



Racial and Ethnic Diversity among U.S.-Educated Science, Engineering, and Health Doctorate Recipients: Methods of Reporting Diversity

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This InfoBrief describes two common methods for tabulating race and ethnicity and uses these methods to present the racial diversity and the Hispanic or Latino origins of the science, engineering, and health (SEH) doctoral population.² In this report, the SEH doctoral population comprises individuals in the United States who hold a research doctorate from a U.S. academic institution in an SEH field. In 2008, 98.8% of the estimated 752,000 members of this population reported being a single race, and 1.2% reported being two or more races.

The percentage of Hispanic doctorate holders increased between 2001 and 2008 among individuals in the SEH doctoral population who were U.S. citizens or permanent residents.³ Among those without Hispanic origins, Asian and black or African American doctorate holders who reported being a single race also increased from 2001 to 2008, but the percentage of individuals reporting multiple race combinations remained virtually unchanged.⁴ Individuals who reported being American Indian or Alaska Native and those who

reported being Native Hawaiian or Other Pacific Islander were more likely than others not of Hispanic ethnicity to report being two or more races.

Collecting Data on Race and Ethnicity

In 1997, to reflect the nation's increasing diversity, the Office of Management and Budget (OMB) revised the federal guidelines for collecting and tabulating data on race/ethnicity to allow individuals the option to self-identify with more than one race (see http://www.whitehouse.gov/omb/fedreg_1997standards). Beginning in 2001 the Survey of Doctorate Recipients (SDR) incorporated OMB's revised guidelines into its survey questionnaires.⁵ Respondents could report their ethnicity by selecting from two categories: (1) Hispanic or Latino or (2) not Hispanic or Latino. Respondents could report their race by selecting one or more of the following five categories: (1) American Indian or Alaska Native, (2) Asian, (3) black or African American, (4) Native Hawaiian or Other Pacific Islander, and (5) white. Figure 1 shows the wording of questions from the 2008 SDR Web survey.⁶

Tabulating Data on Race and Ethnicity

Agencies and researchers have tabulated data on race/ethnicity in various ways over the years. This InfoBrief uses two common practices to capture the detailed distributions of race/ethnicity within the doctoral population.⁷

Minimum Number Reporting Each Race

The first reporting practice results in counts that sum to the total population. Each individual's self-reported race is represented among mutually exclusive categories. The categories are based on the reporting of just one race, as well as combinations of more than one race. Those who report one race alone are categorized into the following five groups:

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

FIGURE 1. Questions on Hispanic origin and race from the Web version of the 2008 Survey of Doctorate Recipients

- **Are you Hispanic or Latino?**
Yes
No
- [If "yes" to above] **Which of the following best describes your Hispanic origin or descent?**
Mexican American or Chicano
Puerto Rican
Cuban
Other Hispanic
- [If "Other Hispanic" is selected] **What is the other Hispanic origin or descent?** _____
- [If no origin or descent is selected] **What is your Hispanic origin?** _____
- **What is your racial background?**
Select all that apply.
American Indian or Alaska Native
Native Hawaiian or Other Pacific Islander (Hawaiian, Guamanian, Chamorro, Samoan, or other Pacific Islander)
Asian (Asian Indian, Cambodian, Chinese, Japanese, Korean, Malaysian, Pakistani, Filipino, Thai, or Vietnamese)
Black or African American
White
Other
- [If "American Indian" is selected] **What is your tribal affiliation?** _____
- [If "Other" racial group or no racial group is selected] **What is your race?** _____

NOTES: Beginning in 2001 all Survey of Doctorate Recipients (SDR) sample members were allowed to identify more than one race. Sample members who responded to the questions on race/ethnicity in 2001 were not asked the questions in 2003, 2006, or 2008; only those who did not provide data in 2001 were asked the questions in a subsequent year, if they responded via telephone or the Web. (The paper survey did not include the race/ethnicity questions.) For new sample members entering the SDR in 2003, 2006, or 2008, the race/ethnicity data were collected by the National Science Foundation-sponsored Survey of Earned Doctorates (SED), an annual census of all new research doctorate recipients. The SED began asking the multi-race question in 2001. If a sample member new to SDR did not provide the information to the SED, the SDR attempted to collect it.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

Those who report more than one race represent one of the 26 possible combinations of the five racial groups. These individuals can be described in terms of their specific, self-reported multiple-race combinations (e.g., Asian and white, black and white, or Asian and black and white) or simply grouped into categories representing the number of races with which they identify (e.g., with two races or with three or more races).

When this reporting practice is applied to the 2008 SDR, 98.8% of doctorate holders reported a single race and 1.2% reported two or more races (table 1). Although the absolute number of SEH

doctorate recipients identifying two or more races increased between 2001 and 2008, so did the overall SEH doctoral population; as a result, the percentage of individuals indicating multiple races did not change.

Citizenship Status. Of the 752,000 SEH doctorate holders in 2008, a total of 725,000 (96.4%) were U.S. citizens or permanent residents and 26,900 (3.6%) were temporary residents. Because the distribution of race and ethnicity differs by citizenship status, we describe these differences briefly before focusing solely on U.S. citizens and permanent residents.

In 2008, 1.3% of U.S. citizens reported more than one race, whereas less than 1% of permanent residents (0.4%) and temporary residents (0.4%) did so (table 1). The overall increase from 2001 to 2008 in the number of all SEH doctorate holders reporting more than one race was entirely a reflection of the trend among those who were U.S. citizens (7,000 to 9,000) (table 1).

In 2008 more than half of the permanent residents reported Asian alone (58.4%), 38.0% reported white alone, and 3.2% reported black alone. Among temporary residents 73.2% reported Asian alone, 24.2% reported white

TABLE 1. Doctorate recipients in science, engineering, and health fields reporting one or more races, by U.S. citizenship status: 2001, 2003, 2006, and 2008

U.S. citizenship status and race	2001	2003	2006	2008
All doctorate recipients	656,500	685,300	711,800	752,000
Single race	649,000	676,900	703,400	742,700
2 races	7,000	7,700	7,700	8,600
3 or more races	600	600	700	700
U.S. citizens	597,300	622,600	644,000	675,200
Single race	590,200	614,700	636,100	666,200
2 races	6,500	7,300	7,300	8,300
3 or more races	500	600	600	700
Permanent residents	42,100	42,400	43,000	49,800
Single race	41,700	42,100	42,700	49,600
2 races	400	300	300	200
3 or more races	D	D	D	D
Temporary residents	17,200	20,200	24,800	26,900
Single race	17,000	20,100	24,700	26,800
2 races	100	200	100	100
3 or more races	D	D	D	D

D = suppressed to avoid disclosure of confidential information.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients.

alone, and 2.2% reported black alone. (Data not shown.)

U.S. Citizens and Permanent Residents: Single-Race. Generally, the SDR and other surveys that report on race and ethnicity classify all individuals who report Hispanic origin as Hispanic (regardless of reported race) and classify all others according to the single race or multiple races identified by the respondents. Overall, 98.9% of the 2008 U.S. citizen and permanent resident doctoral population was categorized as either Hispanic (regardless of racial background) or of a single race (table 2).

Among respondents to the SDR who were not Hispanic, the largest single race reported in 2008 was white (80.3%) followed by Asian (15.3%) (table 2). The number of respondents reporting a single race increased from 2001 to 2008, but relative growth was lowest for whites. In 2001, 81.1% of respondents were white (518,400 of

639,400), and although the number of whites increased in 2008, the percentage of whites fell to 78.0% (565,600 of 725,000). In contrast, the percentage of Asians increased from 12.9% of the population in 2001 to 14.8% in 2008, and the percentage of blacks increased from 2.3% in 2001 to 2.8% in 2008 (table 2).

As a percentage of the U.S. citizen and permanent resident doctoral population, Hispanics increased from 2.4% (15,300) in 2001 to 2.9% (20,900) in 2008; 90.0% reported white alone in 2008 (table 2).

U.S. Citizens and Permanent Residents: Multiple-Race. Multiple-race identifications in the doctoral population were relatively rare compared with single-race identifications. Among U.S. citizen and permanent resident doctorate recipients in 2008 who were not Hispanic, a total of 8,000 (1.1%) reported being two or more races. Of these, the most common combinations

were American Indian or Alaska Native and white (3,600 of 8,000, or 45.0%) and Asian and white (2,500 of 8,000, or 31.3%) (table 2). Of the 7,300 individuals in the five most frequent racial combinations that excluded Hispanic ethnicity, 6,700 (91.8%) included white as one of the reported races (table 2). Hispanic doctorate recipients were more likely than doctorate recipients who were not Hispanic to report two or more races (5.3% versus 1.1%).

Maximum Number Reporting Each Race

A second reporting practice results in the maximum number of people reporting a particular race, because it includes all who reported that race alone or in combination with one or more of the other races. This type of aggregation represents all respondents who identified themselves as entirely or partially of that race. Therefore, the five race categories are not mutually exclusive (i.e., individuals reporting two or more races are counted in each reported group).

Among U.S. citizen and permanent resident doctorate recipients in 2008 who were not Hispanic, individuals identifying in two racial groups, American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander, were more likely than others to report being two or more races (figure 2). A total of 5,600 SEH doctorate recipients reported having an American Indian or Alaska Native racial background, but only 1,500 of the 5,600 (26.8%) reported that race alone. A total of 3,600 (64.3%) reported being American Indian or Alaska Native and white, and 500 (8.9%) identified other combinations of races that included American Indian or Alaska Native (figure 2).

Similarly, among the 1,500 individuals self-reporting as Native Hawaiian or Other Pacific Islander, 700 (46.7%) identified solely as that race (figure 2). “White” was identified as their single

TABLE 2. U.S. citizen and permanent resident doctorate recipients in science, engineering, and health fields reporting each race, by Hispanic ethnicity: 2001, 2003, 2006, and 2008

Race/ethnicity	2001	2003	2006	2008
All U.S. citizens and permanent residents	639,400	665,100	687,000	725,000
Hispanic or Latino (any race)	15,300	16,600	18,700	20,900
Single race	14,500	15,800	17,700	19,800
American Indian or Alaska Native	200	200	200	300
Asian	100	200	200	200
Black or African American	300	300	300	500
Native Hawaiian or Other Pacific Islander	D	D	D	D
White	13,900	15,100	16,900	18,800
2 races (3 most frequent plus other combinations)	600	600	800	900
American Indian or Alaska Native and white	200	300	400	400
Asian and white	100	100	100	100
Black or African American and white	200	200	300	300
All other combinations of 2 races	*	D	100	100
3 or more races	200	200	200	200
Not Hispanic or Latino	624,100	648,500	668,300	704,100
Single race	617,400	641,100	661,100	696,100
American Indian or Alaska Native	1,100	1,100	1,400	1,500
Asian	82,600	92,600	94,400	107,600
Black or African American	14,700	16,400	18,600	20,600
Native Hawaiian or Other Pacific Islander	600	500	700	700
White	518,400	530,400	545,900	565,600
2 races (5 most frequent plus other combinations)	6,300	7,000	6,800	7,500
American Indian or Alaska Native and black or African American	200	200	200	200
American Indian or Alaska Native and white	3,200	3,500	3,500	3,600
Asian and Native Hawaiian or Other Pacific Islander	400	400	300	400
Asian and white	1,800	2,200	2,000	2,500
Black or African American and white	400	500	500	600
All other combinations of 2 races	300	200	300	300
3 or more races	400	500	500	500

* = value < 50; D = suppressed to avoid disclosure of confidential information.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients.

other race by 200 (13.3%) individuals. Nearly all of the 600 individuals reporting other multiple-race combinations reported Asian as one of their races.

In contrast, much higher percentages of those who identified themselves as Asian, black, or white reported one race alone (figure 2). In 2008, of the 110,900 reporting Asian race, 97.0% reported it alone and 2.3% reported Asian and white. Among the 21,800 persons who identified as black, 94.5% reported that race alone and 2.8% reported black and white. Of the 572,900 identifying

as white, 98.7% indicated white alone (figure 2 and table 3).

For American Indians and Alaska Natives and for Native Hawaiians and Other Pacific Islanders, it is important to note that although the minimum numbers (single race alone) and maximum numbers (single race alone or in combination with one or more other races) differ substantially, the percentages of the population from these two reporting practices yield similar results because of the relatively small numbers in the total doctorate recipient population identifying as these races.

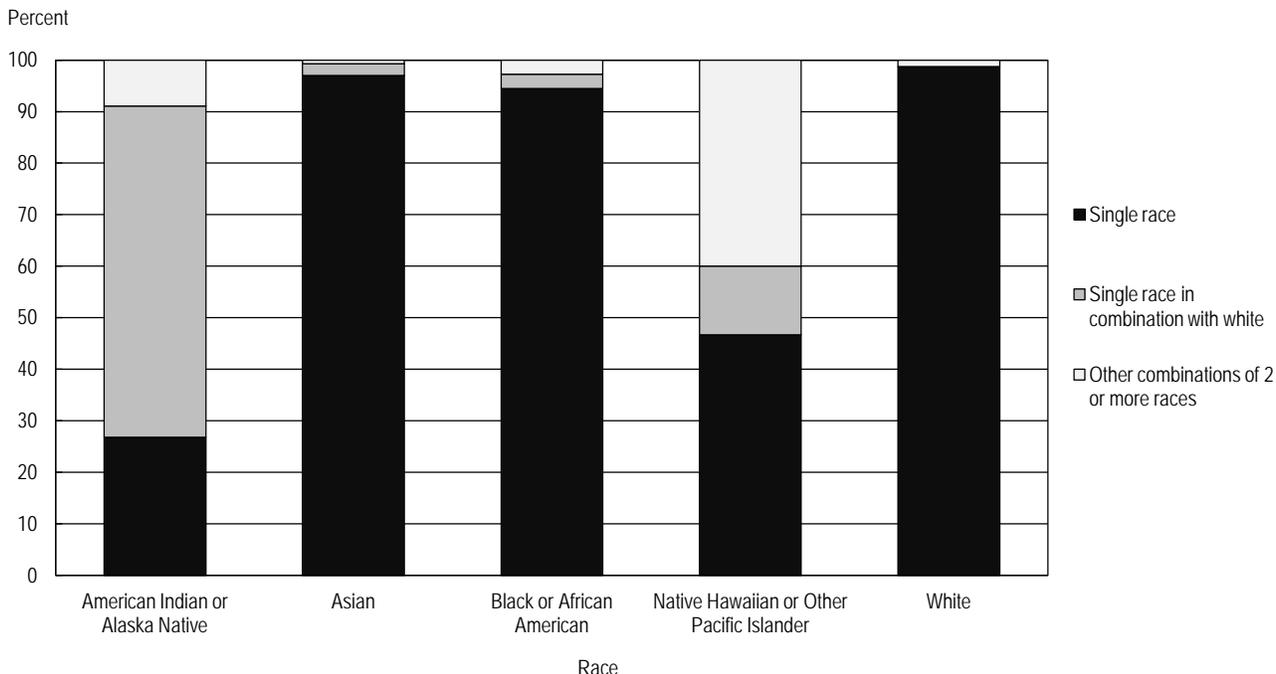
Characteristics of SEH Doctorate Recipients

The remainder of this report describes the SEH doctoral population using the mutually exclusive reporting categories of single race and multiple race (minimum number reporting each race); however, tables 4–6 present both the minimum and maximum values for comparison purposes.

Sex

Among all U.S. citizens and permanent residents who held an SEH doctorate from a U.S. institution in 2008, 30.3% were women. Women made up 40.7%

FIGURE 2. Single- and multiple-race identification among U.S. citizen and permanent resident doctorate recipients who are not of Hispanic ethnicity: 2008



NOTE: Numbers represent weighted counts and are rounded to nearest 100.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

TABLE 3. U.S. citizen and permanent resident doctorate recipients who are not of Hispanic ethnicity in science, engineering, and health fields reporting each race alone or in combination: 2001, 2003, 2006, and 2008

Race	2001	2003	2006	2008
All U.S. citizens and permanent residents who are not Hispanic	624,100	648,500	668,300	704,100
American Indian or Alaska Native, alone or in combination ^a	4,800	5,100	5,400	5,600
American Indian or Alaska Native, alone	1,100	1,100	1,400	1,500
American Indian or Alaska Native and one or more other races	3,700	4,000	4,000	4,100
Asian, alone or in combination ^a	85,100	95,500	97,100	110,900
Asian, alone	82,600	92,600	94,400	107,600
Asian and one or more other races	2,600	2,900	2,700	3,300
Black or African American, alone or in combination ^a	15,700	17,500	19,700	21,800
Black or African American, alone	14,700	16,400	18,600	20,600
Black or African American and one or more other races	1,000	1,100	1,100	1,200
Native Hawaiian or Other Pacific Islander, alone or in combination ^a	1,300	1,200	1,400	1,500
Native Hawaiian or Other Pacific Islander, alone	600	500	700	700
Native Hawaiian or Other Pacific Islander and one or more other races	700	700	700	700
White, alone or in combination ^a	524,400	537,200	552,700	572,900
White, alone	518,400	530,400	545,900	565,600
White and one or more other races	6,000	6,800	6,700	7,300

^a Because respondents could report more than one race, the sum of race categories exceeds the total number of individuals.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients.

of those who reported Hispanic ethnicity and 30.0% of those who did not (table 4). Among individuals who were not Hispanic and who reported being just one race, 45.1% of blacks were women compared with 30.0% of whites and 26.5% of Asians. Women were a higher percentage of Native Hawaiians or Other Pacific Islanders (42.9%) than of Asians (26.5%).

Women made up a greater percentage of those reporting two or more races (39.6%) than of those reporting a single race (30.2%) (table 4). This may be due, in part, to the greater percentage

of women in the more recent doctoral cohorts and a greater percentage of individuals identifying multiple races from those newer cohorts.

Age

Overall, doctorate holders younger than 35 were more likely than older doctorate holders to report multiple races. This age group comprised 12.1% of the multiple-race identifiers compared with 7.5% of the single-race identifiers (table 4). Specifically, among individuals who were younger than 35 years and not Hispanic, the percentage identifying multiple races was significantly greater

than the percentage identifying a single race among Asians (18.2% versus 8.6%) and whites (11.0% versus 7.0%).

Among individuals not of Hispanic ethnicity who were 60 years or older in 2008, the percentage of single-race whites (33.3%) was greater than the percentage of single-race Asians (15.7%), blacks (20.9%), and Native Hawaiians and Other Pacific Islanders (14.3%). Single-race whites were also a larger percentage in this age group than were individuals identifying Hispanic ethnicity, regardless of race (16.7%) (table 4).

TABLE 4. U.S. citizen and permanent resident doctorate recipients in science, engineering, and health fields reporting each race alone or in combination, by Hispanic ethnicity, sex, and age: 2008

Race/ethnicity	All	Sex		Age				
		Male	Female	Under 35	35–39	40–49	50–59	60+
All U.S. citizens and permanent residents	725,000	505,200	219,800	54,600	81,800	180,900	191,800	215,800
Single race	715,900	499,700	216,200	53,600	80,700	178,400	189,500	213,600
2 or more races	9,100	5,500	3,600	1,100	1,100	2,500	2,300	2,200
Hispanic or Latino	20,900	12,400	8,500	2,600	3,500	6,300	5,100	3,500
Single race	19,800	11,900	7,900	2,400	3,300	5,900	4,800	3,400
White	18,800	11,400	7,300	2,300	3,100	5,600	4,600	3,200
All other races	1,000	500	500	100	200	300	200	200
2 or more races	1,100	500	600	200	100	400	300	100
Not Hispanic or Latino	704,100	492,800	211,300	52,000	78,300	174,600	186,700	212,400
American Indian or Alaska Native, alone or in combination ^a	5,600	3,600	2,000	300	500	1,200	1,700	1,900
American Indian or Alaska Native, alone	1,500	1,000	500	S	200	300	400	500
American Indian or Alaska Native and one or more other races	4,100	2,600	1,500	200	300	900	1,300	1,400
Asian, alone or in combination ^a	110,900	81,300	29,600	9,700	19,100	40,600	24,000	17,400
Asian, alone	107,600	79,100	28,500	9,200	18,500	39,700	23,300	16,900
Asian and one or more other races	3,300	2,200	1,100	600	600	1,000	600	500
Black or African American, alone or in combination ^a	21,800	11,800	9,900	2,200	3,100	5,500	6,300	4,700
Black or African American, alone	20,600	11,200	9,300	2,100	3,000	5,200	6,000	4,300
Black or African American and one or more other races	1,200	600	600	100	200	300	200	400
Native Hawaiian or Other Pacific Islander, alone or in combination ^a	1,500	900	600	200	200	500	300	300
Native Hawaiian or Other Pacific Islander, alone	700	500	300	200	200	300	100	100
Native Hawaiian or Other Pacific Islander and one or more	700	400	300	100	100	200	200	200
White, alone or in combination ^a	572,900	400,600	172,300	40,500	56,400	129,000	156,700	190,400
White, alone	565,600	396,000	169,700	39,700	55,500	127,100	154,900	188,500
White and one or more other races	7,300	4,600	2,700	800	900	1,900	1,800	1,900

S = suppressed for reliability; coefficient of variation exceeds publication standards.

^a Because respondents could report more than one race, the sum of race categories exceeds the total number of individuals.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

Field of Doctorate

In 2008, the percentage of U.S. citizen and permanent resident doctorate recipients who identified as Hispanic or as a single race differed across the field of study groupings (table 5). The percentage of blacks in the physical sciences (9.7%) was lower than the percentage of Hispanics (14.8%), Asians (19.8%), or whites (18.9%). The percent-

ages of Asians in psychology and social sciences (2.9% and 6.1%, respectively) were lower than the percentages of Hispanics (20.1% and 15.3%), blacks (22.8% and 22.8%), or whites (17.3% and 13.7%). The percentage of Asians in engineering (34.7%) was much higher than the percentage of Hispanics (14.4%), blacks (11.2%), or whites (13.9%) in engineering.⁸

Individuals reporting multiple races were less likely than single-race identifiers to have earned doctorates in mathematics and statistics (2.2% versus 4.7%) and in engineering (13.2% versus 16.9%), and they were more likely than single-race identifiers to have earned doctorates in social sciences (17.6% versus 12.9%). In other fields of study the likelihood of earning an

TABLE 5. U.S. citizen and permanent resident doctorate recipients in science, engineering, and health fields reporting each race alone or in combination, by Hispanic ethnicity and field of study: 2008

Race/ethnicity	All fields	Biological/ agricultural/ environmental life sciences	Computer/ information sciences	Mathematics/ statistics	Physical sciences	Psy- chology	Social Sciences	Engineering	Health
All U.S. citizens and permanent residents	725,000	182,000	15,400	33,900	134,600	111,700	93,900	122,200	31,200
Single race	715,900	179,600	15,200	33,700	133,100	110,100	92,300	121,000	30,800
2 or more races	9,100	2,400	200	200	1,500	1,600	1,600	1,200	500
Hispanic or Latino	20,900	5,500	400	800	3,100	4,200	3,200	3,000	900
Single race	19,800	5,300	300	800	2,800	3,900	2,900	2,900	800
White	18,800	5,000	300	700	2,700	3,700	2,700	2,800	700
All other races	1,000	300	D	D	100	200	200	100	*
2 or more races	1,100	200	D	D	300	300	200	100	100
Not Hispanic or Latino	704,100	176,500	15,100	33,100	131,500	107,500	90,700	119,200	30,400
American Indian or Alaska Native, alone or in combination ^a	5,600	1,500	D	100	800	1,200	1,200	400	300
American Indian or Alaska Native, alone	1,500	400	D	D	200	300	400	S	100
American Indian or Alaska Native and one or more other races	4,100	1,100	D	100	600	900	800	300	200
Asian, alone or in combination ^a	110,900	26,500	4,600	6,100	21,800	3,400	7,000	37,900	3,500
Asian, alone	107,600	25,500	4,500	5,900	21,300	3,100	6,600	37,300	3,400
Asian and one or more other races	3,300	1,000	200	100	600	300	400	600	100
Black or African American, alone or in combination ^a	21,800	4,400	300	700	2,100	5,000	5,000	2,500	1,900
Black or African American, alone	20,600	4,200	300	700	2,000	4,700	4,700	2,300	1,800
Black or African American and one or more other races	1,200	300	D	D	100	200	300	200	100
Native Hawaiian or Other Pacific Islander, alone or in combination ^a	1,500	500	D	D	300	200	200	200	100
Native Hawaiian or Other Pacific Islander, alone	700	200	D	D	200	100	100	100	D
Native Hawaiian or Other Pacific Islander and one or more other races	700	300	D	D	100	D	100	100	100
White, alone or in combination ^a	572,900	146,100	10,200	26,500	107,800	99,200	78,800	79,400	25,000
White, alone	565,600	144,100	10,000	26,300	106,700	97,900	77,600	78,400	24,700
White and one or more other races	7,300	2,000	200	200	1,100	1,300	1,200	1,000	300

* = value < 50. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability; coefficient of variation exceeds publication standards.

^a Because respondents could report more than one race, the sum of race categories exceeds the total number of individuals.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

SEH doctorate was not significantly different between identifiers of single and multiple races.

Employment Sector

In 2008, universities and 4-year colleges had the largest number (237,400) of full-time employed SEH doctorate holders who were U.S. citizens or permanent residents, followed by the private for-profit sector (184,000). Full-time

employed doctorate holders who identified as Hispanic or as a single race differed in how they were distributed across the employment sectors (table 6). A smaller percentage of single-race Asians were employed by universities and 4-year colleges (30.9%) compared with Hispanics (50.9%), blacks (51.2%), and whites (44.9%). In contrast, a higher percentage of Asians were employed in the private for-profit sector (52.6%)

compared with Hispanics (25.1%), blacks (19.3%), and whites (29.9%).

Multiple-race reporters were not significantly more or less likely than single-race reporters to work in academe or to work in the private for-profit sector, either overall or within most racial/ethnic groups. The only exception to this was among Asians, where single-race reporters were less likely

TABLE 6. U.S. citizen and permanent resident doctorate recipients in science, engineering, and health fields reporting each race alone or in combination, by Hispanic ethnicity and employment sector: 2008

Race/ethnicity	All	Universities and 4-year colleges	Private for-profit	Self-employed	Private not-for-profit	Federal government	State and local government	Other ^a
All full-time employed U.S. citizens and permanent residents	552,900	237,400	184,000	20,100	35,500	41,600	16,800	17,700
Single race	545,500	233,800	181,900	19,900	34,900	41,000	16,400	17,600
2 or more races	7,500	3,500	2,100	200	500	600	400	100
Hispanic or Latino	17,100	8,700	4,300	400	1,000	1,100	700	900
Single race	16,200	8,100	4,100	400	1,000	1,100	600	900
White	15,400	7,800	3,900	400	900	1,100	600	800
All other races	800	400	200	D	D	D	D	100
2 or more races	1,000	500	200	D	*	D	100	100
Not Hispanic or Latino	535,800	228,700	179,700	19,600	34,500	40,500	16,100	16,700
American Indian or Alaska Native, alone or in combination ^b	4,500	2,000	1,400	200	200	400	300	D
American Indian or Alaska Native, alone	1,200	500	300	100	D	100	S	D
American Indian or Alaska Native and one or more other races	3,300	1,500	1,000	100	100	300	200	D
Asian, alone or in combination ^b	95,800	30,000	49,800	1,600	5,400	5,400	2,500	1,200
Asian, alone	93,100	28,800	49,000	1,500	5,000	5,200	2,400	1,100
Asian and one or more other races	2,700	1,200	800	S	300	200	100	D
Black or African American, alone or in combination ^b	17,600	9,200	3,300	500	1,000	1,500	1,000	1,100
Black or African American, alone	16,600	8,500	3,200	500	1,000	1,400	900	1,100
Black or African American and one or more other races	1,000	700	100	D	D	100	100	D
Native Hawaiian or Other Pacific Islander, alone or in combination ^b	1,200	600	300	D	100	100	*	D
Native Hawaiian or Other Pacific Islander, alone	600	300	200	D	100	100	D	D
Native Hawaiian or Other Pacific Islander and one or more other races	600	300	100	D	D	D	D	D
White, alone or in combination ^b	423,800	190,300	126,800	17,500	28,300	33,800	12,600	14,500
White, alone	417,900	187,600	125,000	17,400	27,900	33,200	12,300	14,400
White and one or more other races	6,000	2,700	1,800	100	500	600	300	S

* = value < 50. D = suppressed to avoid disclosure of confidential information. S = suppressed for reliability: coefficient of variation exceeds publication standards.

^a Includes mainly individuals employed by preschool, elementary, middle, or secondary schools or systems and individuals employed by 2-year colleges, community colleges, or technical institutes, as well as a small number whose employment did not correspond to these or the other categories.

^b Because respondents could report more than one race, the sum of race categories exceeds the total number of individuals.

NOTES: Numbers represent weighted counts and are rounded to nearest 100. Due to rounding, numbers may not sum to totals.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, Survey of Doctorate Recipients: 2008.

than multiple-race reporters to work in academe (30.9% versus 44.4%) and more likely to work in the private for-profit sector (52.6% versus 29.6%).

Data Sources and Limitations

Information in this InfoBrief is from the 2008, 2006, 2003, and 2001 cycles of the Survey of Doctorate Recipients (SDR). The data on race and ethnicity presented in this report were provided as responses to the SDR by respondents as well as responses assigned during the data editing and imputation processes. Of the 29,974 respondents in the 2008 SDR, 383 had ethnicity and/or race imputed (1.3%).

Numbers in this InfoBrief represent weighted counts and are rounded to the nearest 100. The percentages presented in the text are based on the rounded counts presented in the tables. Because of the rounding, the subtotal counts may not sum to the total counts in the tables and the percentages calculated from those counts may not sum to 100%. All differences stated in this report are significant at the 95% level. Significance tests were performed on unrounded statistics.

The SDR has been conducted every 2 years since 1973 (with a 3-year period between 2003 and 2006) and is sponsored by the National Science Foundation (NSF), the National Institutes of Health, and other federal agencies on an occasional basis. The SDR is a longitudinal study of individuals who have received research doctorate degrees from U.S. academic institutions in SEH fields and are living in the United States on the survey reference date. SEH fields include biological/agricultural/environmental life sciences, computer and information sciences, mathematics and statistics, the physical sciences, psychology, the social sciences, engineering, and health fields.

The survey follows a sample of individuals with SEH doctorates throughout their careers from the year of their degree award through age 75; the total sample size for the 2008 survey was 40,093, of which 81% completed the questionnaire. The panel is refreshed in each survey cycle with a sample of new SEH doctoral degree earners selected from another NSF-sponsored survey, the Survey of Earned Doctorates (SED). The SED is a census of all individuals who receive a research doctorate from a U.S. institution in a given academic year (1 July of one year through 30 June of the following year). For the 2008 cycle a sample of individuals from the SED who were younger than 76 years and who earned SEH doctoral degrees in academic years 2006 and 2007 was added to the existing 2006 survey panel.

Notes

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2. The two tabulation methods show the minimum and the maximum number of respondents self-identifying with each race.

3. In this report “Hispanic or Latino” is used interchangeably with “Hispanic.” Individuals who report Hispanic or Latino ethnicity are reported as “Hispanic,” regardless of race.

4. In this report “black or African American” is used interchangeably with “black.”

5. Due to the change in collection guidelines, data on race/ethnicity collected by the SDR prior to 2001 are not directly comparable to data collected in 2001 and later.

6. In the 2001 SDR, the question wording was slightly different from that used in 2003, 2006, and 2008. In 2001 the questions read:

Are you Hispanic (or Latino)? - Yes - No

[If Hispanic] **Which of the following describes your Hispanic origin or descent?**

- Mexican American or Chicano
- Puerto Rican
- Cuban
- Other Hispanic –

Specify → _____

What is your racial background?

Mark (X) one or more.

- American Indian or Alaska Native –
Specify tribal affiliation(s)
→ _____
- Native Hawaiian or Other Pacific Islander
- Asian
- Black or African-American
- White

7. Findings for the general population are available in Humes KR, Jones NA, Ramirez RR. March 2011. 2010 Census Briefs: Overview of Race and Hispanic Origin: 2010. <http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf>. Accessed 13 June 2011.

8. Differences involving American Indians or Alaska Natives and Native Hawaiians or Other Pacific Islanders were not statistically significant, reflecting the small numbers of cases in these two groups.

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