Couples with *Marriage Allocated* who are Lesbian	0.357	0.349	0.341	0.333
Fraction of Same-sex Couples with *Marriage not Allocated* who are Lesbian	1.000	0.972	0.943	0.915
Overall Fraction Lesbian	0.712	0.692	0.673	0.654
Fraction with Children among Lesbian Couples	0.284	0.279	0.273	0.270

Notes: Authors' calculation, Census 2000 Supplementary Survey

Table 5. Estimated Classification Error of Same-Sex Couples Assuming Rate of Sex Miscoding Rate is 0.0035

	Same-Sex Male Couples	*Same-Sex Female Couples*
Number of same-sex unmarried partners with *no* marital status allocation (weighted)	154,750	158,600
Estimated miscoded heterosexual unmarried partners	7,851	7,851
Estimated fraction of same-sex unmarried partners that are miscoded heterosexual	0.051	0.050
Estimated fraction of same-sex couples with children	0.127	0.276
Number of same-sex unmarried partners with marital status allocated (weighted)	179,100	128,950
Estimated miscoded heterosexual married couples	92,925	92,925
Estimated fraction of same-sex unmarried partners that are miscoded heterosexual	0.519	0.721
Estimated fraction of same-sex couples with marital status allocation with children	0.166	0.229
Overall estimated fraction of all same-sex couples with children	0.142	0.267
Estimated fraction of reported same-sex couples that are gay	0.698	0.650

Notes: Authors' calculation, Census 2000 Supplementary Survey. In these data the number of unmarried heterosexual partners (weighted) is 4,486,400 and the number of heterosexual married couples (weighted) is 53,100,000.

Table 6. Sensitivity of Analysis to the Rate of Miscoding the Sex Variable, C2SS

Assumed Rate of Sex Miscoding per Couple among Heterosexuals	0.000	0.002	0.004	0.006
Panel A. Male Same-sex Unmarried Partners				
Fraction of Same-sex Couples with *Marriage Allocated* who are Gay	1.000	0.704	0.407	0.111
Fraction of Same-sex Couples with *Marriage not Allocated* who are Gay	1.000	0.978	0.942	0.913
Overall Fraction Gay	1.000	0.828	0.655	0.483
Fraction with Children among Gay Couples	0.243	0.194	0.119	-0.008
Panel B. Female Same-sex Unmarried Partners				
Fraction of Same-sex Couples with *Marriage Allocated* who are Lesbian	1.000	0.588	0.176	-0.235
Fraction of Same-sex Couples with *Marriage not Allocated* who are Lesbian	1.000	0.972	0.943	0.915
Overall Fraction Lesbian	1.000	0.800	0.599	0.399
Fraction with Children among Lesbian Couples	0.341	0.306	0.249	0.135

Notes: Authors' calculation, Census 2000 Supplementary Survey

Table 7. Analysis of the Sensitivity of Same-sex Unmarried Partner Couples (Census 2000 Special Tabulation Program, STP24)

Rates of Miscoding Sex for Married Couples	Total Same-Sex Couples	Same-Sex Couples with Children	Fraction with Children	Overall Fraction Gay
0.000	591,939	182,642	0.309	1.000
0.0025	328,303	115,200	0.260	0.749
0.0030	312,104	101,711	0.246	0.699
0.0035	295,905	88,223	0.230	0.649
0.0040	279,706	74,734	0.211	0.599
0.0045	263,507	61,246	0.189	0.549

Notes: Authors' calculations, Census 2000 Special Tabulation Program, STP24.