

## APPENDICES:

### I. Methodology

**Data Sources:** Data on the currently married population and new marriages are from tabulations done by the Pew Research Center using microdata (i.e., individual records) from the Decennial Censuses of 1980, 1990, and 2000 and the American Community Surveys (ACS) of 2005 and 2008. The microdata files were obtained from the IPUMS-USA database<sup>1</sup> (<http://www.ipums.org/>). For the three decennial censuses, the data are a 5% sample of the population; for the ACS, each is a 1% sample.<sup>2</sup>

**Married Population:** The currently married population is selected as individuals whose marital status is “married, spouse present.” The spouse must be present in the dataset to ascertain his/her race, Hispanic origin, and nativity. In these datasets all married couples are opposite sex. Linkages of individual records for the spouses was done by IPUMS which supplies “attached variables.” For the analyses reported here, the attached variables included the spouse’s age, race, Hispanic origin, nativity, and year of immigration.

**Newly Married Population:** The newly married population is a subset of the currently married population drawn from the 2008 ACS and the 1980 Census. The 2008 ACS was the first to include questions relating to date of marriage. One question asked respondents if they had been married (or divorced or widowed) in the “past 12 months.”<sup>3</sup> Those saying they had married are the basis for our analyses of “newlyweds” and “new marriages” in 2008. Further questions asked how many times the respondent has been married and in what year the most recent marriage occurred. The latter question supplied information on year of marriage used in the “look back” analyses in Section III.

Definition of the newly married population in the 1980 Census required a slightly different approach to data analysis. The 1980 Census asked respondents if they had been married once or more than once, the month and year of marriage (*first* marriage in the case of multiple marriages), and if the first marriage had ended by the death of the other spouse. The IPUMS dataset does not include the year of marriage, but rather the respondent’s age at marriage and the quarter of the year in which the marriage occurred and the quarter of the year in which the respondent was born. With this information, we derived the year in which the first marriage occurred and identified persons whose first marriage occurred in the year before the census.

Marriages in which one or both spouses had been married only once were assigned as having occurred in the year reported by the spouse married only once. Marriages in which both spouses had been married more than once could not be assigned a year of marriage. This group was excluded from the analyses of the

---

<sup>1</sup> Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. Integrated Public Use Microdata Series: Version 5.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

<sup>2</sup> IPUMS files are available for earlier US censuses, but the 1980 Census is the first to collect information on Hispanic origin from the entire population. This information is required for the intermarriage analyses reported here. For earlier censuses, IPUMS has created a variable to identify the Hispanic origin population, but spouses are always assigned the same Hispanic category so the data for 1970 and earlier cannot be analyzed in the same manner as subsequent censuses.

<sup>3</sup> Because each year’s ACS is an aggregation of 12 monthly samples, responses to this question cannot be assigned to a specific year or set of months. Thus, we report the marriages as occurring in the “previous year.”

newly married population and from the look back at historical trends. Marriages with both spouses married more than once represented about 10% of the married population (3% and 6% of Hispanics and Asians respectively). The multiply-married group was somewhat more likely to be U.S.-born and intermarried than the population in “first” marriages. Intermarriage rates for this group were about one-third higher than the rest of the population, with rates for Asians and Hispanics being even higher.

**Look Back Analysis:** The classification of marriages by the years in which they occurred served as the basis for the look back analyses. Some further specifications were used to sharpen the analyses. Because our focus is changes in marriage patterns within the U.S. population, we excluded from the look back analyses immigrants who were married when they arrived in the U.S. This exclusion was accomplished using the year of immigration variable supplied by IPUMS. For 2008, marriages involving immigrants with year of marriage greater than their year of immigration were excluded from the look back analyses. To smooth out variations due to sampling and reporting errors, the estimates reported for 1985, 1990, 1995, 2000, and 2005 are based on marriages occurring in three-year periods centered on the reported year. For 1980, the information on date of immigration was collected in intervals rather for single years. Because of this limitation, the look back was done only for marriages occurring in 1960, 1965, 1970, and 1975 including only immigrants arriving before the year of marriage.

**Weighting:** All of the estimates for marriages, currently married population, and people getting married are based on weighted data from the IPUMS microdata files. The Census Bureau provides the weights based on a complicated weighting process so that the resulting estimates reflect the actual population. In the data from the 1980 Census, the weights for each person in a husband-wife couple are forced to be equal. This is not the case for the data files from the ACS or the 1990 and 2000 Censuses. Consequently, the number and characteristics of wives estimated using their husbands’ weights will be different from the same estimates based on the wives’ weights; similarly for characteristics of men estimated from their wives’ weights. In this report, estimates for each gender are based on their own weights; estimates for couples or both sexes combined are an average of estimates based on husbands’ and wives’ weights; estimates for nativity groups are based on individual weights regardless of gender.

**Race and Ethnic Groups:** Individuals are identified as Hispanic or non-Hispanic with a direct question on Hispanic origin. The wording and placement of the question have changed somewhat over the 1980-2008 period, but the underlying concept has remained essentially unchanged. Individuals who are not Hispanic are further subdivided by race group. Throughout the period of analysis, we use data for whites, black, Asians and Pacific Islanders<sup>4</sup> (“Asians”), American Indians and Alaska natives (“American Indians”) and a residual category usually labeled as “Some Other Race.”

Beginning with the 2000 Census, individuals could choose to identify with more than one group in response to race question; about 4.6 million non-Hispanics or slightly less than 2% of the non-Hispanic population chose more than one race. We treat these people as an additional racial grouping and reserve the specific races listed above for persons identifying as a single race only. This change in data collection methods may

---

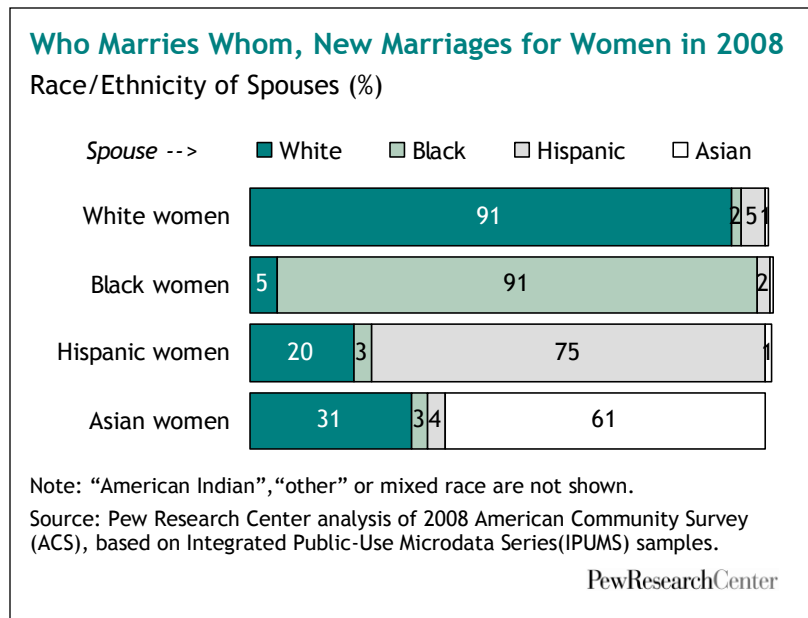
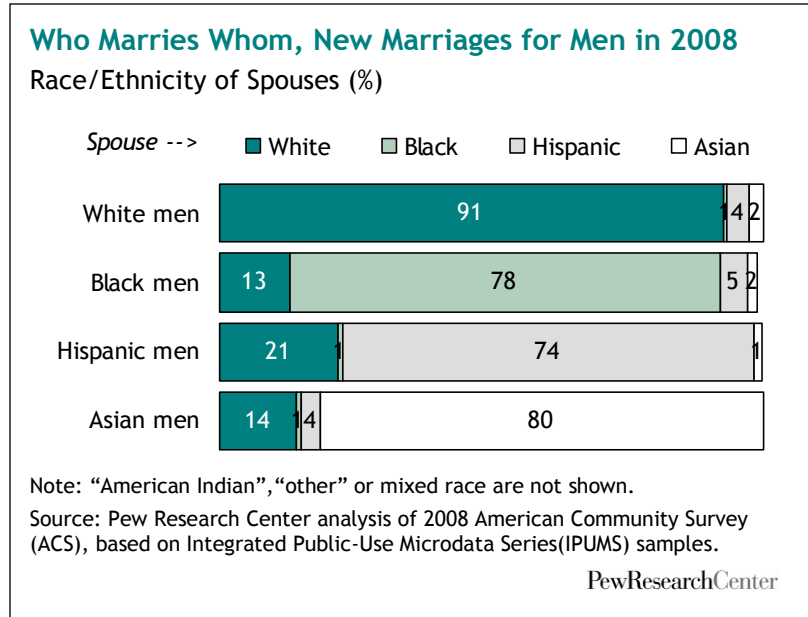
<sup>4</sup> Beginning with the 2000 Census, these two groups were separated and labeled “Asian” and “Native Hawaiians and Other Pacific Islanders.”

have accounted for a significant share of the increase in intermarriage observed in the currently married population between 1990 and 2000. In the 2000 Census, about 720,000 or 19% of the 3.8 million marriages with spouses of a different race were between a non-Hispanic person reporting a single race and a non-Hispanic person reporting more than one race. Had the race question remained the same as in 1990, some of these interracial marriages in 2000 would not have been so classified. This type of marriage accounted for almost half of the increase in interracial marriages between 1990 and 2000. In 2008, roughly the same number of interracial marriages, about 700,000, are between single and multiple-race non-Hispanics. They represent a somewhat smaller share (15%) of the 4.6 million interracial marriages in 2008.

## Survey Methodology

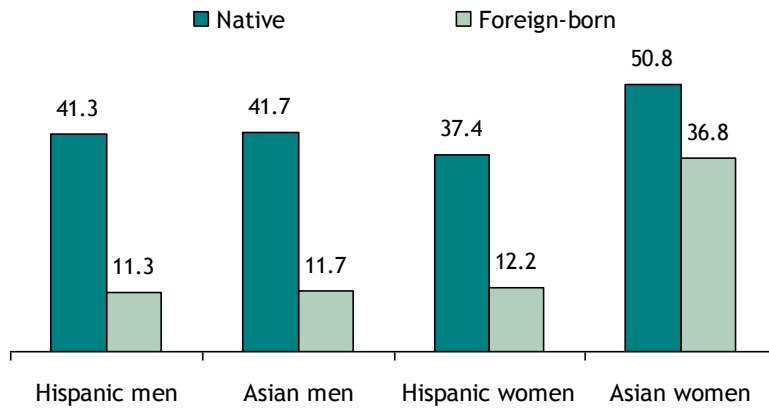
The survey findings presented in Section IV of this report are based on a Pew Research Center telephone survey conducted on landlines and cell phones from October 28 through November 30, 2009 among a nationally representative sample of 2,884 adults. Interviews were conducted in English or Spanish. In order to allow for a detailed analysis of attitudes within the African-American community, the survey included an over-sample that brought the total number of non-Hispanic black respondents to 812. The margin of error is plus-or-minus 3.0 percentage points for the full sample and plus-or-minus 4.5 percentage points for the African-American sample. The survey also included 376 Hispanics of any race, with a margin of error of plus-or-minus 7.5 percentage points for this group. The margin of error for whites is 3.5 percentage points.

## II. Additional charts



### New Marriages for Hispanics and Asians in 2008, Native vs. Foreign Born

% married someone of a different race/ethnicity in the past 12 months

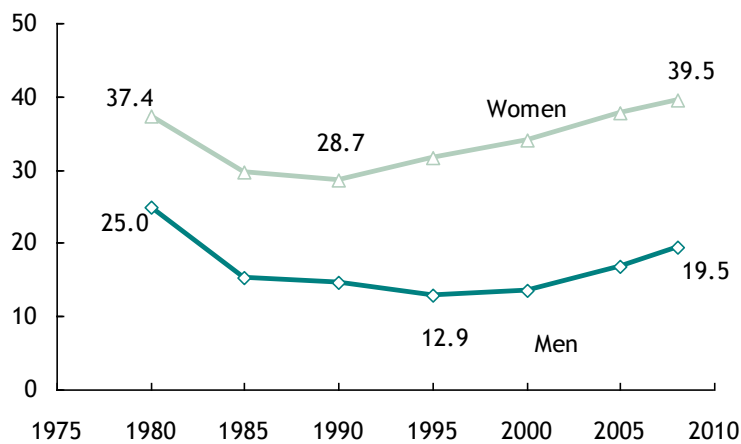


Source: Pew Research Center analysis of 2008 American Community Survey (ACS), based on Integrated Public-Use Microdata Series (IPUMS) samples.

PewResearchCenter

### Intermarriage Rates among Asian Newlyweds, by Gender, 1980-2008

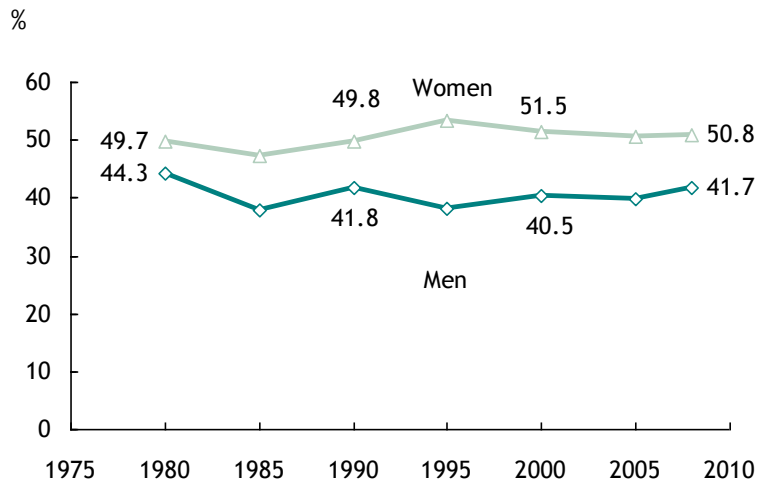
%



Source: Pew Research Center analysis of 2005-2008 American Community Survey (ACS) and U.S. Decennial Census data, based on Integrated Public-Use Microdata Series (IPUMS) samples.

PewResearchCenter

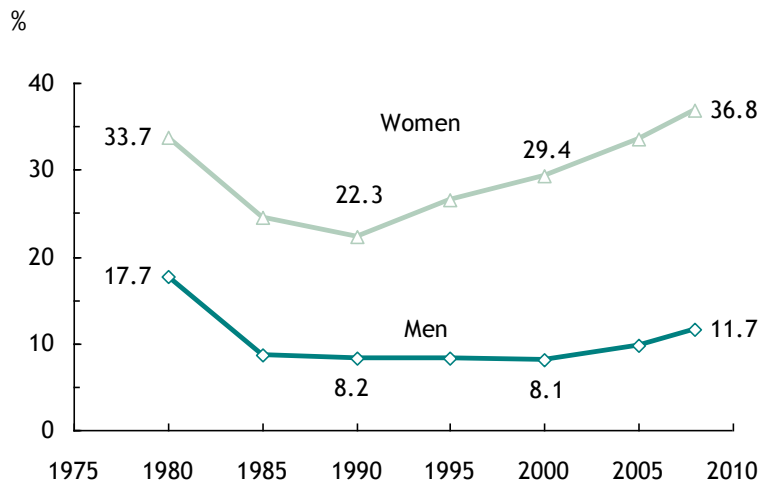
### Intermarriage Rates among Asian U.S.-Born Newlyweds, by Gender, 1980-2008



Source: Pew Research Center analysis of 2005-2008 American Community Survey (ACS) and U.S. Decennial Census data, based on Integrated Public-Use Microdata Series (IPUMS) samples.

PewResearchCenter

### Intermarriage Rates among Asian Foreign Born Newlyweds, by Gender, 1980-2008



Source: Pew Research Center analysis of 2005-2008 American Community Survey (ACS) and U.S. Decennial Census data, based on Integrated Public-Use Microdata Series (IPUMS) samples.

PewResearchCenter

### III. Percent of Newlyweds with Spouse of a Different Race/Ethnicity, by Race for States and Regions, 2008<sup>5</sup>

State or Region	Race/Ethnic Group				
	Total	Hispanic	White*	Black*	Asian*
U.S., Total	14.6%	25.7%	8.9%	15.5%	30.8%
Northeast	12.6%	28.9%	7.4%	17.4%	22.9%
Midwest	10.7%	41.0%	5.5%	17.3%	30.6%
South	13.2%	23.0%	8.4%	11.9%	36.8%
West	21.6%	23.4%	15.5%	38.0%	31.1%
Alabama	10%	z	6%	13%	z
Alaska	z	z	z	z	z
Arizona	21%	25%	15%	z	z
Arkansas	8%	z	4%	z	z
California	22%	18%	20%	36%	27%
Colorado	21%	35%	14%	z	z
Connecticut	14%	z	8%	z	z
Delaware	z	z	z	z	z
Dist. of Columbia	z	z	z	z	z
Florida	16%	25%	10%	17%	z
Georgia	12%	z	7%	10%	z
Hawaii	48%	z	z	z	z
Idaho	12%	z	7%	z	z
Illinois	13%	24%	7%	11%	z
Indiana	10%	z	5%	z	z
Iowa	10%	z	6%	z	z
Kansas	13%	z	7%	z	z
Kentucky	8%	z	5%	z	z
Louisiana	9%	z	6%	5%	z
Maine	7%	z	3%	z	z
Maryland	8%	z	5%	5%	z
Massachusetts	11%	z	6%	z	z
Michigan	11%	z	5%	z	z
Minnesota	9%	z	5%	z	z
Mississippi	5%	z	3%	5%	z
Missouri	10%	z	5%	z	z
Montana	11%	z	z	z	z
Nebraska	13%	z	7%	z	z
Nevada	28%	z	22%	z	z
New Hampshire	6%	z	3%	z	z
New Jersey	17%	26%	11%	18%	z
New Mexico	22%	22%	20%	z	z
New York	13%	25%	9%	11%	23%
North Carolina	11%	z	6%	9%	z
North Dakota	10%	z	5%	z	z
Ohio	9%	z	5%	17%	z
Oklahoma	23%	z	15%	z	z
Oregon	24%	z	14%	z	z
Pennsylvania	11%	z	6%	z	z
Rhode Island	15%	z	z	z	z
South Carolina	10%	z	6%	z	z
South Dakota	10%	z	5%	z	z
Tennessee	9%	z	5%	z	z
Texas	18%	19%	15%	14%	33%
Utah	12%	z	7%	z	z
Vermont	z	z	z	z	z
Virginia	13%	z	8%	15%	z
Washington	20%	z	12%	z	z
West Virginia	13%	z	7%	z	z
Wisconsin	10%	z	5%	z	z
Wyoming	z	z	z	z	z

Notes: "Newlyweds" are persons who got married in the 12 months prior to the survey.

\* Not Hispanic, single race.

z -- less than 5,000 couples (for total) or 10,000 persons (for race groups).

Source: Pew Research Center analysis of 2008 American Community Survey (ACS), based on Integrated Public-Use Microdata Series (IPUMS) samples.

<sup>5</sup> Note (June 15, 2010): This table is a corrected version of the original posting. Data for Hawaii, the West Region, and the United States have been changed slightly.