

# Computer and Internet Use in the United States

## Population Characteristics

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Issued May 2013  
P20-569

### INTRODUCTION

In 2011, more Americans connected to the Internet than ever before, although differences continued to exist between those with use and those without. Just as with differences in use, variation in the ways that people were connecting online and the frequency of their use remained prevalent as well.

This report provides household and individual level analysis of computer usage and Internet use. The findings are based on data collected in a July 2011 supplement to the Current Population Survey (CPS), which includes questions about computer ownership, Internet use both inside and outside the home, and the additional devices that people use to go online. The U.S. Census Bureau has asked questions in the CPS about computer use since 1984 and Internet use since 1997.<sup>1</sup> This narrative report is complemented by a detailed table package that allows users to explore the data in more detail.<sup>2</sup>

In 2011, household respondents were asked how many computers were present in their home. Respondents were also asked whether anyone in their household used the Internet from that home. Later in the survey, respondents were asked about the individual Internet activities of all members of the household, including whether they accessed the Internet, where that use took place, and what types of devices they used. Over time, the Census Bureau has changed the wording

<sup>1</sup> People in the military, U.S. citizens living abroad, and people in institutionalized housing, such as correctional institutions and nursing homes, were not included in the surveys discussed in this report.

<sup>2</sup> Additional historical computer and Internet data, as well as detailed tables addressing the topics discussed in this research, are available at <[www.census.gov/hhes/computer/](http://www.census.gov/hhes/computer/)>.

of many questions in the Computer and Internet Use Supplement. Appendix Table A presents a summary of these changes.<sup>3</sup>

This report begins with a summary of computer and Internet use in American households since 1984, while the second part addresses use specifically in 2011. The final section presents a new “Connectivity Continuum” designed to show variations across an all-inclusive scale of personal technology adoption in the general public.

### HOUSEHOLDS

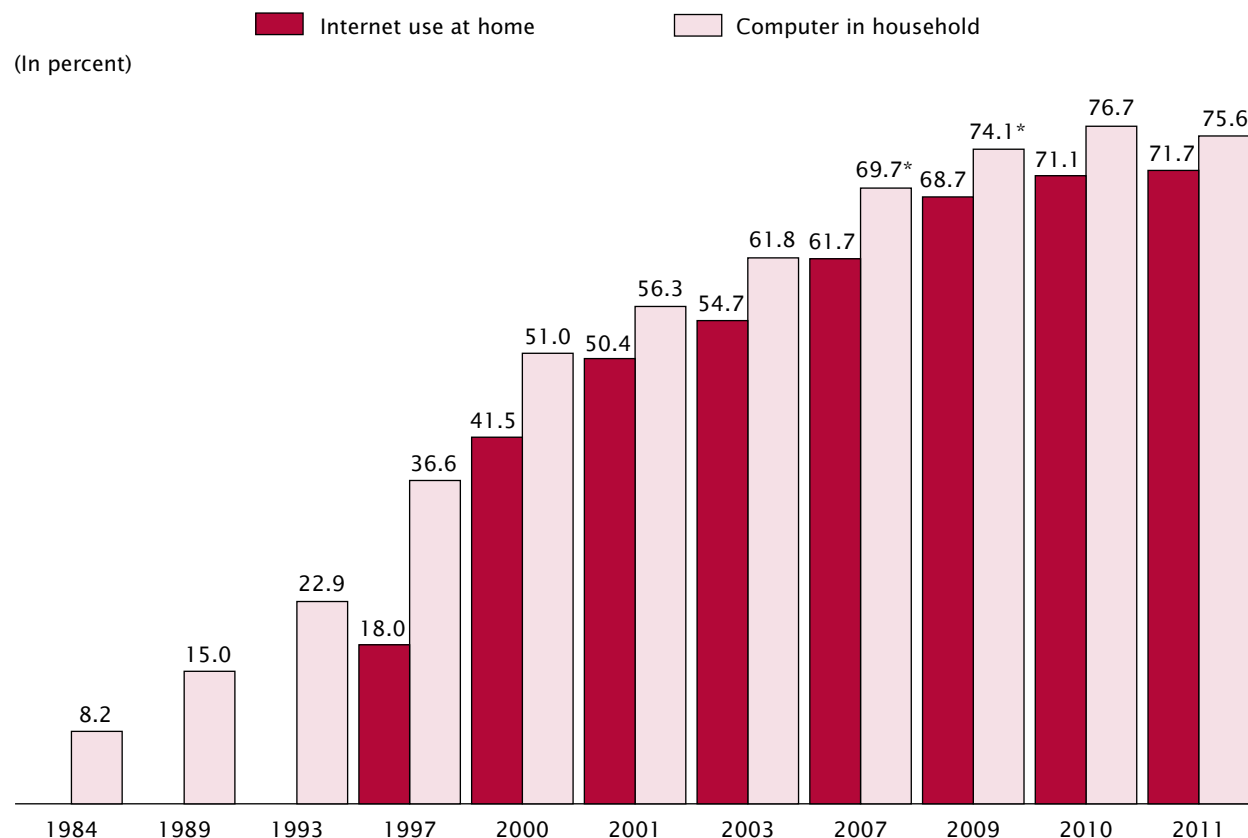
Computer and Internet use at the household level has changed greatly in recent years (Figure 1).<sup>4</sup> In 2011, 75.6 percent of households reported having a computer, compared with only 8.2 percent in 1984 (the first year that the Census Bureau asked about computer ownership), and 61.8 percent in 2003 (the last time the Census Bureau asked about computers prior to 2010).<sup>5</sup> Similar shifts occurred for household Internet use, as 71.7 percent of households reported accessing the Internet in 2011, up from 18.0 percent in 1997 (the first year the Census Bureau asked about Internet use) and 54.7 percent in 2003 (the first year that more than

<sup>3</sup> Beginning in 2013, the Census Bureau will begin asking a series of Internet-related questions on the American Community Survey (ACS). For more information on the ACS, please visit <[www.census.gov/acs/www/](http://www.census.gov/acs/www/)>.

<sup>4</sup> The estimates in this report (which may be shown in maps, text, figures, and tables) are based on responses from a sample of the population and may differ from actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. Unless otherwise noted, all comparative statements have undergone statistical testing and are significant at the 90 percent confidence level.

<sup>5</sup> Please see footnote 9 for a fuller discussion about comparing 2010 and 2011 estimates.

Figure 1.  
**Household Computer and Internet Use: 1984–2011**



\*Note: In 2007 and 2009 the Census Bureau did not ask about computer ownership. The estimates presented here for 2007 and 2009 reflect estimates made based on the ratio of computer ownership to Internet use in 2003 and 2010, respectively.  
 Source: U.S. Census Bureau, Current Population Survey, selected years.

50 percent of households reported accessing the Internet).<sup>6</sup>

Household Internet use has also historically varied across demographics such as race and ethnicity.<sup>7</sup> In

<sup>6</sup> Changes between 2010 and 2011 were smaller than in some of the previous years, in part due to question wording and other instrument changes. See Appendix A for a summary of these changes.

<sup>7</sup> Federal surveys now give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group such as Asian may be defined as those who reported Asian and no other race (the race-alone or single-race concept) or as those who reported Asian regardless of whether they also reported another race (the race-alone-or-in-combination concept). The body of this report (text, figures, and text tables) shows data for people who reported they were the single race White and not Hispanic, people who reported the

2011, 76.2 percent of non-Hispanic White households and 82.7 percent of Asian households reported Internet use at home, compared with 58.3 percent of Hispanic

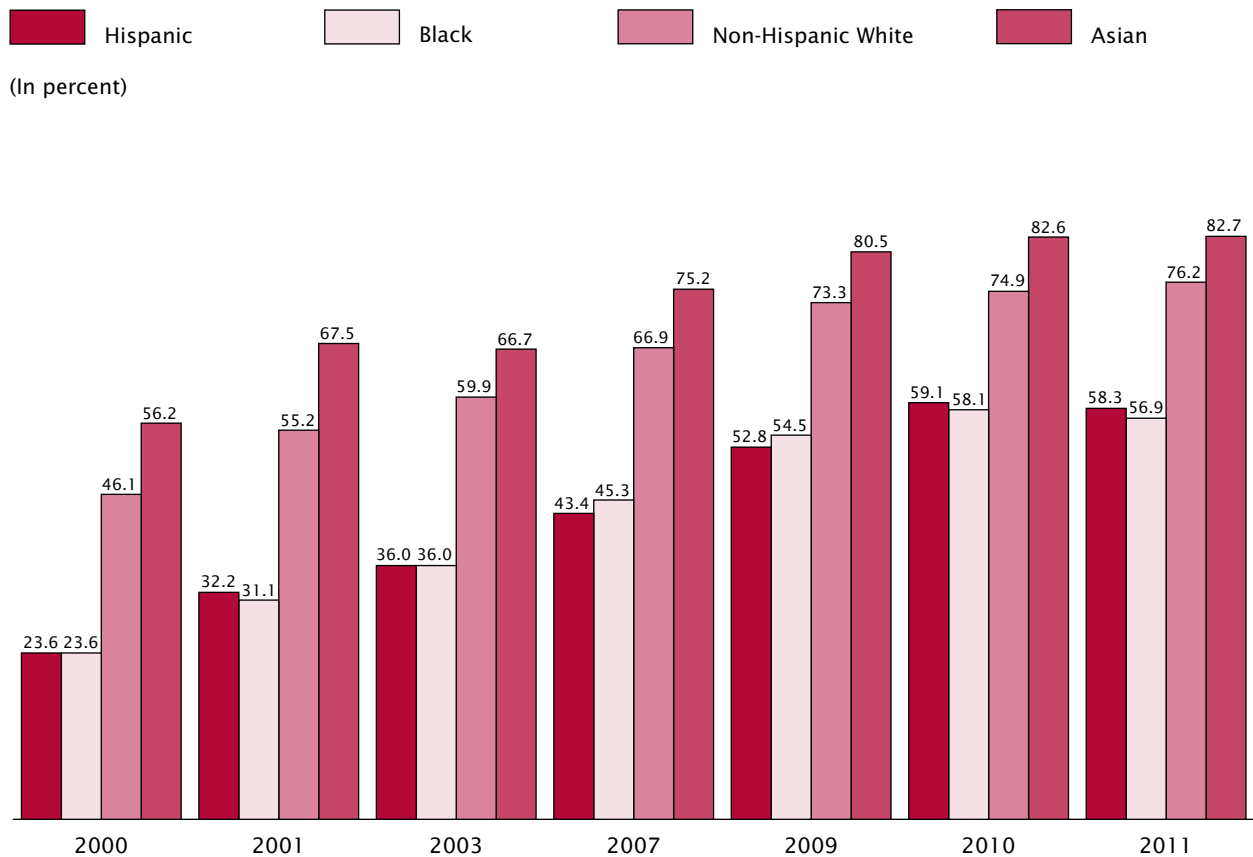
single race Black, and people who reported the single race Asian. Use of the single-race populations does not imply that it is the preferred method of presenting or analyzing data. Because Hispanics may be any race, data in this report for Hispanics overlap slightly with data for the Black population and the Asian population. Data for the American Indian and Alaska Native and the Native Hawaiian and Other Pacific Islander populations are not shown in this report because of their small sample size in the October 2011 Current Population Survey.

households<sup>8</sup> and 56.9 percent of Black households (Figure 2).<sup>9</sup>

<sup>8</sup> In 2011, reported household Internet use for Blacks and Hispanics were not statistically different.

<sup>9</sup> Readers will note that the overall rate of household computers failed to increase between 2010 and 2011 data points, the only period in our research where a significant increase failed to occur. There are a number of possible explanations for this seemingly counterintuitive result. First, the period between the 2010 and 2011 was by far the shortest gap in the CPS Computer and Internet time series. Additionally, questions were changed in substantive ways in 2011 that may have impacted the data in unforeseen ways (see Appendix A). Also, between October 2010 and July 2011, the number of American households actually decreased according to CPS estimates, by a total of about 300,000 households. Although explaining this additional phenomenon remains outside the scope of this particular research, the mere fact that the household base decreased between these periods is cause for caution when attempting to substantively interpret any household level change.

Figure 2.  
**Household Internet Use by Race and Ethnicity: 2000–2011**



Source: U.S. Census Bureau, Current Population Survey, selected years.

Although disparities in Internet use continued to persist across race and ethnicity groups in 2011, they did appear to be shrinking. For example, in 2000 the differences between household Internet use for White non-Hispanics and both Blacks and Hispanics was about 23 percent.<sup>10</sup> In 2011, these differences decreased to about 19 percent between White non-Hispanics and both Blacks and Hispanics (Table 1).<sup>11</sup> In relative

<sup>10</sup> The differences of about 23 percent between White non-Hispanics and both Blacks and Hispanics were not statistically different from one another.

<sup>11</sup> The differences of about 19 percent between White non-Hispanics and both Blacks and Hispanics were not statistically different from one another.

terms, whereas in 2000 White non-Hispanic households were about twice as likely as Black households to report Internet use (46.1 percent vs. 23.6 percent), by 2011 White non-Hispanic households were only about 1.3 times as likely as Black households to report the same (76.2 percent vs. 56.9 percent).

Although the majority of U.S. households reported having Internet use in the home in 2011, notable differences in Internet use persisted between demographic groups. As Table 1 shows, Internet use was most common in households with householders between 35 and 44 years of age (81.9

percent).<sup>12</sup> Households with reference persons over the age of 55 reported consistently lower rates of Internet use (61.7 percent), a finding consistent with other years the Census Bureau has asked about Internet activity. Over time, households with highly educated householders have also consistently reported higher rates of Internet use, and in 2011 this was once again the case.

<sup>12</sup> The householder refers to the person (or one of the persons) in whose name the housing unit is owned or rented (maintained) or, if there is no such person, any adult member, excluding roomers, boarders, or paid employees. If the house is owned or rented jointly by a married couple, the householder may be either the husband or the wife. The person designated as the householder is the "reference person" to whom the relationship of all other household members, if any, is recorded.

Table 1.

**Household Internet Use by Race and Ethnicity, Education, and Age: 2000–2011**

(In thousands)

Race and ethnicity								
Year	Total number of households and percent of households with Internet use							
	White alone, non-Hispanic		Black alone		Asian alone		Hispanic	
2000.....	78,719	46.1	13,171	23.6	3,457	56.2	9,565	23.6
2001.....	80,734	55.2	13,304	31.1	4,081	67.5	10,476	32.2
2003.....	81,857	59.9	13,746	36.0	4,009	66.7	12,023	36.0
2007.....	83,294	66.9	14,730	45.3	4,576	75.2	13,619	43.4
2009.....	83,810	73.3	15,254	54.5	4,625	80.5	13,799	52.8
2010.....	83,613	74.9	15,357	58.1	4,744	82.6	14,142	59.1
2011.....	83,148	76.2	15,369	56.9	4,795	82.7	14,222	58.3
Educational attainment								
Year	Total number of households and percent of households with Internet use							
	Less than high school		High school degree <sup>1</sup>		Some college		Bachelors degree or more	
2000.....	17,402	11.7	32,278	29.9	27,883	49.0	27,684	66.0
2001.....	17,463	18.0	33,469	39.7	29,410	57.7	28,765	75.2
2003.....	16,972	20.2	34,377	43.1	30,320	62.6	31,457	78.3
2007.....	13,978	24.0	33,099	49.5	30,434	68.9	33,302	84.0
2009.....	13,711	32.2	32,990	57.5	31,050	74.7	34,910	88.5
2010.....	13,257	35.5	33,008	60.4	31,549	77.2	35,156	89.2
2011.....	13,183	36.9	33,060	61.2	31,586	77.3	35,301	89.9
Age								
Year	Total number of households and percent of households with Internet use							
	Under 35 years		35–44 years		45–55 years		55 years and older	
2001.....	13,892	54.0	15,066	62.7	13,418	60.9	12,655	33.9
2003.....	15,251	56.8	15,572	65.3	14,922	65.1	16,108	40.7
2007.....	16,993	57.7	16,400	71.8	17,504	70.7	21,824	50.2
2009.....	19,150	67.0	17,249	77.8	18,982	75.8	26,558	58.2
2010.....	19,988	75.7	17,606	81.5	19,089	77.3	28,267	60.4
2011.....	19,745	75.9	17,400	81.9	19,083	77.9	29,274	61.7

<sup>1</sup> This category includes individuals with GEDs.

Source: U.S. Census Bureau, Current Population Survey, selected years.

**INDIVIDUALS**

Individual Internet use and computer use in 2011 varied by a series of selected characteristics, including age, race and ethnicity, gender, household income, region of residence, employment status, and educational attainment (Table 2). Young people consistently reported both living in households with computers and accessing the Internet from some location. Individuals 18 to 34 years of age, for example, reported living in a home with a computer 82.8 percent of the time and accessing the

Internet 82.0 percent of the time.<sup>13</sup> At the other end of the spectrum, Americans 65 years of age and older reported living in homes with computers only about 61.8 percent of the time and accessing the Internet about 45.5 percent of the time. This means that nearly four in ten of America's oldest residents did not have a computer in their home, and less than half were accessing the Internet at all.

Differences in computer ownership and Internet use were also present across race and Hispanic-origin

<sup>13</sup> The percent of individuals 18–34 years of age accessing the Internet (82.0 percent) was not statistically different than percent of 35–44 year olds accessing the Internet (81.4). The percent of individuals 18–34 years of age living in a household with a computer (82.8 percent) was not statistically different from the percent of 3–17 year olds (83.2) reporting the same.

groups. While about 89.1 percent of Asians and 84.8 percent of non-Hispanic Whites reported living in homes with at least one computer, about 68 percent of both Blacks and Hispanics reported the same.<sup>14</sup> Differences also existed for Internet use, as about 75 percent of both non-Hispanic Whites and Asians reported accessing the Internet from some location, compared with 60.3 percent of Blacks and 54.4 percent of Hispanics.<sup>15</sup> In summary, about four out of every ten Blacks and almost half of all Hispanics did not use the Internet in 2011.

<sup>14</sup> The estimates for Blacks and Hispanics living in homes with a computer (both about 68 percent) are not significantly different.

<sup>15</sup> The estimates for non-Hispanic Whites and Asians accessing the Internet (about 75 percent) are not significantly different.

Table 2.

**Reported Computer and Internet Use, by Selected Individual Characteristics: 2011**

(In thousands)

Selected characteristics	Total	Lives in a home with at least one computer		Accesses the Internet from some location	
		Number	Percent	Number	Percent
<b>Individuals 3 years and older</b> .....	<b>293,414</b>	<b>235,066</b>	<b>80.1</b>	<b>204,596</b>	<b>69.7</b>
<b>Age</b>					
3–17 years.....	62,138	51,720	83.2	37,419	60.2
18–34 years.....	71,210	58,965	82.8	58,378	82.0
35–44 years.....	39,478	33,883	85.8	32,144	81.4
45–64 years.....	80,947	66,016	81.6	58,630	72.4
65 years and older.....	39,641	24,481	61.8	18,026	45.5
<b>Race and Hispanic origin</b>					
White alone.....	233,672	190,751	81.6	166,238	71.1
White non-Hispanic alone.....	190,318	161,471	84.8	142,827	75.0
Black alone.....	37,117	25,337	68.3	22,370	60.3
Asian alone.....	13,891	12,383	89.1	10,194	73.4
Hispanic (of any race).....	47,114	32,032	68.0	25,648	54.4
<b>Sex</b>					
Male.....	143,780	116,120	80.8	99,739	69.4
Female.....	149,635	118,946	79.5	104,857	70.1
<b>Household income</b>					
Less than \$25,000.....	70,352	39,901	56.7	35,020	49.8
\$25,000–\$49,999.....	76,985	58,396	75.9	49,070	63.7
\$50,000–\$99,999.....	89,514	82,408	92.1	71,509	79.9
\$100,000–\$149,000.....	33,157	31,862	96.1	28,810	86.9
\$150,000 and more.....	23,407	22,499	96.1	20,187	86.2
<b>Region</b>					
Northeast.....	52,720	43,692	82.9	37,698	71.5
Midwest.....	63,575	51,395	80.8	45,620	71.8
South.....	108,353	83,546	77.1	72,694	67.1
West.....	68,766	56,433	82.1	48,585	70.7
<b>Total 15 years and older</b> .....	<b>243,689</b>	<b>194,096</b>	<b>79.6</b>	<b>177,808</b>	<b>73.0</b>
<b>Employment status</b>					
Employed.....	140,696	121,198	86.1	114,744	81.6
Unemployed.....	14,711	11,324	77.0	11,126	75.6
Not in labor force.....	88,282	61,575	69.7	51,937	58.8
<b>Total 25 years and older</b> .....	<b>201,475</b>	<b>158,535</b>	<b>78.7</b>	<b>142,374</b>	<b>70.7</b>
<b>Educational attainment</b>					
Less than high school graduate.....	24,960	12,703	50.9	7,864	31.5
High school graduate or GED.....	61,952	43,897	70.9	36,358	58.7
Some college or associate's degree.....	53,255	44,869	84.3	42,980	80.7
Bachelor's degree or higher.....	61,308	57,066	93.1	55,171	90.0

Note: The categories in this table are not mutually exclusive.

Source: U.S. Census Bureau, Current Population Survey, July 2011.

Previous research has shown that computer ownership and Internet use are both strongly associated with income.<sup>16</sup> In 2011, about 96

<sup>16</sup> See <[www.census.gov/prod/2005pubs/p23-208.pdf](http://www.census.gov/prod/2005pubs/p23-208.pdf)> and <<http://pewinternet.org/Reports/2012/Digital-differences/Main-Report/Internet-adoption-over-time.aspx>> for two examples.

percent of individuals living in either households with income of \$100,000 to \$149,999 or \$150,000 or more reported having a computer in their household, compared with 56.7 percent of individuals living in households with annual

income below \$25,000.<sup>17</sup> Where Internet use was concerned, about 86 percent of high income individuals reported connecting to the

<sup>17</sup> The computer estimates for individuals in households with incomes of \$100,000 to \$149,999 and individuals in households with incomes above \$150,000 were not significantly different.

Internet, compared with 49.8 percent of individuals living in households making less than \$25,000.<sup>18</sup>

Educational attainment was also related to computer and Internet use. For every successive higher level of education, computer ownership increased, from a low of 50.9 percent for individuals with less than a high school degree, to a high of 93.1 percent for those with at least a bachelor's degree. For Internet use, 31.5 percent of non-high school graduates reported connecting to the Internet, compared with 90.0 percent of individuals with at least a bachelor's degree.

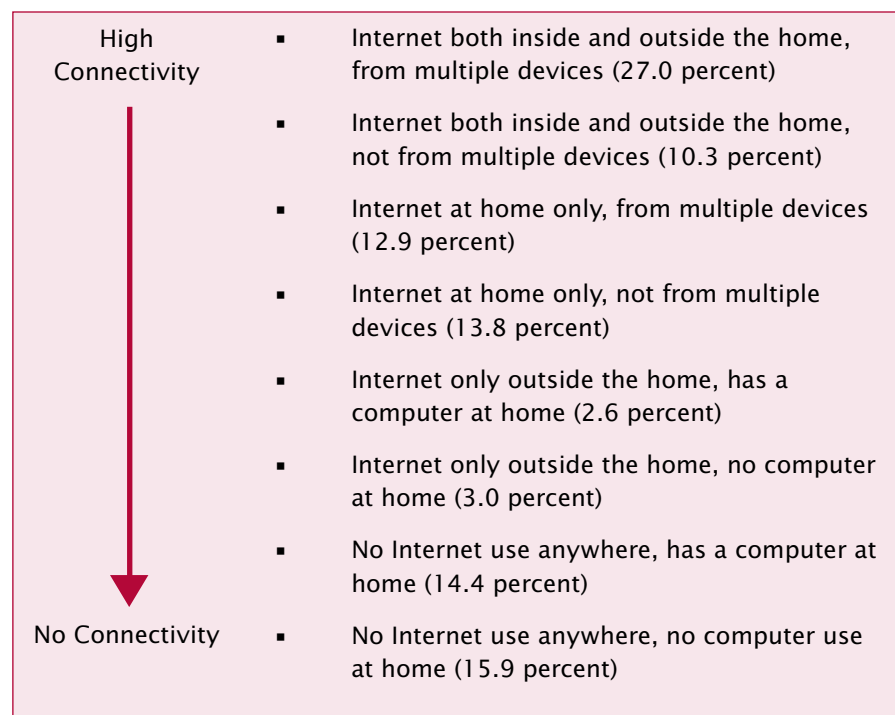
### CONNECTIVITY CONTINUUM

Access to computing technology and the Internet is not a simple “yes/no” proposition. As technology has changed and evolved over the years, people have seen an increase in the variation and number of ways they use computers and access the Internet. To explore this phenomenon further, a scale has been developed, designed to place individuals along a “connectivity continuum” of access variations, ranging from people with no Internet connection or computer, to those connecting from multiple locations and devices.<sup>19</sup>

In 2011, a plurality of Americans connected to the Internet from multiple locations and multiple devices (27.0 percent). These individuals were considered “high connectivity” individuals. The second most common position on the continuum was the opposite extreme—individuals without any computer or Internet activity at all (15.9 percent), or “no connectivity”

<sup>18</sup> The Internet estimates for individuals in households with incomes of \$100,000 to \$149,999 and individuals in households with incomes above \$150,000 were not significantly different.

<sup>19</sup> This scale is highly subjective in nature and should be interpreted as such.



individuals. The remaining 57 percent of Americans were located somewhere between these two extremes.

Table 3 presents the continuum scale tabulated by various social, demographic, and economic characteristics. As can be seen, there are sizeable points of variation along the dimensions previously noted. At the highest end of the scale, certain groups were more likely to report being highly connected. Young people, particularly those between the ages of 18 and 34, were much more likely to report being highly connected (37.1 percent)<sup>20</sup> than residents 65 years and older (5.6 percent). A strong plurality of Asians (31.7 percent) and non-Hispanic Whites (30.1) were also highly connected, as were individuals with incomes over \$150,000 (51.8 percent), those with steady employment

<sup>20</sup> The estimate for highly connected people aged 18–34 (37.1 percent) was not significantly different from the estimate for those aged 35–44.

(39.6 percent), and those with college degrees (47.3 percent).<sup>21</sup>

Among those with no connectivity, the picture was quite different. About 36 percent of individuals aged 65 years and older were in this category, a difference of about 20 percentage points from every other age-based category. Other groups with sizeable proportions of no connectivity included Blacks and Hispanics (about 25 percent each, respectively), individuals living in households making less than \$25,000 in annual income (35.6 percent), people who were not in the labor force (26.3 percent), and individuals with less than a high school degree (44.9 percent).<sup>22</sup>

The degree of connectivity also varied across states (Table 4). Among the areas standing out for their relatively large percentages of highly connected individuals were Colorado (35.8 percent), the

<sup>21</sup> The estimates of high connectivity for Asians and non-Hispanic Whites were not statistically different.

<sup>22</sup> Estimates of “no connectivity” for Hispanics and those not in the labor force were not statistically different, as were the estimates for Hispanics and Blacks.

Table 3.

**Connectivity Continuum, by Selected Individual Characteristics: 2011**

(In thousands)

Selected characteristics	Total	Percent							
		No connection anywhere <sup>1</sup>		No connection at home, but connect somewhere else		Connection at home only		Connection at home and somewhere else	
		No computer in household	Computer present in household	No computer in household	Computer present in household	Not from multiple devices	From multiple devices	Not from multiple devices	From multiple devices
<b>Individuals 3 years and older . . .</b>	<b>293,414</b>	<b>15.9</b>	<b>14.4</b>	<b>3.0</b>	<b>2.6</b>	<b>13.8</b>	<b>12.9</b>	<b>10.3</b>	<b>27.0</b>
<b>Age</b>									
3–17 years . . . . .	62,138	13.2	26.6	2.9	2.4	7.0	8.9	13.4	25.7
18–34 years . . . . .	71,210	11.1	6.9	4.5	4.1	10.3	16.7	9.3	37.1
35–44 years . . . . .	39,478	10.3	8.3	2.8	2.6	13.5	15.6	9.9	36.9
45–64 years . . . . .	80,947	15.3	12.2	2.4	2.2	18.2	12.7	12.3	24.6
65 years and older . . . . .	39,641	35.5	19.0	2.2	1.4	22.1	10.4	3.7	5.6
<b>Race and Hispanic origin</b>									
White alone . . . . .	233,672	14.9	14.0	2.6	2.5	14.4	13.2	10.5	27.8
White non-Hispanic alone . . . . .	190,318	12.2	12.8	2.1	2.4	15.4	13.9	11.1	30.1
Black alone . . . . .	37,117	24.5	15.2	5.7	3.5	10.8	10.7	9.0	20.6
Asian alone . . . . .	13,891	8.9	17.7	1.2	1.6	13.3	14.3	11.2	31.7
Hispanic (of any race) . . . . .	47,114	25.9	19.7	4.9	3.0	10.3	10.0	8.1	18.1
<b>Sex</b>									
Male . . . . .	143,780	15.5	15.1	2.8	2.6	13.0	12.7	9.9	28.4
Female . . . . .	149,635	16.3	13.7	3.3	2.7	14.6	13.1	10.8	25.6
<b>Household income</b>									
Less than \$25,000 . . . . .	70,352	35.6	14.7	6.3	3.8	12.7	9.1	6.3	11.6
\$25,000–\$49,999 . . . . .	76,985	19.3	17.0	3.7	3.1	16.3	12.6	9.9	18.1
\$50,000–\$99,999 . . . . .	89,514	5.9	14.2	1.4	2.2	15.0	15.5	12.9	33.0
\$100,000–\$149,000 . . . . .	33,157	2.7	10.4	0.8	1.4	11.6	14.0	12.8	46.3
\$150,000 and more . . . . .	23,407	2.8	11.0	0.7	1.3	7.7	13.9	10.9	51.8
<b>Region</b>									
Northeast . . . . .	52,720	13.9	14.6	2.4	2.1	15.3	13.5	10.9	27.3
Midwest . . . . .	63,575	15.2	13.0	3.0	2.6	14.9	12.2	11.7	27.4
South . . . . .	108,353	18.4	14.5	3.5	2.9	13.3	12.5	9.4	25.5
West . . . . .	68,766	14.1	15.2	3.0	2.6	12.6	13.8	10.1	28.6
<b>Total 15 years and older . . . . .</b>	<b>243,689</b>	<b>16.2</b>	<b>10.9</b>	<b>3.2</b>	<b>2.7</b>	<b>15.2</b>	<b>13.8</b>	<b>9.9</b>	<b>28.1</b>
<b>Employment status</b>									
Employed . . . . .	140,696	9.9	8.5	2.9	2.9	11.5	11.1	13.5	39.6
Unemployed . . . . .	14,711	15.1	9.3	6.3	4.8	19.7	25.6	5.1	14.1
Not in labor force . . . . .	88,282	26.3	14.9	3.1	2.2	20.3	16.1	5.0	12.1
<b>Total 25 years and older . . . . .</b>	<b>201,475</b>	<b>17.6</b>	<b>11.7</b>	<b>2.8</b>	<b>2.4</b>	<b>16.7</b>	<b>13.7</b>	<b>9.3</b>	<b>25.7</b>
<b>Educational attainment</b>									
Less than high school graduate . . . . .	24,960	44.9	23.6	3.4	1.8	12.3	8.0	2.2	3.8
High school graduate or GED . . . . .	61,952	24.7	16.6	3.4	2.4	20.9	14.1	6.7	11.2
Some college or associate's degree . . . . .	53,255	11.2	8.1	3.4	3.3	18.4	16.6	11.1	27.9
Bachelor's degree or higher . . . . .	61,308	4.8	5.2	1.5	2.0	12.6	13.3	13.3	47.3

<sup>1</sup> The connectivity continuum scale is designed to place individuals along a range of connectivity outcomes, ranging from people with no Internet connection or computer to those connecting from multiple locations and devices. The results presented above are inclusive, meaning that they sum to 100 percent for each group. Source: U.S. Census Bureau, Current Population Survey, July 2011.

Table 4.  
**Connectivity Continuum, by State: 2011**  
(In thousands)

Selected characteristics	Total	Percent							
		No connection anywhere <sup>1</sup>		No connection at home, but connect somewhere else		Connection at home only		Connection at home and somewhere else	
		No computer in household	Computer present in household	No computer in household	Computer present in household	Not from multiple devices	From multiple devices	Not from multiple devices	From multiple devices
<b>Individuals 3 years and older . . .</b>	<b>293,414</b>	<b>15.9</b>	<b>14.4</b>	<b>3.0</b>	<b>2.6</b>	<b>13.8</b>	<b>12.9</b>	<b>10.3</b>	<b>27.0</b>
Alabama . . . . .	4,449	19.9	13.6	4.5	4.8	14.1	12.3	10.7	20.1
Alaska . . . . .	664	10.4	12.6	4.3	4.4	10.7	15.5	10.8	31.3
Arizona . . . . .	6,336	16.2	15.4	2.5	2.4	13.3	14.8	7.7	27.8
Arkansas . . . . .	2,708	20.8	17.9	4.0	2.6	14.0	12.3	8.4	20.1
California . . . . .	35,459	15.4	16.6	3.2	2.4	11.6	13.2	9.5	28.1
Colorado . . . . .	4,852	11.0	10.9	2.8	2.6	13.0	12.6	11.3	35.8
Connecticut . . . . .	3,344	10.1	13.4	1.9	1.6	14.1	15.5	10.6	32.6
Delaware . . . . .	850	16.6	12.8	3.0	2.5	16.2	14.9	12.1	21.9
District of Columbia . . . . .	588	17.9	10.3	5.7	2.1	10.7	8.5	10.8	34.0
Florida . . . . .	17,777	14.0	14.2	3.0	2.7	15.4	14.4	8.8	27.5
Georgia . . . . .	9,334	16.1	14.0	3.2	3.3	13.3	13.1	9.3	27.7
Hawaii . . . . .	1,210	18.2	16.1	2.5	2.6	12.0	14.1	8.7	25.7
Idaho . . . . .	1,475	11.0	15.9	2.1	3.1	16.4	18.5	10.6	22.4
Illinois . . . . .	12,280	15.5	14.4	2.6	2.9	14.2	11.7	11.3	27.4
Indiana . . . . .	6,121	18.7	12.9	4.3	2.5	16.4	10.1	11.5	23.6
Iowa . . . . .	2,881	14.8	12.5	2.7	3.7	13.7	13.9	11.9	26.8
Kansas . . . . .	2,653	12.6	12.4	2.9	2.7	14.7	12.8	11.2	30.7
Kentucky . . . . .	4,133	19.6	14.6	2.9	2.7	14.3	11.4	11.4	23.1
Louisiana . . . . .	4,282	19.0	14.7	4.4	2.3	12.8	13.4	8.7	24.6
Maine . . . . .	1,252	13.5	13.1	2.7	1.9	17.7	12.2	13.3	25.6
Maryland . . . . .	5,440	12.5	13.4	2.4	2.3	10.6	14.5	10.8	33.5
Massachusetts . . . . .	6,341	12.0	13.6	2.6	1.4	14.5	14.7	12.3	28.9
Michigan . . . . .	9,438	13.5	13.2	2.7	1.8	16.5	13.5	11.6	27.2
Minnesota . . . . .	5,063	9.8	11.1	2.2	2.3	14.7	13.2	13.2	33.4
Mississippi . . . . .	2,772	26.8	14.2	4.3	4.4	10.6	11.2	8.6	19.9
Missouri . . . . .	5,686	18.7	13.0	3.8	2.9	11.9	11.6	9.6	28.6
Montana . . . . .	933	16.5	15.8	4.9	4.5	16.3	11.7	9.6	20.7
Nebraska . . . . .	1,694	14.3	11.6	3.2	3.4	15.2	10.1	11.9	30.4
Nevada . . . . .	2,519	15.3	16.5	2.6	2.4	13.1	15.9	9.4	24.9
New Hampshire . . . . .	1,273	8.9	11.4	1.6	2.2	16.5	13.9	14.6	31.0
New Jersey . . . . .	8,261	12.3	14.2	2.1	2.0	12.6	13.4	10.7	32.6
New Mexico . . . . .	1,942	21.7	17.9	3.8	4.0	10.6	9.4	11.3	21.3
New York . . . . .	18,637	15.0	15.9	2.5	1.7	16.4	13.2	10.3	24.9
North Carolina . . . . .	9,005	20.4	13.4	2.8	1.9	15.4	11.2	10.0	24.9
North Dakota . . . . .	612	14.5	13.7	3.0	3.2	14.9	11.3	11.9	27.5
Ohio . . . . .	10,967	17.0	13.5	3.0	2.7	14.8	12.9	11.0	25.1
Oklahoma . . . . .	3,496	18.0	17.4	3.1	3.3	13.8	10.5	9.6	24.2
Oregon . . . . .	3,713	10.9	12.7	3.5	3.1	12.8	15.2	11.3	30.5
Pennsylvania . . . . .	12,004	16.3	14.2	2.4	3.1	15.9	13.2	10.1	24.8
Rhode Island . . . . .	1,008	13.6	14.2	2.4	2.2	15.9	13.2	12.4	26.2
South Carolina . . . . .	4,344	21.6	13.5	3.8	2.4	15.9	12.3	9.7	20.8
South Dakota . . . . .	778	13.9	13.1	3.4	3.8	13.9	12.1	12.9	26.9
Tennessee . . . . .	6,057	21.2	15.7	2.4	4.0	13.0	11.7	9.8	22.2
Texas . . . . .	23,864	20.5	15.5	4.4	3.3	10.4	11.8	8.2	25.9
Utah . . . . .	2,693	7.5	16.3	2.4	3.0	13.4	18.1	12.1	27.3
Vermont . . . . .	599	12.1	12.3	2.8	2.9	15.1	11.2	13.9	29.7
Virginia . . . . .	7,506	16.6	13.3	2.8	2.1	13.6	11.6	11.3	28.8
Washington . . . . .	6,453	9.1	10.9	2.1	2.5	16.0	13.4	13.0	33.0
West Virginia . . . . .	1,748	21.5	14.4	3.3	1.7	18.9	12.2	10.9	17.2
Wisconsin . . . . .	5,402	13.2	11.6	2.6	2.0	16.2	11.6	15.1	27.6
Wyoming . . . . .	517	12.7	13.0	2.5	3.6	14.8	13.5	14.7	25.1

<sup>1</sup> The connectivity continuum scale is designed to place individuals along a range of connectivity outcomes, ranging from people with no Internet connection or computer to those connecting from multiple locations and devices. The results presented above are inclusive, meaning that they sum to 100 percent for each group.  
Source: U.S. Census Bureau, Current Population Survey, July 2011.



District of Columbia (34.0 percent), Maryland (33.5 percent), Minnesota (33.4 percent), Washington (33.0 percent), New Jersey (32.6 percent), and Connecticut (32.6 percent).<sup>23</sup> At the opposite end of the connectivity continuum, among the states with large percentages of no connectivity were Mississippi (26.8 percent), New Mexico (21.7 percent), South Carolina (21.6 percent), West Virginia (21.5 percent), Tennessee (21.2 percent), Arkansas

(20.8 percent), and Texas (20.5 percent).<sup>24</sup>

Figure 3 presents estimates of high connectivity for each state, relative to the national average. Again, by high connectivity, we mean Americans who reported connecting to the Internet from multiple devices and locations. In Figure 3, 13 states had percentages of high connectivity statistically above the national average of 27.0, whereas 17 states had statistically lower percentages of highly connected users. The remaining 21 states

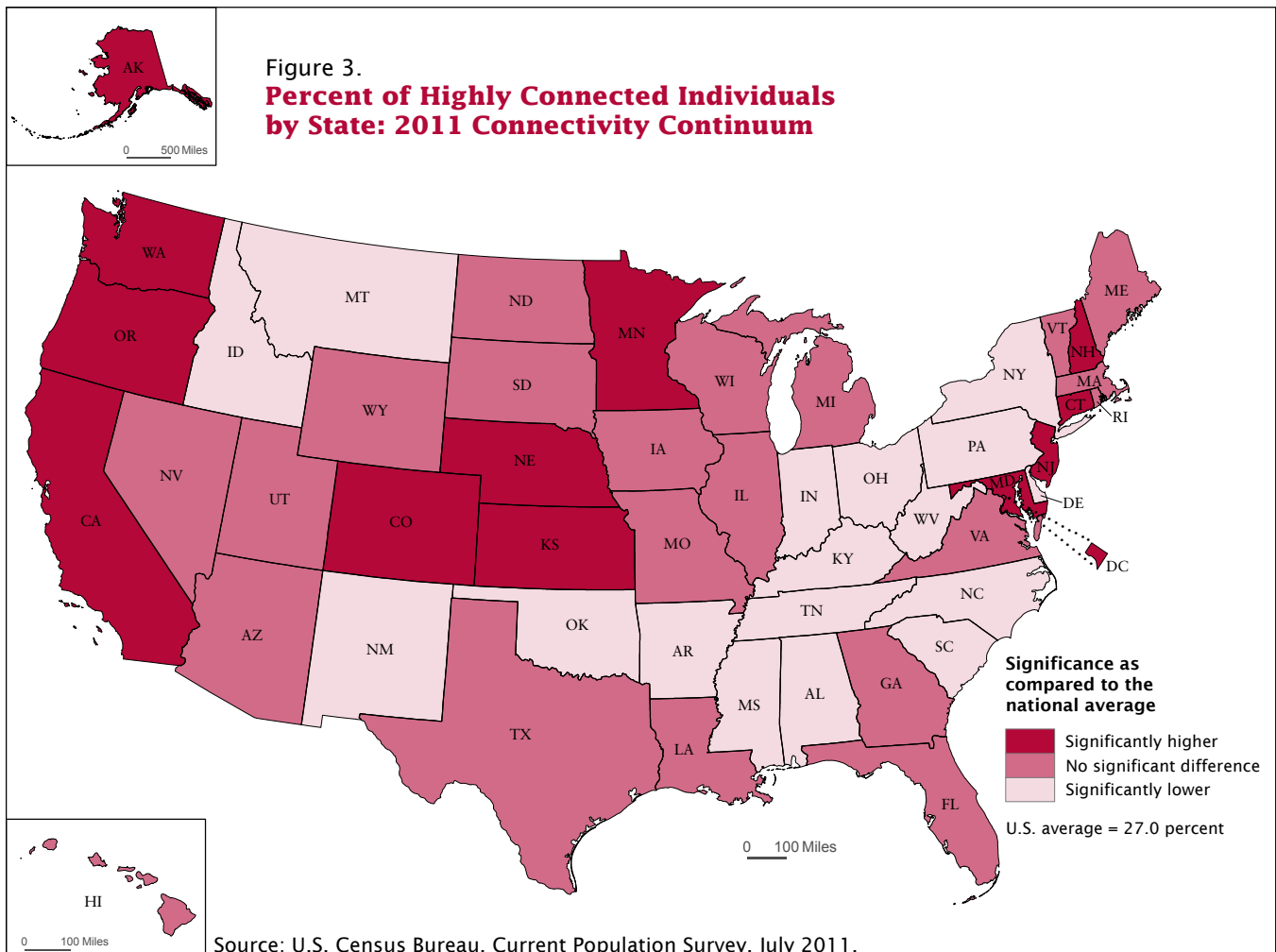
did not statistically differ from the national average.<sup>25</sup>

The majority of southern states lagged behind the nation in terms of highly connected individuals. The same can be said for segments of other regions, as pockets of the West, Midwest, and Northeast all contained multiple states with low percentages of high connectivity, but in no other region was this phenomenon as consistent as in the South. The Pacific Coast stood out for having large percentages of high connectivity, as Washington, Oregon, California, and Alaska all had significantly large percentages relative to the national average.

<sup>23</sup> The states discussed here are not statistically different from one another and may not be statistically different from additional states.

<sup>24</sup> The estimate of no connectivity for Mississippi is significantly different from all other states, but the remaining listed states discussed here are not significantly different from each other, nor are they significantly different from additional states that are not specifically discussed here.

<sup>25</sup> All comparative statements about these maps have undergone statistical testing and are significant at the 90 percent confidence level.



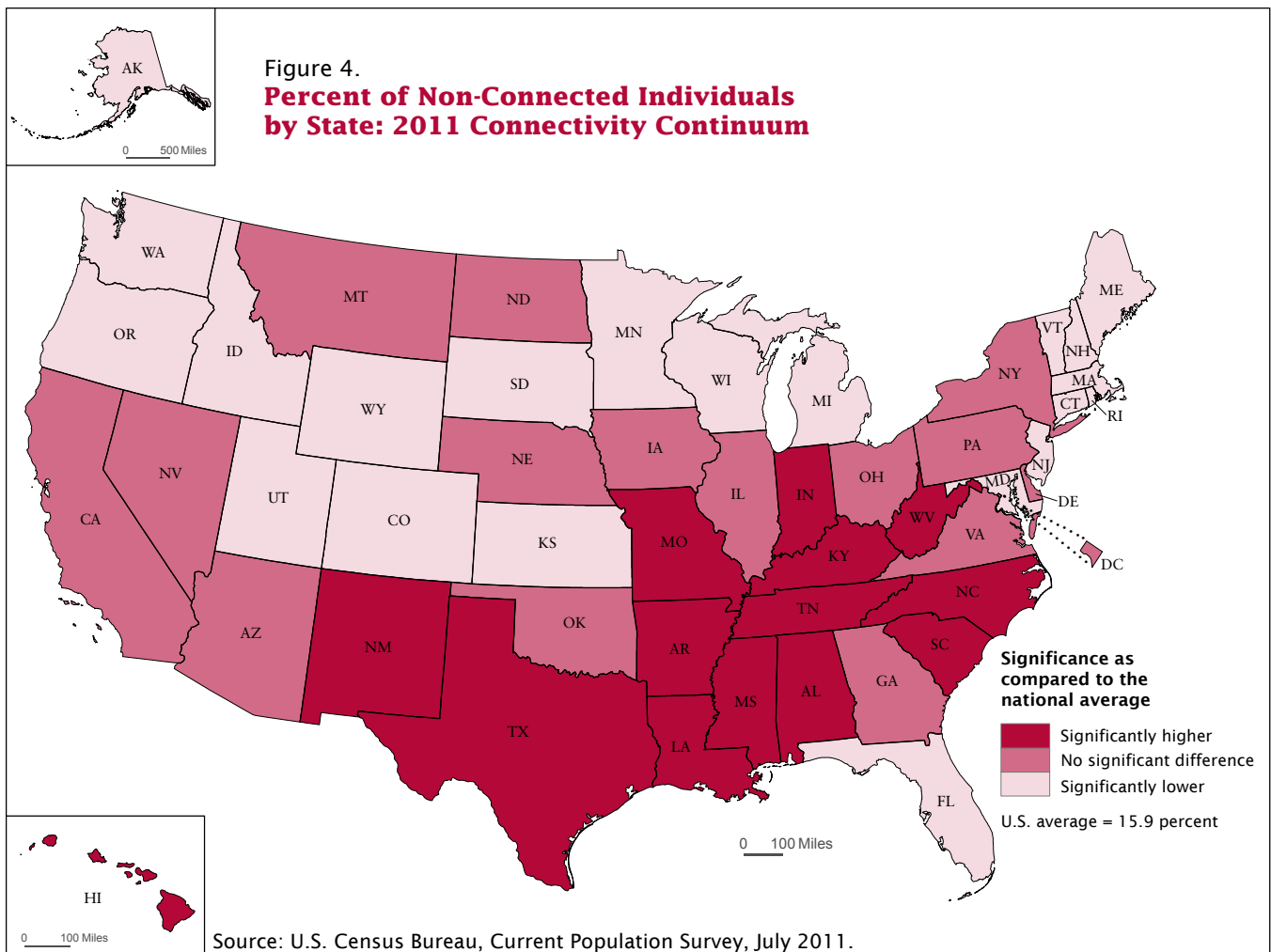


Figure 4 displays state-level estimates of no connectivity, or individuals who did not connect to the Internet and lived in a home without a computer. Twenty-one states had lower percentages of no connectivity than the national average of 15.9 percent, whereas fourteen states had higher percentages. Once again, the South stands out for having consistently high percentages of individuals with no connectivity. Certain other parts of the country, particularly the Western region and states in New England, showed small concentrations of no connectivity.

In a number of states, the percentage of high connectivity was large, while the percentage of no

connectivity was also small. Alaska, Colorado, Connecticut, Kansas, Maryland, Minnesota, New Hampshire, New Jersey, Oregon, and Washington all had large percentages of high connectivity and small percentages of no connectivity. In a number of other states, the percentage of high connectivity was low, while the percentage of no connectivity was also high. With the exception of Indiana and New Mexico, the remaining eight states that fell into this category were all located in the South. No states had large percentages of both high connectivity and no connectivity, although Idaho stood out for being the only state with small percentages of both high connectivity and no connectivity.

## SMARTPHONES

As computing and Internet technology have evolved, many people have started accessing the Internet via “smartphones,” or cellular telephones with additional software capabilities, such as e-mail access or Internet browsers. In addition to asking household respondents whether they used the devices to make phone calls or send text messages, in 2011 the CPS also inquired about using phones to browse the Web, e-mail, use maps, play games, access social networking sites, download applications, listen to music, or take photos and videos

Table 5.  
**Smartphone Use, by Selected Characteristics: 2011**  
(In thousands)

Selected characteristics	Total	Home Internet users		Smartphone users <sup>1</sup>		Either <sup>2</sup>	
		Number	Percent	Number	Percent	Number	Percent
<b>Total 15 years and older<sup>3</sup> . . . . .</b>	<b>243,689</b>	<b>163,663</b>	<b>67.2</b>	<b>117,429</b>	<b>48.2</b>	<b>184,909</b>	<b>75.9</b>
<b>Age<sup>4</sup></b>							
Under 25 years . . . . .	42,214	29,765	70.5	28,633	67.8	36,923	87.5
25–34 years . . . . .	41,408	30,839	74.5	27,896	67.4	35,683	86.2
35–44 years . . . . .	39,478	30,426	77.1	23,235	58.9	33,630	85.2
45–54 years . . . . .	43,882	31,225	71.2	19,777	45.1	33,903	77.3
55 years and over . . . . .	76,706	41,409	54.0	17,887	23.3	44,769	58.4
<b>Race and Hispanic origin</b>							
White alone . . . . .	195,949	134,959	68.9	93,992	48.0	150,489	76.8
White non-Hispanic alone . . . . .	163,475	118,471	72.5	79,439	48.6	129,451	79.2
Black alone . . . . .	29,795	16,028	53.8	14,108	47.3	20,233	67.9
Asian alone . . . . .	11,237	8,801	78.3	5,793	51.6	9,322	83.0
Hispanic (of any race) . . . . .	35,309	18,080	51.2	16,037	45.4	23,112	65.5
<b>Sex of householder</b>							
Male . . . . .	118,394	81,141	68.5	57,560	48.6	90,921	76.8
Female . . . . .	125,295	82,522	65.9	59,869	47.8	93,988	75.0
<b>Region of household</b>							
Northeast . . . . .	42,325	29,315	69.3	18,665	44.1	31,937	75.5
Midwest . . . . .	53,585	36,628	68.4	24,909	46.5	40,870	76.3
South . . . . .	91,378	58,331	63.8	44,475	48.7	67,684	74.1
West . . . . .	56,402	39,389	69.8	29,380	52.1	44,418	78.8
<b>Region of household</b>							
Metropolitan area . . . . .	204,366	140,983	69.0	102,130	50.0	158,359	77.5
Nonmetropolitan area . . . . .	39,324	22,680	57.7	15,299	38.9	26,550	67.5
<b>Employment status</b>							
Employed . . . . .	146,810	111,264	75.8	85,734	58.4	124,864	85.1
Unemployed . . . . .	16,484	10,461	63.5	8,148	49.4	12,514	75.9
Not in labor force . . . . .	80,395	41,938	52.2	23,548	29.3	47,532	59.1
<b>Total 25 years and older . . . . .</b>	<b>201,475</b>	<b>133,898</b>	<b>66.5</b>	<b>88,796</b>	<b>44.1</b>	<b>147,986</b>	<b>73.5</b>
<b>Educational attainment</b>							
Less than high school graduate . . . . .	22,957	5,806	25.3	4,711	20.5	8,077	35.2
High school graduate or GED . . . . .	57,911	30,590	52.8	18,564	32.1	35,593	61.5
Some college or associate degree . . . . .	56,247	41,319	73.5	27,405	48.7	45,730	81.3
Bachelor's degree or higher . . . . .	64,360	56,183	87.3	38,115	59.2	58,586	91.0

<sup>1</sup> Smartphone use includes anyone who reported using their phone to browse the Web, e-mail, use maps, play games, access social networking sites, download apps, listen to music, or take photos and videos.

<sup>2</sup> This includes the number and percentage of individuals who either use the Internet at home, use a smartphone, or both.

<sup>3</sup> Data in this table are from questions asked only of household respondents and then weighted to reflect the total population.

<sup>4</sup> Because household respondents tended to be older, the data for those below the age of 25 had more variability than for older respondents. The estimates in this section for those under 25 should therefore be interpreted with caution.

Source: U.S. Census Bureau, Current Population Survey, July 2011.

(i.e., the uses that make the phones “smart”).<sup>26</sup>

Nationally, about 48 percent of individuals 15 years old and above reported using a smartphone

<sup>26</sup> The household respondent refers to the individual who answered the survey questions. Data on smartphones were derived from questions asked only of household respondents and then weighted to reflect the total population 15 years and above.

(Table 5). In some ways, smartphone use mirrored the previous sections addressing household and individual Internet use, as users were once again likely to be young, employed, and highly educated.<sup>27</sup> However, race and ethnicity did not

<sup>27</sup> The estimates of smartphone use for individuals under 25 years old and people 25 to 34 were not statistically different.

seem to be a particularly strong factor in terms of smartphone use.

Although smartphone use was significantly higher for Asian respondents (51.6 percent), reported rates for White non-Hispanics and Blacks were not statistically different from one another (about 48 percent each, respectively). Additionally,



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young people, White non-Hispanics and Asians, individuals living in households with high incomes, and those with college educations.

Overall, in 2011 a plurality of Americans were “highly connected” individuals (27.0 percent). At the other extreme, about 16 percent of Americans reported “no connectivity” at all. These no-connectivity individuals were disproportionately old, Black and/or Hispanic, low income, and poorly educated.

The use of smartphones also varied according to a number of population characteristics, as users of these devices tended to be young, employed, highly educated, and living in metropolitan areas. Race and ethnicity did not seem to be a particularly strong factor in terms of smartphone use, and smartphone rates were disproportionately low in the eastern part of the country and consistently high west of the Mississippi River.

### **SOURCE AND ACCURACY OF THE DATA**

The population represented (the population universe) in the Computer and Internet Supplement to the July 2011 CPS is the civilian noninstitutionalized population living in the United States.

Statistics from sample surveys are subject to sampling error and nonsampling error. All comparisons presented in this report have taken sampling error into account and are significant at the 90 percent confidence level. Nonsampling error in

surveys is attributable to a variety of sources, such as survey design, respondent question interpretation, respondent willingness and ability to provide correct and accurate answers, and post survey practices like question coding and response classification. To minimize these errors, the Census Bureau employs quality control procedures in sample selection, the wording of questions, interviewing, coding, data processing, and data analysis.

The CPS weighting procedure uses ratio estimation to adjust sample estimates to independent estimates of the national population by age, race, sex, and Hispanic origin.

This weighting partially corrects for bias due to undercoverage, but biases may still be present when people are missed by the survey who differ from those interviewed in ways other than age, race, sex, and Hispanic origin. We do not precisely know the effect of this weighting procedure on other variables in the survey. All of these considerations affect comparisons across different surveys or data sources.

Further information on the source of the data and accuracy of the estimates, including standard errors and confidence intervals, can be found at <[www.census.gov/apsd/techdoc/cps/cpsjul11.pdf](http://www.census.gov/apsd/techdoc/cps/cpsjul11.pdf)> or by contacting the Demographic Statistical Methods Division via Internet e-mail at <[dsmd.source.and.accuracy@census.gov](mailto:dsmd.source.and.accuracy@census.gov)>.

### **MORE INFORMATION**

Detailed tabulations are available that provide demographic characteristics of the population on computer and Internet use. The electronic versions of these tables and this report are available on the Internet at the Census Bureau’s Computer and Internet Use Web site (<[www.census.gov/hhes/computer/](http://www.census.gov/hhes/computer/)>).

### **CONTACT**

Contact the U.S. Census Bureau Customer Services Center toll free at 1-800-923-8282 or visit <[ask.census.gov](mailto:ask.census.gov)> for further information.

### **SUGGESTED CITATION**

File, Thom. 2013. “Computer and Internet Use in the United States.” Current Population Survey Reports, P20-568. U.S. Census Bureau, Washington, DC.

### **USER COMMENTS**

The Census Bureau welcomes the comments and advice of data and report users. If you have any suggestions or comments, please write to:

Chief, Social, Economic, and Housing Statistics Division  
U.S. Census Bureau  
Washington, DC 20233-8500.

Appendix Table A.

**Computer and Internet Use Questionnaire Changes Overtime: 1984–2012**

Characteristics	Year and month of supplement											
	2012 October	2011 July	2010 October	2009 October	2007 October	2003 October	2001 September	2000 August	1997 October	1993 October	1989 October	1984 October
<b>Household computer use</b>												
Year newest computer obtained . . . . .		x				x	x	x	x	x	x	x
Is there a computer in the household . . . . .						x	x	x	x	x	x	x
Number of computers in the household . . . . .	x	x				x	x	x	x	x		
Is the newest computer owned or leased . . . . .							x	x				
Characteristics of newest computer . . . . .									x	x	x	
Has there ever been computer use in the home . . . . .								x				
Is there a Web TV in the home . . . . .								x				
What type of computer is in the home . . . . .			x									
<b>Household Internet use</b>												
Is there Internet use at home . . . . .	x	x	x	x	x	x	x	x				
What type of Internet connection is there at home . . . . .	x	x	x	x	x	x	x	x				
Reason for no Internet (if applicable) . . . . .	x	x	x			x	x	x				
Reason for no high-speed connection (if applicable) . . . . .	x	x	x	x		x						
Has there ever been Internet use at home . . . . .	x	x				x	x	x				
Cost concerns contributing to lack of Internet (if applicable) . . . . .	x	x	x					x				
Does connection involve a long distance telephone call . . . . .							x	x				
Internet as part of a "bundle" package . . . . .		x										
What other bundled services are provided . . . . .		x										
How much does your Internet cost per month . . . . .		x										
Have you ever switched providers and why . . . . .		x										
Most important factor regarding Internet service . . . . .		x										
Access with or without a paid subscription . . . . .			x									
What other media are used at home . . . . .						x						
Is there a wireless network . . . . .						x						
Is there some other device used to connect . . . . .							x					
Internet pricing and payment . . . . .								x				
What type of Internet service provider is used . . . . .								x				
<b>Individual computer use</b>												
Where do individuals use computers (home, school, work, etc.) . . . . .						x	x			x	x	x
What are computers being used for at these locations . . . . .						x	x			x	x	x
Frequency of individual computer use . . . . .									x	x	x	x
What children under 18 use computers at school . . . . .								x				
<b>Individual Internet use</b>												
Who in the household uses the Internet at home . . . . .	x	x	x	x		x	x	x	x			
Where outside the home is Internet used (if applicable) . . . . .	x	x	x			x	x					
What is the Internet used for at home . . . . .						x	x	x	x			
Who in household uses the Internet outside the home . . . . .	x	x	x			x	x	x	x			
What is Internet used for outside the home . . . . .						x	x	x	x			
Who accesses from any location . . . . .				x	x							
How was the Internet used in the last year . . . . .						x	x					
What devices do individuals use to access the Internet . . . . .		x										
Main devices used for household Internet use . . . . .						x						
<b>Primary respondent questions</b>												
Concern with providing personal information over Internet . . . . .						x	x	x				
Concern with children being exposed to material online . . . . .						x	x	x				
Cellular/smartphone use and for what purpose (if applicable) . . . . .	x	x										
Reliance on Internet (if applicable) . . . . .	x	x										
Frequency of Internet use . . . . .		x				x						
Concern with providing personal information over Internet . . . . .		x										
Specific Internet related activities . . . . .		x										
Concern with Internet safety . . . . .		x										
Methods used to ensure child safety online . . . . .		x										
Sources of news and information . . . . .		x										
Sources of online news and information . . . . .		x										

Note: This table provides a summary of general concepts addressed in the CPS Computer and Internet Supplements. Over time, the exact wording of specific questions has occasionally changed and this table should be used for general guidance only. An "x" next to a question characteristic implies that this concept was measured in a specific year, but in some instances the exact question wording is not precisely the same across all marked years. Data users interested in making direct comparative statements about computer or Internet use supplements should consult the Current Population Survey technical documentation at <[www.census.gov/cps/methodology/techdocs.html](http://www.census.gov/cps/methodology/techdocs.html)>, or contact the Census Bureau's Education and Social Stratification Branch at 301-763-2464.

Source: U.S. Census Bureau, Current Population Survey, 1984, 1989, 1993, 1997, 2000, 2001, 2003, 2007, 2009, 2010, 2011, 2012.