

Analysis of Racial Characterization under Different Reporting Options

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Section 1: Overview

The Department of Housing and Urban Development (HUD) funds the Census Bureau to conduct the American Housing Survey (AHS), a biennial record of the quality, use, and condition of the nation's housing stock. Separate AHS surveys provide periodic examinations of the housing stock in 47 major metropolitan areas. In 2005, HUD contracted with Econometrica, Inc. and ICF Consulting to support the production and use of the AHS. As part of that contract, HUD commissioned this study of how AHS respondents characterized themselves and other household members with respect to race and ethnicity.

On October 30, 1997, the Office of Management and Budget (OMB) posted in the *Federal Register* new guidelines that all federal agencies should follow in collecting information on the race and ethnicity of persons.¹ The new guidelines mandate that agencies collect racial information using a minimum of five categories, that respondents be allowed to choose more than one category, and that "other" race not be an allowed choice. Previous practice generally allowed respondents to choose only one category. OMB directed federal agencies to implement the new guidelines no later than January 1, 2003.

The AHS implemented the guidelines in the 2003 national AHS survey. The longitudinal design of the AHS makes it possible to determine how the change in reporting format may have affected the way respondents characterize themselves and other members of their household. For the AHS, the Census Bureau selected a sample of housing units from the 1980 decennial census and has interviewed the occupants of those same units every 2 years beginning in 1983.² Because many of the sampled units contain the same households in successive years, it is possible to compare the answers to the race and ethnicity questions in the 2001 AHS, which used the old format, to the answers for the same persons in the 2003 AHS, which used the new format.

This paper employs the term "racial characterization" to reflect how the AHS collects information on race and other personal characteristics. Using telephone interviewing, the Census Bureau speaks to an adult member of the household who describes the unit and its occupants. The respondent reports his or her own race, sex, age, education, etc., and provides the same information for the other occupants in the unit. For the respondent,

¹ *Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity* at <http://www.whitehouse.gov/omb/fedreg/1997standards.html>.

² The Census Bureau increases the sample every 2 years to represent newly constructed units and other additions to the housing stock. Once a unit is added to the sample it is tracked biennially until the unit is no longer part of the housing stock.

race is a self-identified characteristic but, for other occupants, it is a characteristic attributed to the person by the respondent.

Four sections and two appendices comprise the remainder of this paper:

- Section 2 describes the AHS data and the steps used to prepare the data for analysis. This section contains a cross-tabulation of the racial characterization of persons in the 2001 AHS with the racial characterization of the same persons in the 2003 AHS.
- Section 3 discusses how persons characterized as “other” in the 2001 AHS were characterized in the 2003 AHS.
- Section 4 discusses how persons characterized in the 2003 AHS as being members of more than one race were characterized in the 2001 AHS. This section also examines the extent to which being characterized as a member of more than one race is associated with other characteristics, such as ethnicity or age.
- Section 5 summarizes the findings.
- Appendix A contains excerpts from the new OMB guidelines.
- Appendix B contains the coding for the race variable in the 2001 and 2003 AHS’s.

Section 2: Data

For each AHS, HUD and the Census Bureau release public use files that contain data on approximately 60,000 units and their occupants. With each new AHS, the occupant-specific data are placed in a separate file (PERSON). Each record in PERSON has a control number (CONTROL) linking the record to a specific unit and a second number (PLINE) unique to the person for whom the data were collected. If the same household occupies the unit in 2001 and 2003, then the PLINE number will identify the same person in 2001 and 2003. However, if the household in 2003 is not the same household as in 2001, then it is very likely that the same PLINE number will appear in 2001 and 2003 and, if so, different persons will have that number.

The AHS contains a variable (SAMEHH) that indicates whether the household in 2003 is the same household as the household in 2001. (The 2003 household is considered to be the same household if it includes one person from the 2001 household.³) A second AHS variable (MOVE) identifies the year in which the person moved into the unit. Because

³ If some household members from 2001 leave and new members move in by 2003, the Census Bureau will not give a new member the same PLINE number used by a member who moved out as long as there is one common member between the two surveys.

there is occasionally some imprecision in the SAMEHH variable and some reporting errors in the MOVE variable, this paper uses both variables to determine whether to include persons in the analysis. To be included, a person must have the same CONTROL and PLINE in 2001 and 2003, SAMEHH must specify that the 2003 household is the same as the 2001 household, and the person must have moved into the unit before 2001.

In addition to these conditions, the analysis placed the following restriction on the data. Persons are excluded from the analysis if the Census Bureau either edited or allocated information to MOVE or to the variable specifying race (RACE) in either 2001 or 2003. This criterion ensures that the Census Bureau received a clear answer to the RACE question in both 2001 and 2003, and that the move-in date for the person was clearly reported by the respondent. After imposing these restrictions, the analysis includes information on 61,889 persons.⁴

Table 1 presents a cross tabulation of the race as reported in 2001 by race as reported in 2003 for these 61,889 persons. Row 22, column E shows that there were 1,510 persons who were characterized as “Other” in 2001. Row 23, which sums rows 6 through 21, shows that there were 723 persons (column F) who were characterized as members of more than one race in 2003. These are the samples used in sections three and four.

The results in Table 1 indicate that there is a modest level of inconsistent responses in the racial characterizations, even after the elimination of edited and allocated data. For example, of persons identified as White in 2001, 137 were characterized as “Black only” in 2003. Also, there are 326 persons characterized as “White only” who were listed as Black in 2001. The noise level is low. Only 1.1 percent of the persons considered “White only” in 2003 were listed in another race category in 2001, and only 2.5 percent of the persons listed “Black only.”⁵ The exception to this judgment involves persons of American Indian or Alaska Native heritage; 32.0 percent of the persons characterized as “American Indian or Alaska Native only” in 2003 were listed as members of other races in 2001.⁶

⁴ The 2001 and 2003 PERSON files contained information on 146,881 persons; 84,609 had common CONTROL and PLINE values in both years. The restrictions reduced the count to 61,889.

⁵ This comparison ignores “Other” answers because, as explained later, there appears to have been some confusion in the minds of respondents under the old race and ethnicity format between race and ethnicity.

⁶ The inconsistencies discussed in this paragraph do not appear to be the result of comparing two different persons. In Table 1, there are 1,019 cases where the person is clearly characterized by race in 2001 (columns A through D) but has a different race in 2003 (rows 1 through 5). Of 1,019 cases, 99 percent are recorded as the same sex in 2001 and in 2003. One would expect the sex to be different in approximately half the cases with different people in 2001 and 2003. Errors in recording responses probably account for a significant share of these inconsistencies.

Table 1: Persons in 2001 and 2003 with Clear Responses to the Race Question

Race as Reported in 2003 AHS		Race as Reported in 2001 AHS					
		A	B	C	D	E	F
		White	Black	American Indian, Aleut, or Eskimo	Asian or Pacific Islander	Other Race	Total
1	White Only	50,400	326	84	182	1,166	52,158
2	Black Only	137	6,209	18	5	88	6,457
3	American Indian, Alaska Native Only	100	9	206	2	30	347
4	Asian Only	113	6	7	1,773	144	2,043
5	Hawaiian, Pacific Islander Only	21	6	3	117	14	161
6	White / Black	44	51	1	0	30	126
7	White / American Indian, Alaska Native	270	1	44	0	3	318
8	White / Asian	58	3	0	41	21	123
9	White / Hawaiian, Pacific Islander	26	0	0	10	1	37
10	Black / American Indian, Alaska Native	2	38	1	0	3	44
11	Black / Asian	0	2	0	4	1	7
12	Black / Hawaiian, Pacific Islander	0	5	0	0	0	5
13	American Indian, Alaska Native / Asian	1	0	0	1	0	2
14	Asian / Hawaiian, Pacific Islander	0	0	0	17	0	17
15	White / Black / American Indian, Alaska Native	0	11	1	4	7	23
16	White / Black / Asian	0	1	0	0	1	2
17	White / American Indian, Alaska Native/Asian	0	0	0	0	0	0
18	White / Asian / Hawaiian, Pacific Islander	0	0	0	11	1	12
19	White / American Indian, Alaska Native / Hawaiian, Pacific Islander	0	3	0	0	0	3
20	Other combinations of 2 or 3 races	3	0	0	0	0	3
21	Other combinations of 4 or 5 races	1	0	0	0	0	1
22	Total	51,176	6,671	365	2,167	1,510	61,889
23	More than one race (sum of rows 6 through 21)	405	115	47	88	68	723

Section 3: 2003 Racial Characterizations of Persons Characterized as “Other” in 2001

Table 2 is a frequency distribution of persons by race in 2001 as they were distributed by race in the 2003 survey. Only 4.5 percent of the persons characterized as “other” in 2001 were characterized as being members of “more than one race” in 2003 (column E, row 23). Having a mixed racial background was not a major reason for using the “other” characterization. However, there is some relationship between “other” in 2001 and “more than one race” in 2003. Overall, only 1.2 percent of all persons in both surveys were listed as members of more than one race in 2003; the percentage from the “other” category was almost 4 times as large.

Ethnicity appears to have played an important part in the choice of “other” race under the format used in 2001. Of the 1,510 persons who were characterized as “other” in 2001, 72.5 percent were characterized in the 2001 survey as Hispanic. Among all 61,889 persons, the percentage of Hispanics in 2001 was 8.2 percent. Apparently, for some respondents in the 2001 survey, ethnicity introduced a complexity in characterizing race for which the availability of an “other” option was welcomed. This misinterpretation is not unique to the pre-2003 AHS questionnaire. Because of similar problems in other surveys, the 1997 OMB guidelines mandate that the ethnicity question be asked prior to the race question in all federal surveys on the assumption that, if the respondent can establish ethnicity first, then he or she will consider race separate from ethnicity when asked about race.

Table 2 contains other interesting results. Row 23 indicates that persons identified as American Indians, Aleuts, or Eskimos in 2001 were the most likely to be listed in a more-than-one-race category in 2003. There were 365 persons in this group in 2001, and 12.9 percent were reported in a more-than-one-race category in 2003. Moreover, only 56.4 percent of this group was characterized as “American Indian or Native Alaskan only” in 2003, while over 30 percent of the group was identified as either “White only,” “Black only,” “Asian only,” or “Hawaiian or Pacific Islander only.” Apparently the new reporting format elicits different responses from this group.

Table 2: Percentage Distribution of Race in 2001 by Race in 2003

Race as Reported in 2003 AHS		Race as Reported in 2001 AHS					
		A	B	C	D	E	F
		White	Black	American Indian, Aleut, or Eskimo	Asian or Pacific Islander	Other Race	Total
1	White Only	98.5%	4.9%	23.0%	8.4%	77.2%	84.3%
2	Black Only	0.3%	93.1%	4.9%	0.2%	5.8%	10.4%
3	American Indian, Alaska Native Only	0.2%	0.1%	56.4%	0.1%	2.0%	0.6%
4	Asian Only	0.2%	0.1%	1.9%	81.8%	9.5%	3.3%
5	Hawaiian, Pacific Islander Only	0.0%	0.1%	0.8%	5.4%	0.9%	0.3%
6	White / Black	0.1%	0.8%	0.3%	0.0%	2.0%	0.2%
7	White / American Indian, Alaska Native	0.5%	0.0%	12.1%	0.0%	0.2%	0.5%
8	White / Asian	0.1%	0.0%	0.0%	1.9%	1.4%	0.2%
9	White / Hawaiian, Pacific Islander	0.1%	0.0%	0.0%	0.5%	0.1%	0.1%
10	Black / American Indian, Alaska Native	0.0%	0.6%	0.3%	0.0%	0.2%	0.1%
11	Black / Asian	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%
12	Black / Hawaiian, Pacific Islander	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
13	American Indian, Alaska Native / Asian	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14	Asian / Hawaiian, Pacific Islander	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%
15	White / Black / American Indian, Alaska Native	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%
16	White / Black / Asian	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
17	White / American Indian, Alaska Native/Asian	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	White / Asian / Hawaiian, Pacific Islander	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%
19	White / American Indian, Alaska Native / Hawaiian, Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	Other combinations of 2 or 3 races	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	Other combinations of 4 or 5 races	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
23	More than one race (sum of rows 6 through 21)	0.8%	1.7%	12.9%	4.1%	4.5%	1.2%

Column E in Table 2 reports on 1,510 persons. For these same 1,510 persons, Table 3 compares the answers in 2001 and 2003 to questions about sex, ethnicity, age, and education as a check on the procedures used to ensure that the analysis referred to the same person in both years. Given reasonable reporting errors, the numbers in Table 3 do not contradict the assumption that column E in Table 2 reports on the same person in both years.

Table 3: Consistency on Other Variables

Percent of the same sex	98%
Percent of the same ethnicity	94%
Percent exactly 2 years older	73%
Percent with the same or more education	88%

Section 4: 2001 Racial Characterizations of Persons Characterized as “More than one race” in 2003

Table 4 is a frequency distribution of persons by race in 2003 as they were distributed by race in the 2001 survey. Row 23 summarizes the information on 723 persons who were listed in one of 16 categories (rows 6 through 21) that involve being a member of more than one race. Only 9.4 percent had been reported as “other” in 2001. This confirms that “other” and “more than one race” are not equivalent characterizations.

Forty-four percent (318 persons) of those characterized as being members of more than one race are included in row 7, “White and American Indian or Alaska Native.” Of the persons in row 7, 84.9 percent were listed as “White” in 2001; only 0.9 percent had been listed as “other.” Persons listed in 2003 as “Black/American Indian, Alaska Native” had been predominately characterized as Black in 2001. Combining all the categories with American Indian and Alaska Native and one or more other races (rows 7, 10, 13, 15, 17, and 19) accounts for 54 percent of all persons of two or more races.

The discussion of Table 2 noted that the new reporting format appears to elicit different responses about persons with American Indian or Alaska Native heritage. The Table 4 results are consistent with that conclusion. The extent of the difference in responses is highlighted by an analysis of the sample counts in Table 1:

- In 2001, 365 persons were characterized as “American Indian, Aleut, or Eskimo”; 206 of these persons were characterized in 2003 as “American Indian or Alaska Native only,” and another 47 were characterized as “American Indian or Alaska Native” and a member of one or more other races. The remaining 112 persons were characterized in 2003 as members of one race only, but not an American Indian or Alaska Native.

Table 4: Percentage Distribution of Race in 2003 by Race in 2001

Race as Reported in 2003 AHS		Race as Reported in 2001 AHS					
		A	B	C	D	E	F
		White	Black	American Indian, Aleut, or Eskimo	Asian or Pacific Islander	Other Race	Total
1	White Only	96.6%	0.6%	0.2%	0.3%	2.2%	100.0%
2	Black Only	2.1%	96.2%	0.3%	0.1%	1.4%	100.0%
3	American Indian, Alaska Native Only	28.8%	2.6%	59.4%	0.6%	8.6%	100.0%
4	Asian Only	5.5%	0.3%	0.3%	86.8%	7.0%	100.0%
5	Hawaiian, Pacific Islander Only	13.0%	3.7%	1.9%	72.7%	8.7%	100.0%
6	White / Black	34.9%	40.5%	0.8%	0.0%	23.8%	100.0%
7	White / American Indian, Alaska Native	84.9%	0.3%	13.8%	0.0%	0.9%	100.0%
8	White / Asian	47.2%	2.4%	0.0%	33.3%	17.1%	100.0%
9	White / Hawaiian, Pacific Islander	70.3%	0.0%	0.0%	27.0%	2.7%	100.0%
10	Black / American Indian, Alaska Native	4.5%	86.4%	2.3%	0.0%	6.8%	100.0%
11	Black / Asian	0.0%	28.6%	0.0%	57.1%	14.3%	100.0%
12	Black / Hawaiian, Pacific Islander	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
13	American Indian, Alaska Native / Asian	50.0%	0.0%	0.0%	50.0%	0.0%	100.0%
14	Asian / Hawaiian, Pacific Islander	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
15	White / Black / American Indian, Alaska Native	0.0%	47.8%	4.3%	17.4%	30.4%	100.0%
16	White / Black / Asian	0.0%	50.0%	0.0%	0.0%	50.0%	100.0%
17	White / American Indian, Alaska Native/Asian	NA	NA	NA	NA	NA	NA
18	White / Asian / Hawaiian, Pacific Islander	0.0%	0.0%	0.0%	91.7%	8.3%	100.0%
19	White / American Indian, Alaska Native / Hawaiian, Pacific Islander	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
20	Other combinations of 2 or 3 races	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
21	Other combinations of 4 or 5 races	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
22	Total	82.7%	10.8%	0.6%	3.5%	2.4%	100.0%
23	More than one race (sum of rows 6 through 21)	56.0%	15.9%	6.5%	12.2%	9.4%	100.0%

- In 2003, 347 persons were listed as “American Indian or Alaska Native only.” Of those persons, 206 had been listed as “American Indian, Aleut, or Eskimo” in 2001, and another 30 as “other” race. The remaining 111 persons had been listed as either “White,” “Black,” or “Asian or Pacific Islander” in 2001.
- In 2003, 392 persons were characterized as “American Indian or Alaska Native” and a member of another race (rows 7, 10, 13, 15, 17, and 19). Of those persons, only 46 had been characterized as “American Indian, Aleut, or Eskimo” in 2001.
- Of the same 61,889 persons, 365 were identified as “American Indian, Aleut, or Eskimo” in 2001, while 737 were identified as having some American Indian or Alaska Native heritage in 2003—a doubling of the count.

Of the 723 persons of more than one race, 126 (17.4 percent) were identified as members of both the White and Black races. In 2001, roughly equal percentages of this group were listed as “White” (34.9 percent) or “Black” (40.5 percent); 23.9 percent were listed as “other.”

The third major contributor to the more-than-one-race category was line 8, “White and Asian,” which contained 123 persons. About half (47.2 percent) of those in line 8 had been identified as “White” in 2001, and exactly one-third had been identified as “Asian or Pacific Islander.” The “other” category accounted for 17.1 percent of this group.

“Other” was not the characterization most frequently used in 2001 for any row that included more than two persons. In addition to the 3 rows discussed above, only 5 rows between 6 and 21 had more than 10 cases, and none of these rows had more than 10 percent in the “other” column in 2001.

Table 5 presents consistency checks for the 723 persons reported as members of more than one race in 2003. Once again, given reasonable reporting errors, the numbers in Table 5 do not contradict the assumption that row 23 in Table 4 reports on the same person in both years.

Table 5: Consistency on Other Variables

Percent of the same sex	100%
Percent of the same ethnicity	92%
Percent exactly 2 years older	76%
Percent with the same or more education	82%

The analysis in the remainder of this section looks for relationships between being a member of the more-than-one-race group and other AHS variables to determine if there are conditions under which this racial characterization is more likely to be used. Because of the strong association between being Hispanic and use of the “other” race category in 2001, the analysis begins with an examination of the interaction of ethnicity and the more-than-one-race options.

Table 6 shows that overall the percentage of Hispanics among those persons identified as members of more than one race is only slightly higher than the percentage of Hispanics among all 61,889 persons for whom the AHS reports race in both 2001 and 2003. Among the specific categories, the percentage of Hispanics is relatively high for those who are members of both the White and Black races, and relatively low for those listed as White and American Indian or Alaska Native and those listed as White and Asian. The sample sizes are less than 50 persons in each of the other more-than-one-race categories. There does not appear to be any relationship between ethnicity and being characterized as a member of more than one race.

Table 6: Ethnicity of Persons Reported as Members of More Than One Race

More than One Race Category	Hispanic	Non-Hispanic
White / Black	19.8%	80.2%
White / American Indian, Alaska Native	9.7%	90.3%
White / Asian	8.9%	91.1%
White / Hawaiian, Pacific Islander	13.5%	86.5%
Black / American Indian, Alaska Native	2.3%	97.7%
Black / Asian	14.3%	85.7%
Black / Hawaiian, Pacific Islander	0.0%	100.0%
American Indian, Alaska Native / Asian	0.0%	100.0%
Asian / Hawaiian, Pacific Islander	41.2%	58.8%
White / Black / American Indian, Alaska Native	17.4%	82.6%
White / Black / Asian	50.0%	50.0%
White / American Indian, Alaska Native/Asian	NA	NA
White / Asian / Hawaiian, Pacific Islander	33.3%	66.7%
White / American Indian, Alaska Native / Hawaiian, Pacific Islander	0.0%	100.0%
Other combinations of 2 or 3 races	0.0%	100.0%
Other combinations of 4 or 5 races	0.0%	100.0%
More than one race	12.4%	87.6%
All persons ⁷	8.5%	91.5%

The Census Bureau found that “more than one race” designations were more likely to be used for younger persons in the decennial census. This is not surprising; if a person is characterized as a member of more than one race, consistency would argue for applying the same characterization to any natural child of that person. The same consistency requirement does not run from child to parent. The first panel of Table 7 shows that the same is true for the AHS; almost one-half of the more-than-one-race persons were under 21 years of age, compared to less than one-third of all persons.

⁷ In this table, “all persons” refers to the 61,889 persons in both AHS surveys. In the remaining tables, “all persons” refers to the 146,111 persons for whom the 2003 AHS provides data, or as many of that group for whom data are available on the variable of interest. In this table, Hispanic heritage is based on the answer to the ethnicity question in the 2003 AHS. For the same 61,889 persons, the answer is slightly different if one were to use the ethnicity question in the 2001 AHS, 8.2 percent vs. 8.5 percent.

Table 7: Personal Characteristics and Racial Characterization

Age in 2003	More than One Race	All Persons
0-10	23.1%	15.1%
11-20	25.3%	15.3%
21-30	6.5%	12.6%
31-60	31.4%	41.4%
Over 60	13.7%	15.5%
Age in 2003, including recently born persons	More than One Race	All Persons
0-10	28.7%	15.1%
11-20	23.5%	15.3%
21-30	6.0%	12.6%
31-60	29.1%	41.4%
Over 60	12.7%	15.5%
Sex	More than One Race	All Persons
Male	46.2%	48.4%
Female	53.8%	51.6%
Education	More than One Race	All Persons
8th grade or less	8.3%	7.4%
Some high school	20.3%	16.2%
High School Graduate	23.2%	27.5%
Some college, including associate degree, or vocation certificate	30.4%	25.7%
Bachelor degree or higher	17.8%	23.1%

Table 8: Household Characteristics and Racial Characterization

Number of Persons in Household	More than One Race	All Persons
One person	9.3%	10.5%
Two people	19.4%	25.3%
More than two people	71.4%	64.3%
Relationship within Household	More than One Race	All Persons
Reference Person	29.7%	39.1%
Spouse	12.5%	20.1%
Child	50.7%	31.1%
Grandchild	3.2%	1.6%
Other	3.9%	8.0%
Family Type	More than One Race	All Persons
Primary family	84.0%	80.6%
Primary individual	11.1%	12.6%
Related subfamily	2.9%	2.5%
Unrelated subfamily	0.0%	0.2%
Secondary individual	2.1%	4.1%
Household Income	More than One Race	All Persons
Mean	\$78,845	\$73,579
Third Quartile	\$88,000	\$85,000
Median	\$55,000	\$50,000
First Quartile	\$28,000	\$26,000

The more-than-one-race numbers in the first panel of Table 7 were calculated under the constraint that the person of more than one race had to have moved into the unit before 2001. This eliminates children of ages 0 or 1 year. The second panel in Table 7 presents the same age comparison with the addition of 57 zero-year old persons of more than one race. Now more than half of the more-than-one-race persons are less than 21 years old.

Table 7 shows that the male/female distribution of persons of more than one race is very similar to the distribution for all persons. The younger age of persons of more than one race probably explains why this group has a higher percentage of persons with less than a high school diploma.

The younger age of the more-than-one-race persons shows up in other variables. Table 8 shows that persons listed as members of more than one race live in larger households, are less likely to be the “reference” person or the reference person’s spouse and more likely to be a child of the reference person, and are more likely to be part of the primary family and less likely to be either the primary or a secondary individual. The lower percentage for secondary individual probably results from less precise knowledge about the racial background of a roommate. Households with persons of more than one race also have higher incomes than the typical household. The higher income may relate to household structure, i.e., a higher proportion with two wage earners. This may also be related to the fact that so many mixed-race persons are children, to the extent that people decide to have children based on what they can afford.

Household size and composition probably account for the fact that, as shown in Table 9, “more than one race” persons are more likely to live in single-family, detached structures and are less likely to live in apartment buildings. The same factors probably explain the higher proportion of persons of more than one race in suburban areas. The lower concentration in non-metropolitan areas may be related to less racial diversity in non-metropolitan areas. The extent of racial diversity may also account for the significantly higher percentage of persons of more than one race in the West region. As mentioned previously, 54 percent of this group were persons with American Indian or Alaska Native heritage.

Table 9: Structure Type and Location and Racial Characterization

Structure Type	More than One Race	All Persons
One-unit building, detached from any other building	77.7%	67.7%
One-unit building, attached to one or more buildings	3.7%	6.3%
Building with two or more apartments	14.4%	21.2%
Manufactured (mobile) home	4.1%	4.8%
Location by Metropolitan Status	More than One Race	All Persons
Central city of MSA	26.7%	29.8%
Inside MSA, but not in central city - urban	42.7%	35.6%
Inside MSA, but not in central city - rural	13.0%	14.1%
Outside MSA, urban	5.7%	6.6%
Outside MSA, rural	11.9%	13.9%
Location by Region	More than One Race	All Persons
Northeast	15.5%	19.6%
Midwest	18.0%	25.2%
South	28.5%	31.9%
West	38.0%	23.2%

Section 5: Conclusions

With respect to the change in the data collection guidelines, this paper found:

- There is little overlap between the persons listed as “other” race in the 2001 AHS and those listed in one of the 16 categories denoting membership in two or more races in the 2003 AHS. Only 4.5 percent of the “other” race persons were identified as members of two or more races, and only 9.4 percent of those identified as members of two or more races were reported in the “other” race category.
- Use of the “other” race category in 2001 appears to have been heavily influenced by an apparent confusion in the minds of respondents between race and ethnicity. Although only 8.2 percent of the sample was Hispanic in 2001, 72.5 percent of the persons characterized as “other” were Hispanic.
- Fifty-four percent of the persons listed in 2003 as members of more than one race had American Indian or Alaska Native heritage.
- The new data collection guidelines had a significant impact on the way persons with American Indian or Alaska Native heritage were reported. The count of American Indians or Alaska Natives in the sample doubled between the two surveys, even though some of those listed as “American Indian, Aleut, or Eskimo” in 2001 were listed in another race category in 2003. In many cases, the characterizations in the two surveys appear to be inconsistent for these persons.

The paper also found that the AHS is a useful tool for studying the characteristics, both housing and non-housing, of individuals at different times.

- There were 61,889 persons who could be reliably tracked between 2001 and 2003. In addition to racial characterizations, one could examine changes in employment status, income source, education, marital status, etc. for these persons.
- The AHS variables, SAMEHH and MOVE, are effective ways to determine whether a person in the 2001 survey is the same person as one with the same CONTROL and PLINE numbers in the 2003 survey.

Appendix A: Excerpts from the OMB Guidelines on Federal Data on Race and Ethnicity

Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity

This classification provides a minimum standard for maintaining, collecting, and presenting data on race and ethnicity for all Federal reporting purposes. The categories in this classification are social-political constructs and should not be interpreted as being scientific or anthropological in nature. They are not to be used as determinants of eligibility for participation in any Federal program. The standards have been developed to provide a common language for uniformity and comparability in the collection and use of data on race and ethnicity by Federal agencies.

The standards have five categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. There are two categories for data on ethnicity: "Hispanic or Latino," and "Not Hispanic or Latino."

1. Categories and Definitions

The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting are defined as follows:

- American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
- Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."
- Hispanic or Latino. A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."
- Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Respondents shall be offered the option of selecting one or more racial designations. Recommended forms for the instruction accompanying the multiple response question are "Mark one or more" and "Select one or more."

2. Data Formats

The standards provide two formats that may be used for data on race and ethnicity. Self-reporting or self-identification using two separate questions is the preferred method for collecting data on race and ethnicity. In situations where self-reporting is not practicable or feasible, the combined format may be used.

In no case shall the provisions of the standards be construed to limit the collection of data to the categories described above. The collection of greater detail is encouraged; however, any collection that uses more detail shall be organized in such a way that the additional categories can be aggregated into these minimum categories for data on race and ethnicity.

With respect to tabulation, the procedures used by Federal agencies shall result in the production of as much detailed information on race and ethnicity as possible. However, Federal agencies shall not present data on detailed categories if doing so would compromise data quality or confidentiality standards.

a. Two-question format

To provide flexibility and ensure data quality, separate questions shall be used wherever feasible for reporting race and ethnicity. When race and ethnicity are collected separately, ethnicity shall be collected first. If race and ethnicity are collected separately, the minimum designations are:

Race:

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White

Ethnicity:

- Hispanic or Latino

-- Not Hispanic or Latino

When data on race and ethnicity are collected separately, provision shall be made to report the number of respondents in each racial category who are Hispanic or Latino.

When aggregate data are presented, data producers shall provide the number of respondents who marked (or selected) only one category, separately for each of the five racial categories. In addition to these numbers, data producers are strongly encouraged to provide the detailed distributions, including all possible combinations, of multiple responses to the race question. If data on multiple responses are collapsed, at a minimum the total number of respondents reporting "more than one race" shall be made available.

...

5. Effective Date

The provisions of these standards are effective immediately for all new and **revised** record keeping or reporting requirements that include racial and/or ethnic information. All **existing** record keeping or reporting requirements shall be made consistent with these standards at the time they are submitted for extension, or not later than January 1, 2003. *{Emphasis in original.}*

Appendix B: Coding of the RACE Variable in the American Housing Survey

RACE	2001 and earlier AHS's
1	White
2	Black
3	American Indian, Aleut, or Eskimo
4	Asian or Pacific Islander
5	Other Race

RACE	2003 and later AHS's
01	White Only
02	Black Only
03	American Indian, Alaska Native Only
04	Asian Only
05	Hawaiian, Pacific Islander Only
06	White / Black
07	White / American Indian, Alaska Native
08	White / Asian
09	White / Hawaiian, Pacific Islander
10	Black / American Indian, Alaska Native
11	Black / Asian
12	Black / Hawaiian, Pacific Islander
13	American Indian, Alaska Native / Asian
14	Asian / Hawaiian, Pacific Islander
15	White / Black / American Indian, Alaska Native
16	White / Black / Asian
17	White / American Indian, Alaska Native / Asian
18	White / Asian/Hawaiian, Pacific Islander
19	White / American Indian, Alaska Native / Hawaiian, Pacific Islander
20	Other combinations of 2 or 3 races
21	Other combinations of 4 or 5 races