



The Associated Press-NORC  
Center for Public Affairs Research

# AMERICANS' ASSESSMENTS OF THEIR INCREASINGLY AUTOMATED LIVES

Smartphones, GPS, and social media are part of everyday life for most Americans, and many expect developing automation will be a benevolent force, improving their quality of life, offering convenience and efficiency. At the same time, there is considerable concern about new technology's effect on workers and people's interpersonal relationships.

The latest poll conducted by The Associated Press-NORC Center for Public Affairs Research finds that the ubiquity of automated teller machines (ATMs) seems to have given the public a comfort level with ATMs and online banking. However, while e-commerce is on the rise, most people still tend to shop in person and prefer to deal with sales clerks rather than self-service machines.

Many people see automation as a boon for factory safety and efficiency, though they foresee an adverse effect on job security and wages. And while most people continue to shop in brick-and-mortar stores, there is an expectation that future technological developments will be at the expense of retail jobs.

The survey finds that younger, better-educated, and more affluent Americans are more likely to adapt to new technology. But across ages, incomes, and education levels, Americans worry that new technology will lead to people becoming increasingly isolated from one another.

The nationwide poll was conducted August 17-21, 2017, using the AmeriSpeak® Panel, the probability-based panel of NORC at the University of Chicago. Online and telephone interviews using landlines and cell phones were conducted with 1,038 adults.



© 2013 AP/David Goldman

## Three Things You Should Know

About the AP-NORC Poll on Technology and Automation Among All American adults:

1. Forty-one percent expect automation to make the quality of day-to-day life better, 22 percent think it will make things worse, and 34 percent anticipate no change.
2. While 53 percent say automation in factories has improved efficiency and 48 percent say it has made factory jobs safer, 56 percent think automation has caused a significant amount of job loss.
3. About half would rather deal with a salesclerk at a supermarket or convenience store than pay for their purchases using the automated checkouts that are becoming commonplace in stores.

Key findings from the poll include:

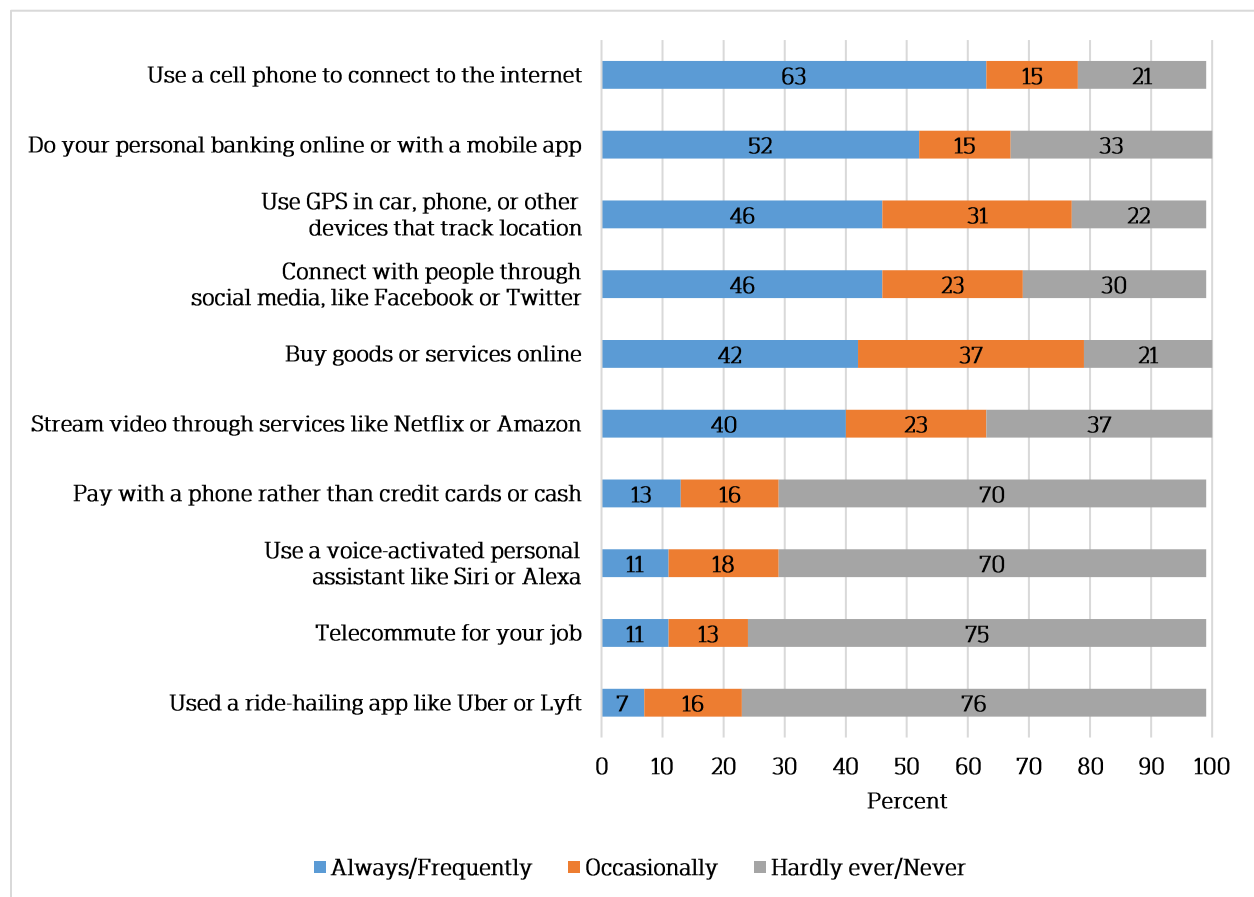
- Most Americans do not anticipate an improvement in their daily lives from automation. While 4 in 10 predict that automating ordinary activities and tasks will make their lives better, a third do not expect any improvement in their day-to-day existence, and more than 2 in 10 think automation will actually cause the quality of their lives to worsen.
- Predictably, young adults are more likely to see themselves as fast adopters of new technologies. Most Americans consider themselves neither quick nor slow to utilize technological developments, but 42 percent of people age 18 to 29 say they quickly adopt new technology, compared with 19 percent of older Americans.
- Certain modern technologies are becoming widespread, as more than half of adults often use smartphones or bank online, and many use GPS, shop online, use social media, or stream video. Paying by cell phone, using voice-activated assistants, ride-sharing apps, and telecommuting are not quite as prevalent.
- ATMs, first introduced in the 1970s, are now just about everywhere, and only 31 percent would rather see a live teller for routine banking transactions. However, the comfort with which Americans manage automated banking has not translated to other everyday transactions. Only about a quarter prefer to pay for purchases at supermarkets or convenience stores using the automated checkouts that are becoming commonplace in stores, while about half would rather deal with a salesclerk. Another quarter have no preference one way or the other.
- In addition to proficiency with ATMs, more than half of the public regularly uses the internet or a mobile app to conduct their personal banking. At the same time, while e-commerce is growing, people still make most purchases in person, particularly groceries and drugstore items.
- Nearly half of the public thinks shopping will become easier and more efficient in the coming years, but about the same number of Americans expect job loss among retail workers because of technological developments.
- In addition, 56 percent say automation in factories has resulted in significant job loss. A majority of Americans also consider it likely that more jobs require advanced education or training because of automation.
- While many people see automation as improving factory safety and efficiency, there is also a belief that automation has caused a decline in factory wages. There is little belief that some manufacturing has returned to the United States from low-wage countries because of increased automation.
- Automation is viewed as a job killer by many. While 57 percent are fairly confident that no one in their household will be replaced at work by automation during the next 10 years, 42 percent are concerned about job loss due to new technological developments, including 19 percent who say it is extremely or very likely that someone in their household will lose a job to technology.
- Among American workers, two-thirds say automation plays at least some role in their workplace. Forty percent of these workers with first-hand knowledge of the new technology see automation as beneficial to the American workforce, compared with only 24 percent of other workers.

## THERE IS MUCH AMBIVALENCE AMONG AMERICANS WHEN IT COMES TO TECHNOLOGY

Perhaps not surprisingly, most Americans consider themselves “in the middle” when it comes to being either quick or slow to use new technologies. Fifty-five percent classify themselves that way, compared to 24 percent who say they are quick to use new technology and 21 percent who say they are slow to pick it up. Adults under 30 are more likely than people 30 or older to say they are quick to adopt new technology (42 percent vs. 19 percent), while those age 60 and older are more likely to say they are slow to adopt (31 percent vs. 17 percent). Those with incomes below \$50,000 a year are also more likely to be slow to use new tech than those who earn more (26 percent vs. 14 percent).

Certain modern technologies have caught on with large shares of the population while others still are confined to smaller shares. More than half of adults often use smartphones, or bank online, while about 4 in 10 often use GPS to track their location, use social media, shop online, or stream video online.

### Few pay with a phone, use voice-activated personal assistants, telecommute, or use ride-hailing apps.



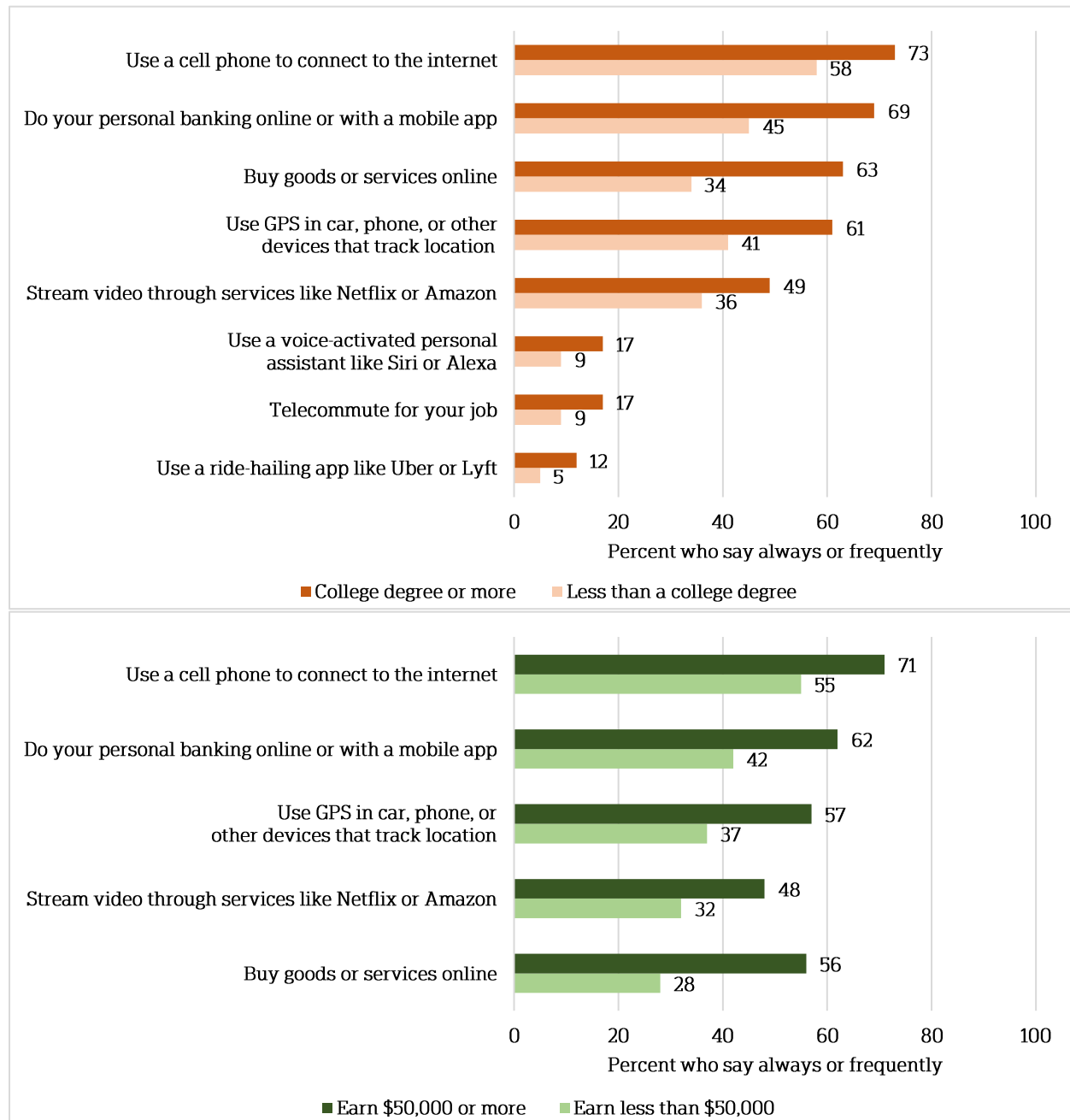
Question: How often do you do each of the following?

Source: AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

Younger Americans are more conversant with technology. Eight-two percent of adults under 30 frequently use their cell phone to go online, compared with 57 percent of Americans 30 and older. They are also more inclined to stream video through Netflix or Amazon and use GPS. For some other activities, the cutoff is older. For example, 57 percent of those under age 60 frequently do their banking online versus 37 percent of older people. Americans age 60 and older are also much less likely to regularly use social media or shop online.

But even taking into account other demographic and social factors like age, there is also a clear divide by income and education for many of these activities.

**Better-educated and more affluent Americans utilize new technology more than other adults.**



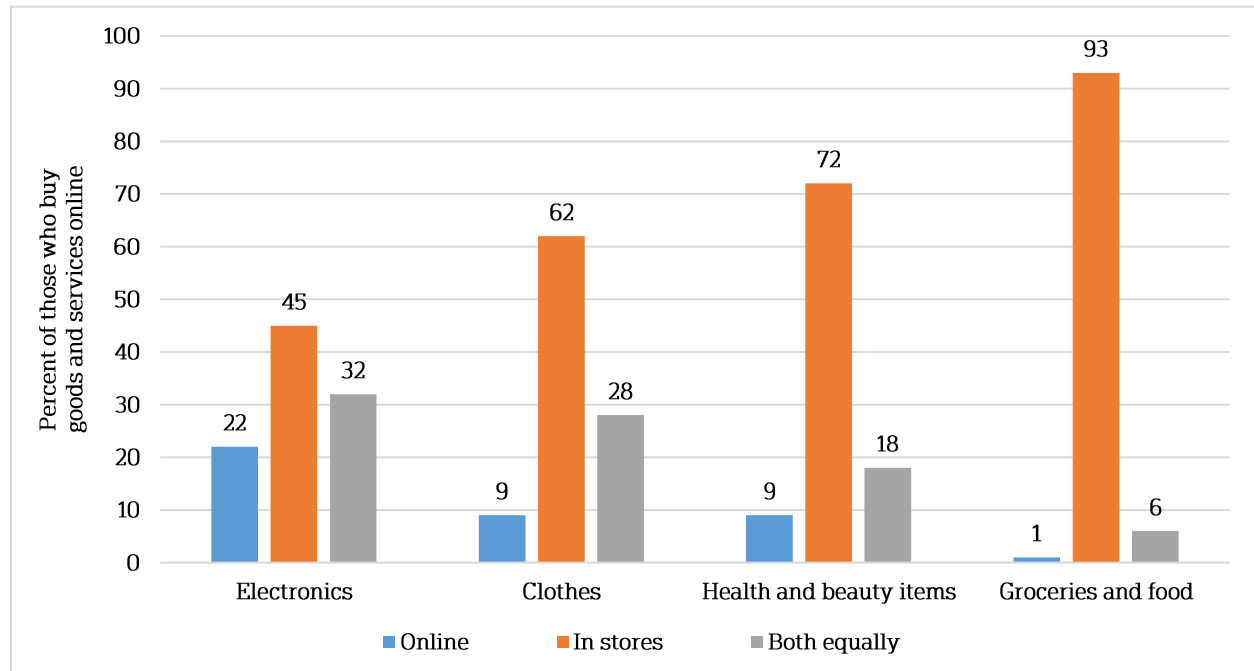
Question: How often do you do each of the following?

Source: AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

## AMERICANS STILL SHOP IN STORES AND WANT PERSONAL INTERACTIONS

Nearly 8 in 10 Americans shop online at least occasionally, and 4 in 10 do so regularly. Although e-commerce is growing,<sup>1</sup> most Americans still do their shopping in brick-and-mortar stores. Almost all Americans say they primarily do their grocery shopping in a store, not online, and three-quarters say the same about health and beauty items. Fewer, but still a majority, mainly shop for clothes in stores. Just under half purchase most of their electronics in person.

**Even people who shop online still make most of their purchases in stores.**



**Question:** Where do you do most of your shopping for each of the following?

**Source:** AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

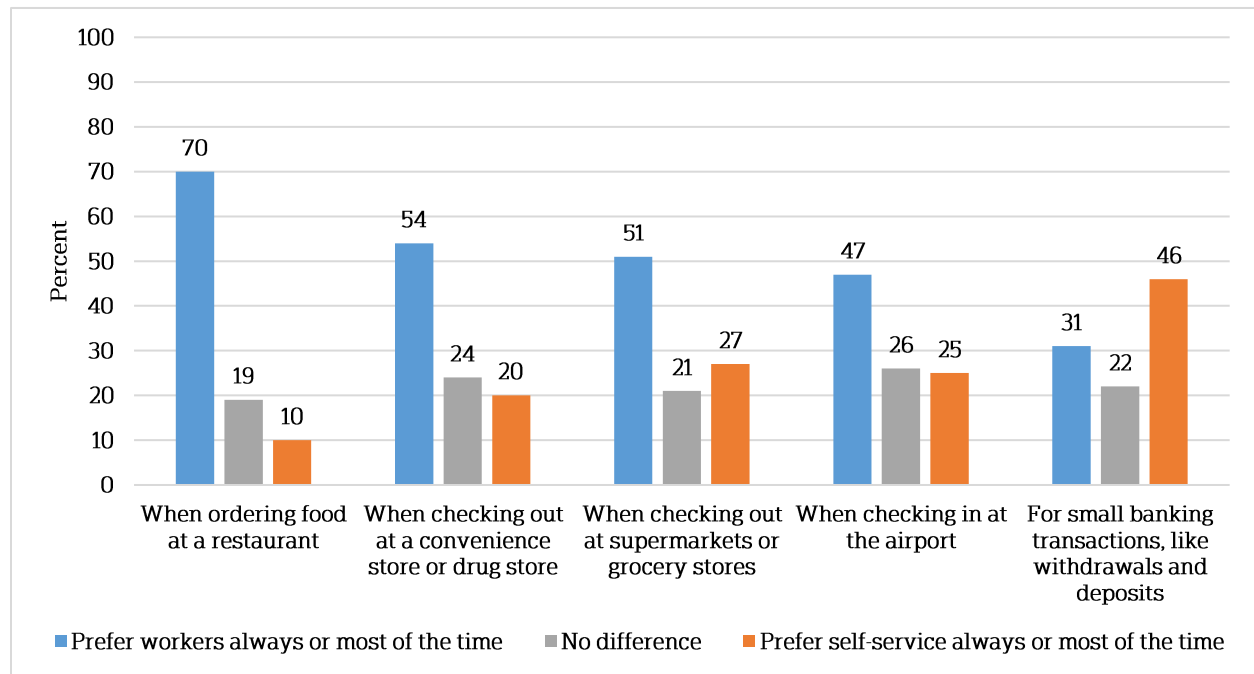
Though people are more likely to shop in person, they do not necessarily interact with actual people working at those stores. Many types of businesses are outsourcing the checkout process to the customer by introducing automated self-checkout. But much of the public still prefers interacting with a real person when checking out at a grocery store or convenience store, and especially when ordering food at a restaurant.

Banking is an exception. Perhaps because ATMs have been in use for more than 40 years, many people like how automation works when it comes to banking. Forty-six percent say they prefer self-service for small transactions like withdrawals or deposits, and 22 percent have no preference, while 31 percent prefer to interact with a live teller. And two-thirds say they do their personal banking online at least occasionally.

<sup>1</sup> [https://www.census.gov/retail/mrts/www/data/pdf/ec\\_current.pdf](https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf)

These days, many airlines have self-service kiosks for their passengers. A quarter of the public prefer to use these kiosks, and about the same number have no preference. Still, nearly half would rather deal directly with an airline agent.

**People prefer interacting with service workers for many transactions.**

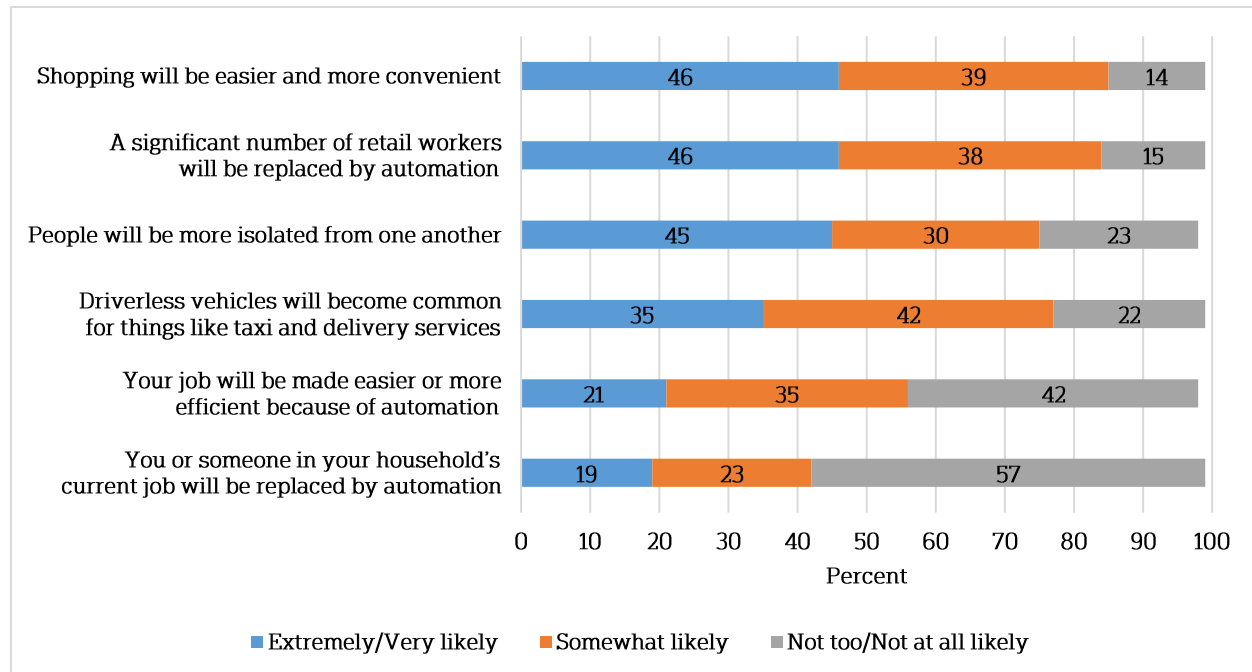


**Question:** In each of the following situations, would you rather interact with workers, or would you prefer to handle transactions with a self-service device or kiosk without interacting with a person, or doesn't it make much difference to you?

**Source:** AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

Although currently people would rather interact with a person rather than a machine and don't shop online as much as they do in stores, most Americans expect technology developed over the next 10 years will make shopping easier and more convenient. And they expect new technology will result in a significant loss of retail jobs.

Though people anticipate increased convenience in their everyday lives, three-quarters say it is at least somewhat likely new technological developments in the next 10 years will lead to people becoming increasingly isolated from each other. This feeling extends across those of all ages, income and educational levels, and urban, suburban, and rural environments. And, while about 4 in 10 Americans anticipate that their daily lives will improve due to automation in the next 10 years, more than half expect it to make no difference (34 percent) or even get worse (22 percent). Those who live in rural areas are less likely to expect their daily lives to improve due to automation, compared to those who live in urban areas (34 percent vs. 48 percent).

**People think shopping will be easier with new technology, but that retail jobs will be lost.**

**Question:** How likely do you think it is that each of the following will happen in the next 10 years as a result of new technological developments?

**Source:** AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

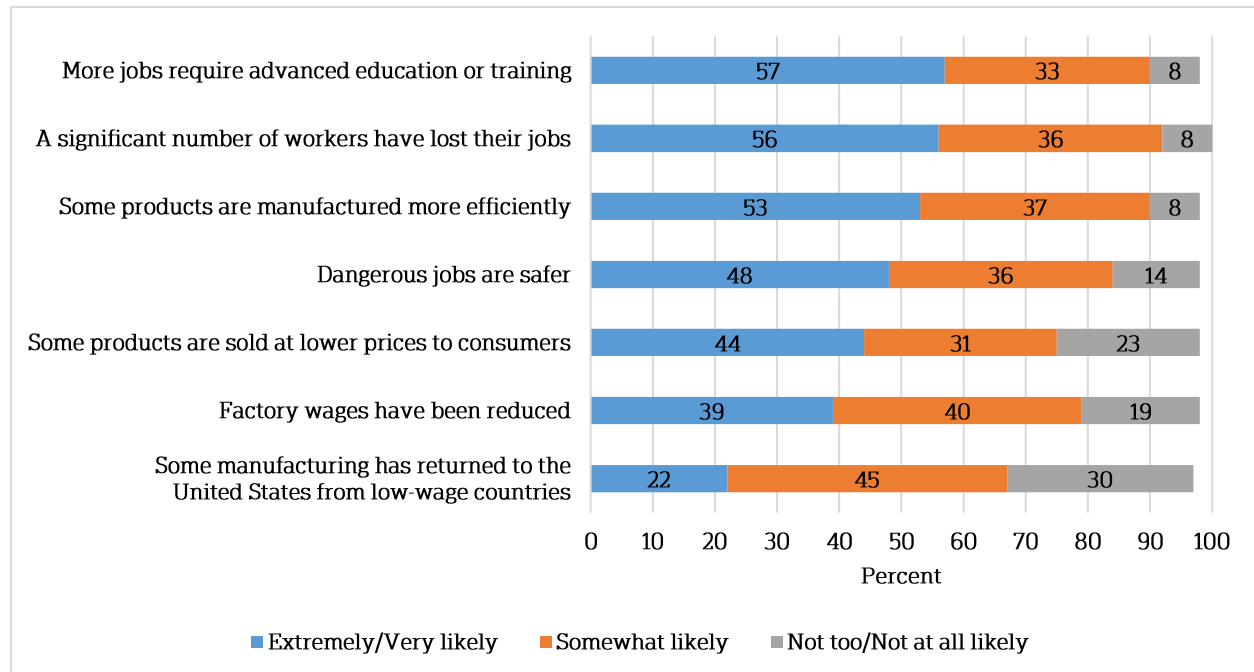
## FEW SEE AUTOMATION AS BENEFICIAL FOR FACTORY WORKERS

Overall, just a third of Americans say the automation of jobs through new technology in the workplace has helped American workers, while 44 percent say it has hurt and 22 percent say it has done neither. They say automation in factories has impacted the American workforce in a variety of ways. On the negative side, more than half say it is very or extremely likely that, because of automation, more jobs require advanced education or training or that a significant number of workers have lost their jobs, and 4 in 10 say factory wages have gone down. On the positive side, nearly half say dangerous jobs are now safer because of automation, and many say products are manufactured more efficiently and prices are cheaper for consumers. Few say some manufacturing has returned to the United States from low-wage countries because of American implementation of technology.

There are two specific areas of the workforce where people anticipate automation hitting particularly hard—retail and driving services. More than 8 in 10 Americans think it is at least somewhat likely that many retail workers will lose their jobs to automation in the next 10 years, and nearly 8 in 10 say driverless vehicles will become common for things like taxi and delivery services.

While 57 percent say it is not particularly likely that anyone in their household will be replaced at work by automation during the next 10 years, still 23 percent consider it somewhat likely and another 19 percent say it is extremely or very likely that new technological developments will result in job loss within their household. Those without a college degree are particularly likely to say they or someone in their household will lose their job due to automation within the next decade (22 percent vs. 10 percent),



**Americans say factory automation increases safety and efficiency, while causing job loss.**

**Question:** How likely do you think it is that each of the following has resulted from increased automation in factories?

**Source:** AP-NORC Center poll conducted August 17-21, 2017, with 1,038 adults nationwide.

Among Americans who are currently working full or part time, two-thirds say automation plays at least some role in their workplace. These workers are actually more likely than other Americans to say automation has helped workers (40 percent vs. 24 percent).

Still, few workers (21 percent) say they expect automation to make their job easier in the future, though those employed in jobs that currently use automation are more likely than other workers to say it will (26 percent vs. 11 percent).

Though many workers say automation has resulted in the need for greater training, most workers are at least moderately confident that, if they or their colleagues lost their jobs due to automation, they could find affordable training in their area to prepare them for new kinds of work. Forty-two percent say they are very or extremely confident they could, and 27 percent are moderately confident. Still, 30 percent are not very confident or not confident at all.

Telecommuting is on the rise<sup>2</sup> and has made the lives of some workers more convenient, as they do not have to spend time stuck in traffic or standing on a train, but few have been able to take advantage of this technology so far. Just less than a third of workers say they telecommute even occasionally.

<sup>2</sup> <https://www.bls.gov/opub/ted/2016/24-percent-of-employed-people-did-some-or-all-of-their-work-at-home-in-2015.htm>



## ABOUT THE STUDY

### Survey Methodology

This survey was conducted by The Associated Press-NORC Center for Public Affairs Research and with funding from The Associated Press and NORC at the University of Chicago. Data were collected using the AmeriSpeak Omnibus®, a monthly multi-client survey using NORC's probability-based panel designed to be representative of the U.S. household population. The survey was part of a larger study that included questions about other topics not included in this report. During the initial recruitment phase of the panel, randomly selected U.S. households were sampled with a known, non-zero probability of selection from the NORC National Sample Frame and then contacted by U.S. mail, email, telephone, and field interviewers (face-to-face). The panel provides sample coverage of approximately 97% of the U.S. household population. Those excluded from the sample include people with P.O. Box only addresses, some addresses not listed in the USPS Delivery Sequence File, and some newly constructed dwellings.

Interviews for this survey were conducted between August 17 and 21, 2017, with adults age 18 and over representing the 50 states and the District of Columbia. Panel members were randomly drawn from AmeriSpeak, and 1,038 completed the survey—861 via the web and 177 via telephone. The final stage completion rate is 26.9 percent, the weighted household panel response rate is 33.5 percent, and the weighted household panel retention rate is 89.2 percent, for a cumulative response rate of 8.0 percent. The overall margin of sampling error is +/- 4.1 percentage points at the 95 percent confidence level, including the design effect. The margin of sampling error may be higher for subgroups.

Once the sample has been selected and fielded, and all the study data have been collected and made final, a poststratification process is used to adjust for any survey nonresponse as well as any non-coverage or under- and oversampling resulting from the study specific sample design. Poststratification variables included age, gender, census division, race/ethnicity, and education. Weighting variables were obtained from the 2017 Current Population Survey. The weighted data, which reflect the U.S. population of adults age 18 and over, were used for all analyses.

All differences reported between subgroups of the U.S. population are at the 95 percent level of statistical significance, meaning that there is only a 5 percent (or lower) probability that the observed differences could be attributed to chance variation in sampling.

A comprehensive listing of the questions, complete with tabulations of top-level results for each question, is available on The AP-NORC Center website: [www.apnorc.org](http://www.apnorc.org). For more information, visit [www.apnorc.org](http://www.apnorc.org) or email [info@apnorc.org](mailto:info@apnorc.org).

## CONTRIBUTING RESEARCHERS

### From NORC at the University of Chicago

Marjorie Connelly  
Dan Malato  
Trevor Tompson  
Jennifer Benz  
Liz Kantor  
Nada Ganesh

### From The Associated Press

Emily Swanson

## ABOUT THE ASSOCIATED PRESS–NORC CENTER FOR PUBLIC AFFAIRS RESEARCH

The AP-NORC Center for Public Affairs Research taps into the power of social science research and the highest-quality journalism to bring key information to people across the nation and throughout the world.

- The Associated Press (AP) is the world's essential news organization, bringing fast, unbiased news to all media platforms and formats.
- NORC at the University of Chicago is one of the oldest and most respected, independent research institutions in the world.

The two organizations have established The AP-NORC Center for Public Affairs Research to conduct, analyze, and distribute social science research in the public interest on newsworthy topics, and to use the power of journalism to tell the stories that research reveals.

The founding principles of The AP-NORC Center include a mandate to carefully preserve and protect the scientific integrity and objectivity of NORC and the journalistic independence of AP. All work conducted by the Center conforms to the highest levels of scientific integrity to prevent any real or perceived bias in the research. All of the work of the Center is subject to review by its advisory committee to help ensure it meets these standards. The Center will publicize the results of all studies and make all datasets and study documentation available to scholars and the public.