JOHN J. HELDRICH CENTER FOR WORKFORCE DEVELOPMENT

WORKTRENDS

AMERICANS' ATTITUDES ABOUT WORK, EMPLOYERS, AND GOVERNMENT

What Me Worry? Most Americans Not Concerned about the Impacts of Technology on Jobs

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Background

The John J. Heldrich Center for Workforce Development at the Edward J. Bloustein School of Planning and Public Policy at Rutgers, The State University of New Jersey was founded as a research and policy organization devoted to strengthening New Jersey's and the nation's workforce during a time of global economic change. The Heldrich Center researches and puts to work strategies that increase worker skills and employability, strengthen the ability of companies to compete, create jobs where they are needed, and improve the quality and performance of the workforce development system. Since 1997, the Heldrich Center has experienced rapid growth, working with federal and state government partners, Fortune 100 companies, and major foundations. The center embodies its slogan "Solutions at Work" by teaming with partners and clients to translate cutting-edge research and analysis into practices and programs that companies, unions, schools, community-based organizations, and government officials can leverage to strengthen the nation's workforce. The center's projects are grounded in a core set of research priorities:

- Disability Employment
- Evaluation, Management, and Employment
- Industry, Education, and Employment
- Reemployment
- Work Trends and Economic Analysis

Since its inception, the Heldrich Center has sought to inform employers, union leaders, policymakers, community members, the media, and academic communities about critical workforce and education issues that relate to the emerging global economy. To better understand the public's attitudes about work, employers, and the government, and improve workplace practices and policy, the Heldrich Center produces the *Work Trends* surveys on a regular basis (The complete set of reports is available at **www.heldrich.rutgers.edu**). The surveys poll the general public on critical workforce issues facing Americans and American businesses. The survey findings are promoted widely to the media and national constituencies. The series is directed by Carl E. Van Horn, Ph.D., Director of the Heldrich Center.

What Me Worry? Most Americans Not Concerned about the Impacts of Technology on Jobs continues to advance the goals of the *Work Trends* series to give American workers a voice in the national economic policy debates, and thereby provides policymakers and employers with reliable insights into how workers across the nation are judging and acting upon the realities of work and the workplace.

The authors of this report were Carl Van Horn, Ph.D. and Jessica Starace, MPP. Cliff Zukin, Ph.D. was instrumental in developing the survey design and analyzing the survey data. Robb C. Sewell edited and formatted the report.

Introduction

The potential impacts of robotics, artificial intelligence, and digital economy technologies on American workers raise important questions about the future of the American workplace. Who will be the winners and losers? Which occupations and jobs will be eliminated? What new jobs and enterprises will be created?

Advanced software, smartphones, the Internet, and cognitive computing have already disrupted the retail, media, transportation, education, and health care industries. Widely different predictions have been offered about the scope of future workforce disruptions. Recent assessments about the impact of artificial intelligence on worker dislocation range from the prediction by the **Organisation for Economic Co-operation and Development** that 9% of jobs will disappear in the next two decades, to a **World Economic Forum** report that technology could create over 50 million net jobs by 2022. On the other end of spectrum is the shocking **analysis of Oxford University scholars**, who concluded that nearly half of current jobs will vanish.

The John J. Heldrich Center for Workforce Development's recent survey of a nationally representative sample of 827 Americans finds that less than a majority of the public (43%) perceive that technology is a major threat to American workers.[1] Far more respondents found corporate decision-makers' plans to move jobs to other countries (64%) and the government in Washington (50%) as greater threats to the economic future of working Americans. The majority of Americans in the labor force today say they have not been personally affected by technology in the workplace.

This Heldrich Center *Work Trends* report, *What Me Worry? Most Americans Not Concerned about the Impact of Technology on Jobs*, explores why most Americans are not very concerned about the impact of technology and also why Americans with limited formal education are fearful that they will be left behind by rapid technological-driven changes.[2] Heldrich Center researchers supplement these findings with a look back at the center's 2000 *Work Trends* survey, which asked working Americans about the impact of the computer on workplace experiences and their attitudes about technology's role in the future of work in America.[3] Several questions asked in 2018 about technology are modeled after questions asked in 2000 about the computer.[4]

A majority of Americans (57%) acknowledge that the introduction of new technologies at work has been rapid and widespread. Overall, they hold generally positive opinions about these changes. Automation and other new technologies have not yet brought about changes at work that are worrisome to Americans. Most respondents say they have not experienced a great deal of change, good or bad, in their working life due to technology.

There are also divergent views and experiences across various groups of the American public, including slight differences by age.[5] Workers under age 50 are more likely to say their workplaces have gained or lost employees; 31% of workers age 18 to 34 say jobs have been added or reduced as a result of technology, compared to 19% of workers age 35 to 49 and 17% of workers age 50 to 70. A large majority (7 in 10) of workers under age 45 (72%) say they need more technological skills to achieve their career goals, compared to just over 5 in 10 (57%) workers age 45 to 70.

Several groups of Americans say they have been negatively affected by the impact of technology or fear that this will continue in the future. Topping this list are Americans living in households earning less than $50K annually and those who have a high school degree or less, and work hourly. For example, 70% of workers making less than $50K annually believe technology eliminates more jobs than creates jobs, compared to 46% of income earners over $100K.

AMERICANS' OPINIONS ABOUT TECHNOLOGY AND JOBS

The survey captured respondents' views about the impact of technology on jobs and the economy by asking them to agree or disagree with a series of statements. They were asked to think of "technology" in a broad sense — that is, encompassing computers, automation, and robots.

The vast majority of Americans — 9 in 10 (93%) — believe that new technologies, such as computers, automation, and robots are generally "good" for the American economy. This includes 4 in 10 (44%) who would say they agree "a lot" with this statement. Given this finding, the interesting variance observed is between respondents who say they agree "a lot" versus "a little." College graduates, people with a household income of at least $100K, and salaried workers are more likely to say that they agree "a lot" with this statement, as shown in Table 1.

Table 1. "New technologies are good for the economy" — percent who agree "a lot," total sample

	% who Agree "a lot"	N
Education		
College graduate	59%	290
Some college	43%	244
High school or less	32%	293
Household Income		
$100K+	53%	290
$50K to $100K	47%	262
Less than $50K	32%	275
Pay Type, Employed		
Salary	56%	194
Hourly	34%	221

Similar attitudes were recorded in the Heldrich Center's 2000 survey.[6] Four in 10 (43%) employed Americans gave a largely positive ranking of 9 or 10 on a scale of 0 to 10 where 0 signifies strong disagreement, 5 is neutral, and 10 suggests strong agreement, when asked about the statement that "new information technology such as the Internet is good for the economy."[7] Less than 1 in 10 (7%) gave a ranking of 0, 1, 2, 3, or 4; few said they disagree that the economy benefits from the impact of new technologies.

The 2000 *Work Trends* report also found that two thirds (68%) of workers agreed with the statement that "new jobs created by information technology are good jobs." Two decades later, Americans also say they think that the jobs created by technology are "good" jobs. Eight in 10 (87%) people agree with this statement, with 3 in 10 agreeing "a lot" (33%). Table 2 shows that, in general, college graduates, higher-income earners, and salaried workers tend to be more confident in the assessment that quality jobs are created in the American economy because of advances in technology.

Table 2. "The jobs created by these new technologies are good jobs" — percent who agree "a lot," total sample

	% who Agree "a lot"	N
Education		
College graduate	45%	290
Some college	33%	244
High school or less	23%	293
Household Income		
$100K+	40%	290
$50K to $100K	35%	262
Less than $50K	24%	275
Pay Type, Employed		
Salaried	41%	194
Hourly	27%	221

This optimism is tempered by the finding that a majority of Americans (56%) agree that "new technologies eliminate more jobs than they create." However, only 1 in 10 (13%) feel strongly that new technologies eliminate a lot of jobs (see Figure 1).

Figure 1. "New technologies eliminate more jobs than they create" — total sample (N=827)

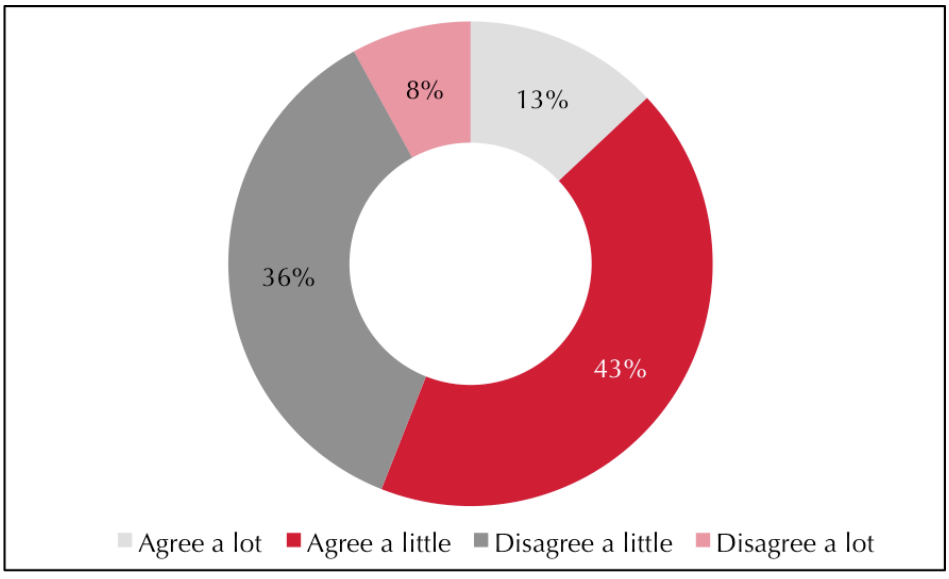


Table 3 illustrates the significant differences across education, income, and type of pay on this measure. Americans with more formal education and a higher household income, as well as those who work on a salaried basis, are less likely to say that technology eliminates, rather than creates, jobs. For example, less than a majority of college graduates (46%) agree that jobs are lost rather than gained because of technology, compared to a majority of people who attended at least some college (59%) or high school (61%). Four in 10 (46%) of those having a household income of $100K or more say they think jobs are lost, rather than gained, because of technology, compared to 50% of $50K to $100K earners, and a large majority (70%) of people making less than $50K per year.

Table 3. "New technologies eliminate more jobs than they create" — percent who agree, total sample

	% who Agree	N
Education		
College graduate	46%	290
Some college	59%	244
High school or less	61%	293
Household Income		
$100K+	46%	290
$50K to $100K	50%	262
Less than $50K	70%	275
Pay Type, Employed		
Salary	44%	194
Hourly	61%	221

THE LABOR FORCE: OPINIONS AND BEHAVIORS ABOUT JOBS, TECHNOLOGY USE, AND SKILLS

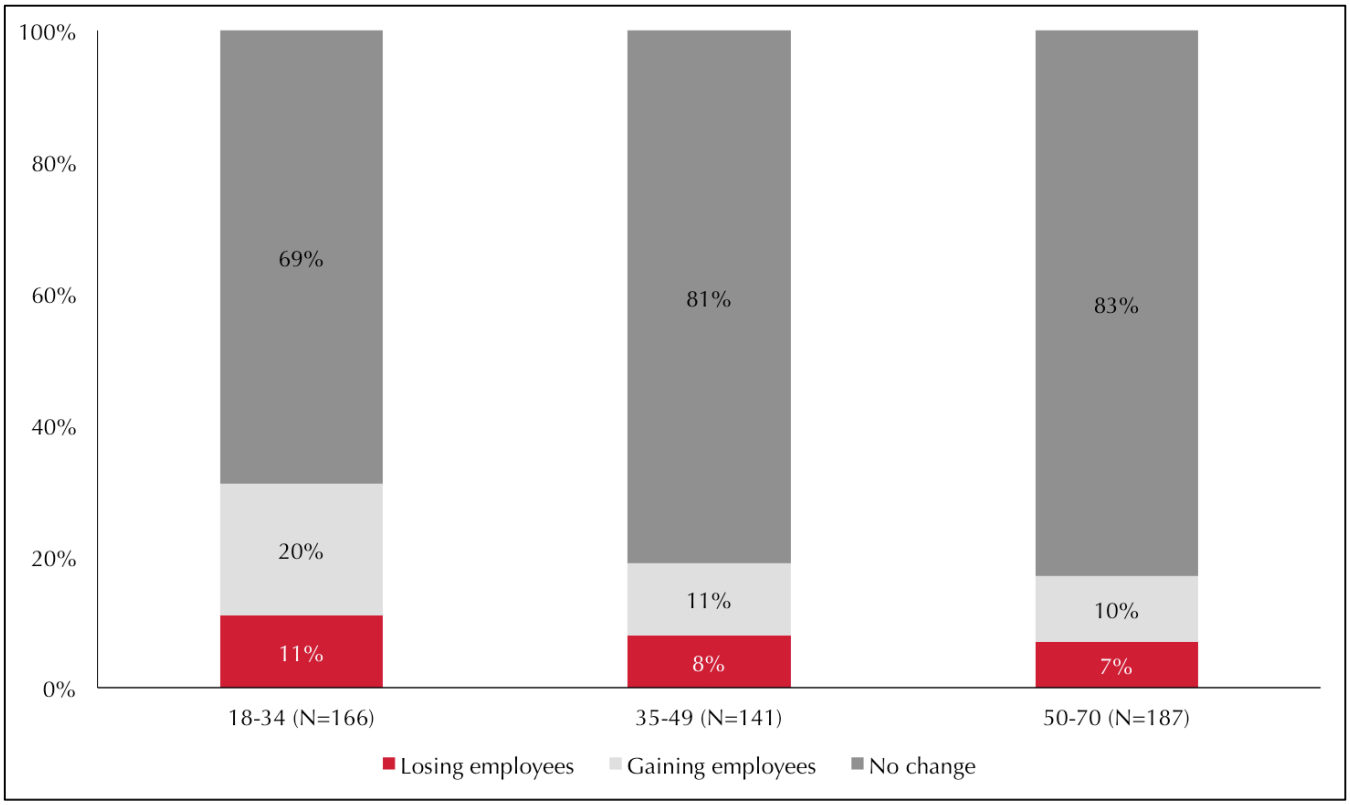
The survey explored workers' assessments of several potential impacts of technology in their workplace and on employment.

Gaining or Losing Jobs

Nearly 8 in 10 workers (77%) say technology did not replace jobs at their places of work in recent years. One quarter (24%) of workers report their company's workforce has changed because of advances in technology — 9% work in companies that have lost employees and 15% work in companies that have gained employees. Younger workers are slightly more likely to say that they've observed changes in who is working. These differences are shown in Figure 2. (**In**

2000, 1 in 10, or 10%, of employed Americans said there were fewer jobs in their workplace since the last year because of technology replacing workers.)

Figure 2. Recent workplace job changes because of technological advances, based on labor force/by age



Impacts and Making Jobs Better

The survey also asked people to consider the impact of technology on their own positions in their current or most recent jobs. Workers were asked to indicate to what degree technology is used in their current job or most recent job.[8] Nearly all workers (94%) say that the ability to use technology to do their job well is critical, very important, or not very important (though still an attribute of their work), with the remaining respondents indicating that they don't or didn't use technology in their work. Four in 10 (39%) say the use of technology is critical, and 3 in 10 (35%) indicate technology is "very important."[9]

Eight in 10 (81%) employed Americans agree that "new technologies have changed my job for the better" (see Table 4). Three in 10 (33%) agree "a lot" with this statement, including 47% of college graduates. Less than 2 in 10 (19%) of those with a high school degree or less share this positive view.

Table 4. "New technologies have changed my job for the better" — percent who agree "a lot," based on employed

	% who Agree "a lot"	N
Education		
College graduate	47%	195
Some college	30%	132
High school or less	19%	130
Household Income		
$100K+	37%	195
$50K to $100K	31%	150
Less than $50K	30%	112
Pay Type		
Salary	41%	194
Hourly	27%	221

More than half (57%) of workers say these technological changes in the workplace have moved quickly or very quickly in the workplace, a measure that varies by education level and only slightly by age (see Table 5). However, just 1 in 10 (14%) say they have struggled in the past to keep up with changes in technology at work. This is true of 11% of younger workers, age 18 to 44, but 19% of older workers, age 45 to 70; no statistically significant differences are observed across educational attainment or between pay types on keeping pace with technological change in the workplace. Eight in 10 members of the labor force (79%) say keeping up with those changes hasn't been a problem in their work.

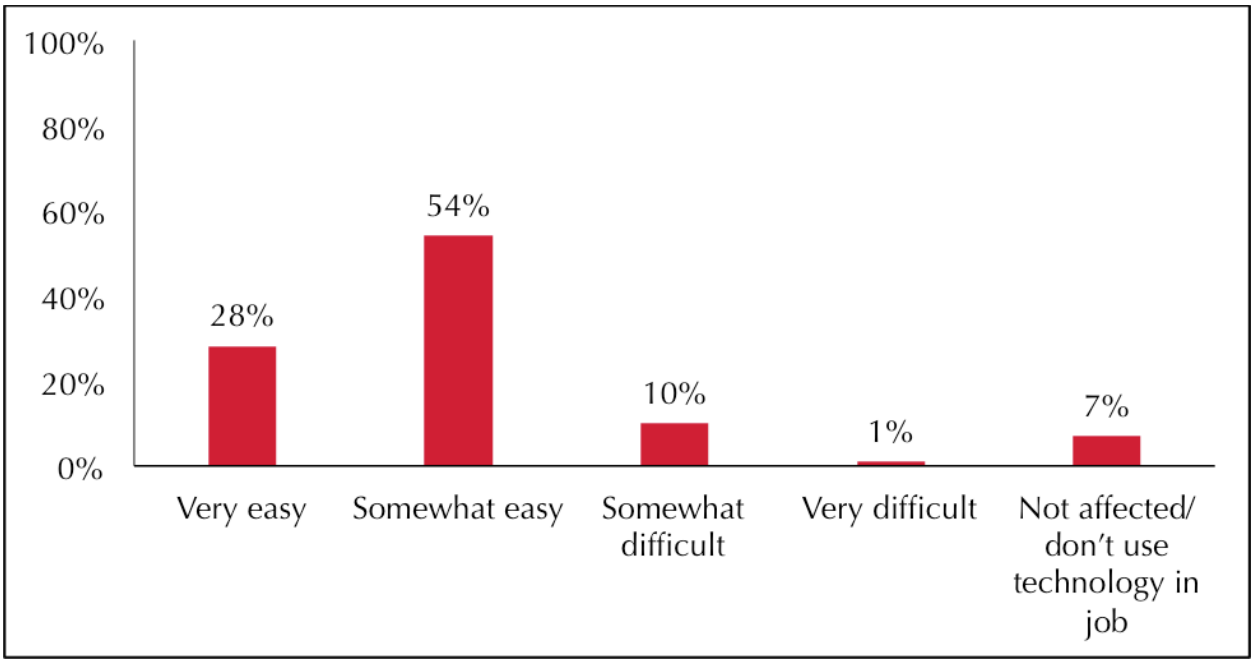
More than three quarters of the labor force (82%) say they have had a relatively easy time keeping up with technology in their current or most recent job with most (54%) saying it has been "somewhat" easy keeping up with technology (see Figure 3). Younger workers, age 18 to 44, are also slightly more likely to say that keeping pace with technology has been very easy (33%), compared to older workers, age 45 to 70 (22%).

American workers are divided in their views of the impact of technology on the appeal of the job. Four in 10 (43%) workers say technology has made their work more interesting to do; an equal number (41%) say technology has made no difference on how interesting the job is. Some differences are also apparent when breaking down answers by education: 51% of college graduates say work is more interesting because of technology, compared to 40% having attended some college, and 37% having a high school diploma or less.[10] Fifty-one percent of salaried Americans currently on the job agree that technology makes work more interesting, compared to 39% of hourly workers.

Table 5. Technological change in the past, based on labor force[11]

	Very Quickly	Quickly	Slowly	Hasn't Really Changed	Doesn't/Didn't Use Technology in Job	N
Age						
18-44	16%	42%	17%	19%	7%	243
45-70	14%	43%	27%	10%	7%	243
18-34	16%	38%	15%	22%	9%	160
35-49	16%	46%	23%	13%	3%	139
50-70	13%	43%	27%	10%	8%	187
Education						
College graduate	20%	49%	19%	10%	1%	202
Some college	8%	46%	25%	16%	6%	142
High school or less	15%	31%	21%	20%	13%	152
Type of Pay, Employed						
Salary	20%	47%	19%	11%	3%	192
Hourly	13%	39%	24%	17%	6%	218

Figure 3. Keeping up with technology in my job/my most recent job, labor force (N=496)



Skills Needed

More than 9 in 10 (93%) American workers say training is essential or important for them to keep pace with changes in the workplace — fully half (51%) say doing so is absolutely "essential."[12] Overall, American workers feel confident that they are prepared for their jobs and careers. Nine in 10 workers (89%) say that they either have the technological skills they need to perform their current job, and, if need be, when they seek another job. Fully 98% of college graduates say they're equipped with the technological skills they need to do their jobs, reporting they either agree "a lot" or "a little" that they're prepared. Large majorities of college graduates (71%), higher-income earners (65%), and salaried workers (69%) say they agree "a lot" that they have those skills (see Table 6). In contrast, just 47% of workers with less than a high school degree, and 44% of the lowest income earners, say they agree "a lot" that they have the skills needed to work in their current or most recent position. There are no observed differences by age on this measure.

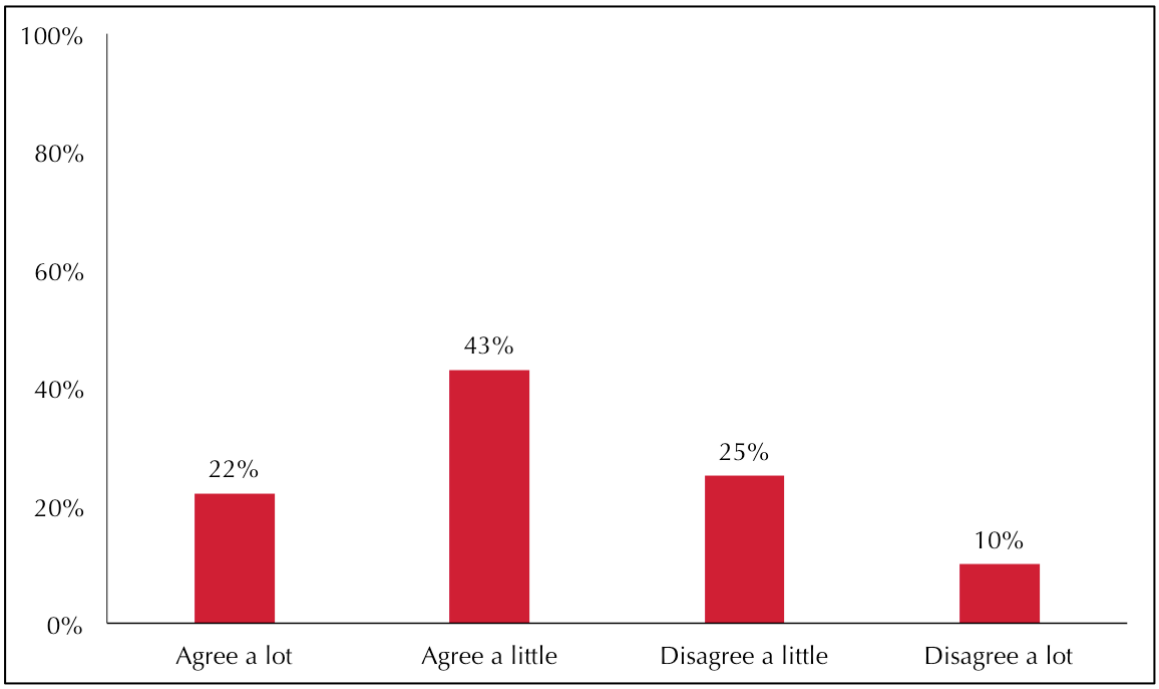
Table 6. "I have the necessary technological skills I need to perform my current job" / "I had the necessary technological skills I needed to perform my current job" — percent who agree "a lot," based on labor force

	% who Agree "a lot"	N
Education		
College graduate	71%	202
Some college	59%	142
High school or less	47%	160
Household Income		
$100K+	65%	201
$50K to $100K	68%	161
Less than $50K	44%	142
Pay Type, Employed		
Salary	69%	194
Hourly	58%	221

American workers' confidence in their technological skills is similar to what the Heldrich Center found in the survey conducted in 2000. Then, nearly two thirds (61%) of employed Americans rated the statement "I have the necessary computer skills to perform my current job" a 9 or 10, indicating strong agreement, with fully three quarters (77%) saying they agree.[13]

While American workers are confident, they are also looking ahead to what they'll need for their future careers. Six in 10 (65%) of the labor force think they'll need more technological skills to achieve the goals they have set for themselves in their career; however, just 2 in 10 (22%) would agree a lot that they will need more technological skills as illustrated in Figure 4.

Figure 4. "I will need more technological skills to achieve my career goals" — based on labor force (N=504)



On this important measure, there are interesting similarities and differences across age, education, income, and pay type, broken down by subgroup in Table 7. For example, 70% of college graduates believe they'll need more training, comparable to workers having a high school degree or less (68%). Also, 7 in 10 (70%) younger workers age 18 to 34 and middle-aged workers (71%) age 35 to 49 think they'll need to develop more technological skills to achieve their career goals, considerably more than the 5 in 10 (55%) workers age 50 to 70. Little to no variance is apparent between workers who agree "a lot" versus those who agree "a little" for this question.

These findings resemble what the Heldrich Center found at the turn of the millennium. In 2000, just one third (35%) of employed people said they disagreed with the statement that "I will need more computer skills to achieve my career goals" — that is, they gave that idea a 0, 1, 2, 3, or 4 ranking. About half (49%) ranked this statement with a 6 to 10, saying they think they'll need training in computers to get ahead professionally, despite being confident they already possess the skills they need.

Respondents who say they "agree" that they'll need more technological skills to achieve their career goals were asked to specify those skills in their own words. They identified the following types of skills as what they'll need to advance professionally in their own working lives:[14]

- Computer skills — general/basic;
- Software packages, apps, and other programs as they relate to their work;
- Data use, data analysis, and database management;
- Programming, coding;
- Machine learning, robots, and artificial intelligence; and
- Social media.

Table 7. "I will need more technological skills to achieve my career goals" — percent who agree, based on labor force

	% who Agree	N
Education		
College graduate	70%	202
Some college	58%	142
High school or less	68%	160
Age		
18-44	72%	250
45-70	57%	244
18-34	70%	166
35-49	71%	141
50-70	55%	187
Household Income		
$100K+	69%	201
$50K to $100K	56%	161
Less than $50K	71%	142
Pay Type, Currently Employed		
Salary	67%	194
Hourly	62%	221

Open-ended responses (see sidebar on page 11) also revealed the following attitudes about acquiring these skills among members of the labor force. Although just a small number of workers say it has been hard to keep up with how fast technology changes (14%), about a quarter (21%) are worried about keeping up, and a similar number (18%) say it will be difficult to keep up in the years ahead. Respondents mentioned the need to:

- "**Keep up**" with change, "stay current," or adapt to technological advancements and changing platforms, or at a minimum, stay up-to-date in their understanding and mastery of programs specific to their professions that are constantly changing, or being replaced with new programs. (This finding reflects the opinions held by workers about how quickly technology has changed in their work, a measure that is similar to what Heldrich Center researchers found when asking about the pace of change in the future.)
- Update their computer "**literacy**" — to be able to learn new programs, apps, gadgets, and computer languages quickly when they encounter them in the workplace.
- Learn about **trends** themselves in their profession as they pertain to technological change, specifically machine learning and other forms of technology.
- Find a source of "**continuous**" training in their careers.

Selected Responses: Technological Skills

"I'm older, so I need a lot of computer skills to keep up."

"[I need the] ability to leverage AI and Machine Learning for my work."

"[I need to understand] continuous updates with new technology."

"Just keeping on top of changing platforms. All professionals need to be prepared to migrate to new computer programs and ways of doing business through technology (e.g., new accounting, purchasing, and travel systems)."

"Keeping up with advances in operating systems and updates to platforms…"

"Keeping up with software changes and updates to existing software."

"[I need to be] more computer literate and [be] able to navigate social media."

"Staying current with the state of robotics and automation."

"The ability to adapt and learn new technologies as they arise."

"To be able to keep up with technology and upgrade yourself."

Half (54%) of Americans in the labor force believe employers are responsible for training workers to keep up with changes in the workplace.[15] Six in 10 (62%) of the labor force say that they would agree their employer currently does, or did, a "good job providing me with training opportunities in technology" in their current or most recent job (see Table 8). In contrast, when asked in 2000 whether their employers make the grade in providing training opportunities in computers, 4 in 10 (42%) gave a rating of 6 to 10, saying they're in relative agreement with this statement. Four in 10 (44%) disagreed, a ranking of 0 to 4, that their place of work offers satisfactory computer training opportunities.

Table 8. "My employer (does/did) a good job of providing me with training opportunities in technology" (N=504)

	August 2018
Agree a lot	22%
Agree a little	40%
Disagree a little	18%
Disagree a lot	14%
Not affected/don't use technology in job	7%
Total	101%

Table 9 shows that agreement in 2018 varies when factoring in educational attainment and household income, and there are slight differences in the level of intensity of agreement with this idea. Nearly 7 in 10 (69%) college graduates say this is true of their current or most recent

employer, compared to 6 in 10 (62%) American workers whose highest level of education is some college, and 5 in 10 (55%) of the labor force with a high school degree or less. Just half (51%) of workers with a household income of less than $50K agree that they've gotten the training they need from their employers, compared to 60% of middle-income earners, and almost three quarters (73%) of workers with an annual income of at least $100K.

Table 9. "My employer does a good job/did a good job of providing me with training opportunities in technology" — based on labor force

	% who Agree	% who Agree "a Lot"	N
Education			
College graduate	69%	29%	202
Some college	62%	19%	142
High school or less	55%	19%	160
Household Income			
$100K+	73%	34%	201
$50K to $100K	60%	15%	161
Less than $50K	51%	14%	142
Pay Type, Currently Employed			
Salary	69%	27%	194
Hourly	60%	20%	221

Technology Use

When considering the use of the computer, the technology that began the digital revolution, almost three quarters (69%) of the labor force say that communication with their colleagues during the workday is primarily through email, or on the computer, including 47% who "agree a lot" that this describes their current or most recent job. This measure varies considerably by education, income, and type of pay (see Table 10). Eight in 10 workers who are college graduates (88%), $100K+ earners (77%), and people paid on a salaried basis (86%) say that the majority of their interaction with others in the workplace is via a computer or email. No differences are observed on this measure by age.

(In 2000, 61% of Americans rated this statement a "0 to 4" on a scale of 0 to 10, indicating disagreement. In fact, 28% said they would "agree" — whether somewhat or strongly — their interaction with colleagues in 2000 was mostly on a computer.)

Nine in 10 (92%) of the labor force, as well as people who say they are currently unemployed but not looking for work, say they'll use the Internet as a source to find new positions when applying, if necessary, including 6 in 10 (66%) who say they agree "a lot" that this is their plan if they must look for a new job. This is compared to half (49%) of job seekers in 2000 who said they would use the Internet, including 3 in 10 (29%) who rated this statement a 9 or 10. One third (33%) of people looking for work nearly two decades ago said they didn't think the Internet would be a source they would turn to in their job search.

Table 10. "(In my most recent job) I use (used) the computer or email as my primary means of communicating with others during the workday" — percent who agree (total) and agree "a lot," based on labor force

	% who Agree	% who Agree "a lot"	N
Education			
College graduate	88%	69%	202
Some college	66%	42%	142
High school or less	52%	28%	160
Household Income			
$100K+	77%	58%	201
$50K to $100K	72%	49%	161
Less than $50K	56%	30%	142
Pay Type[16]			
Salary	86%	68%	200
Hourly	58%	34%	246

American Workers and the Future of Work

In order to capture workers' expectations about the future of their own jobs and the impact of technology, employed respondents were asked to gauge the next three to five years of their careers and jobs. Two thirds think they will still be in their current position and place of work; a large majority (69%) believe they definitely or probably will be working at their current job, including one quarter (23%) who think it's absolutely certain. Only 3% of workers say they will lose their job due to new technology, and 2% believe that their inability to obtain new skills will affect them.

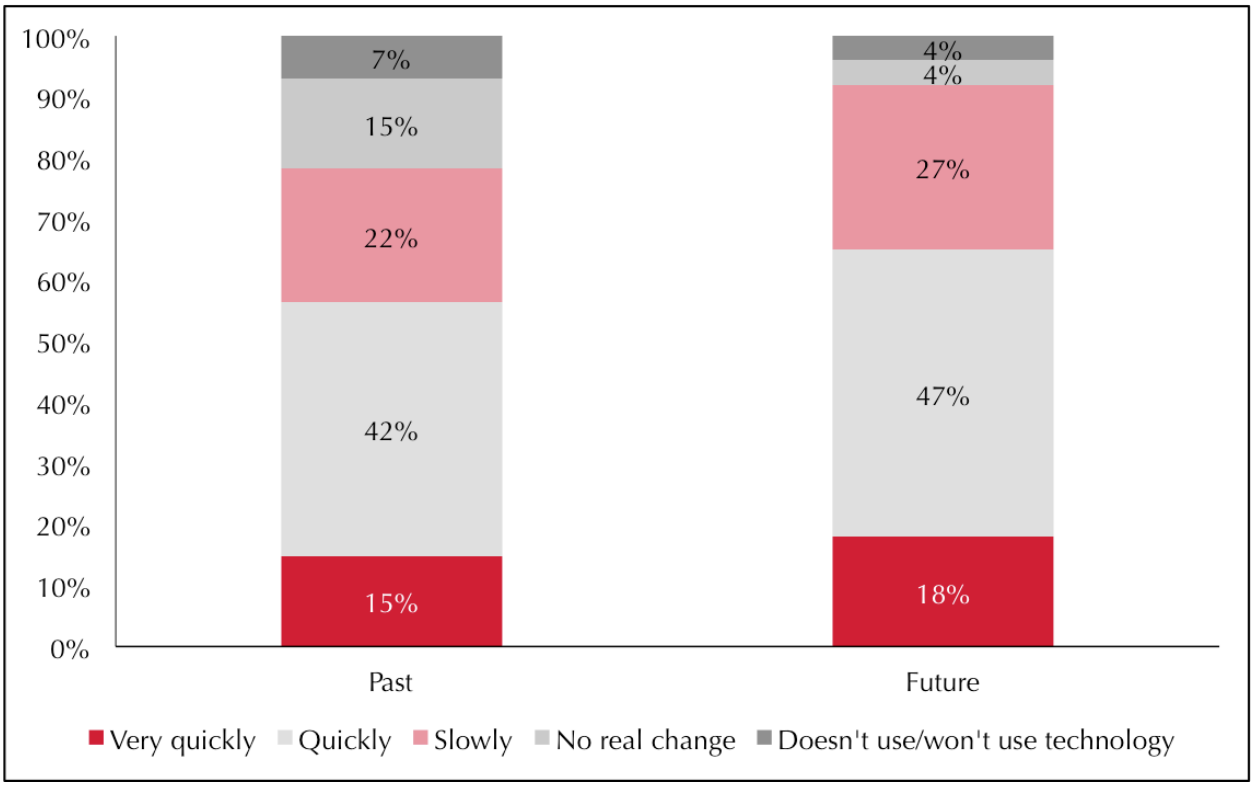
Eight in 10 (83%) of the labor force who will either stay in their current job, or will at least be working in the next two years, say they think their ability to use technology will be a critical (33%) or very important (50%) factor in doing that job well.[17]

One fifth (18%) of workers believe technology in the future will change very quickly, another half (47%) say they think change will be quick. Three in 10 (27%) believe technological developments will arise slowly, and 4% say things will not change in their job when it comes to technology. These opinions differ slightly by age and pay type:

- 75% of workers age 18 to 34 believe technology will change very quickly or quickly in the next three to five years, compared to 63% of workers age 35 to 49 but just 54% of the nation's oldest workers, age 50 to 70.
- 72% of salaried workers say the pace of technological change will be very quick or quick, compared to 58% of hourly workers.

Importantly, American workers overall do not expect that the pace of technology-driven change will be quicker than in the recent past, as shown in Figure 5. Younger workers, however, do think that technology will change far faster in the future than in the past. Just over half, or 54%, of workers age 18 to 34 say technology has changed very quickly or quickly in their current or most recent jobs in the past three to five years, but considerably more, three quarters, or 75%, believe the pace will be very quick or quick in the next three to five years in their current or future positions. There is no difference in opinion among older workers when comparing the pace of change in the past with the future.

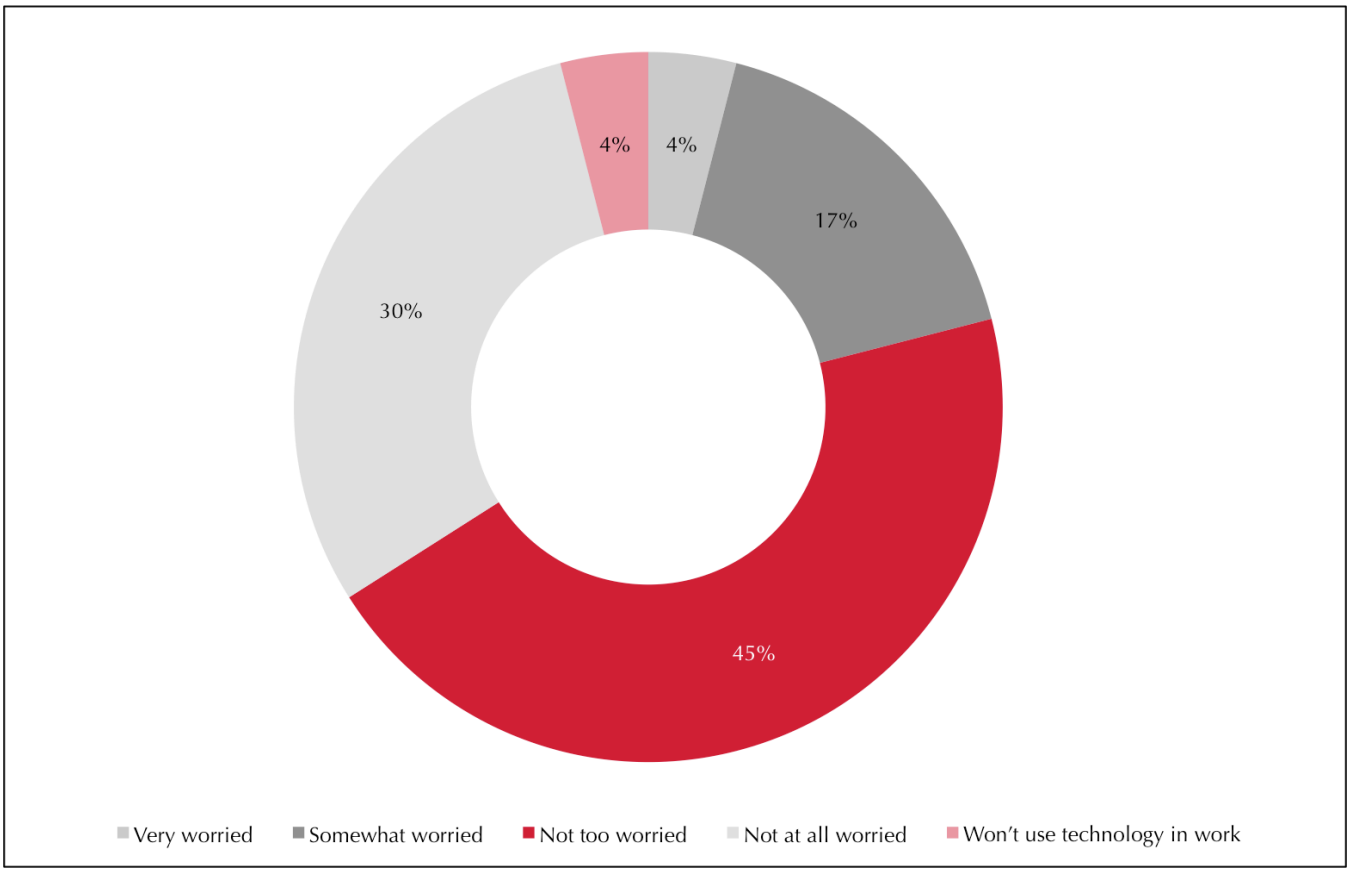
Figure 5. Technological change in job, past (N=496) vs. future (N=430), based on labor force



One fifth (18%) of the labor force believe it will be hard to keep up with the pace of technological change in the workplace, a slight increase from the 14% of the labor force who said it's been hard to keep abreast of technological change in recent years. There is little statistically significant variance apparent among subgroups of the American public on this measure, including age.

When asked how much they worry about keeping up with the quick pace of technological change, just one fifth (21%) of the labor force say they are somewhat or very worried, as shown in Figure 6.

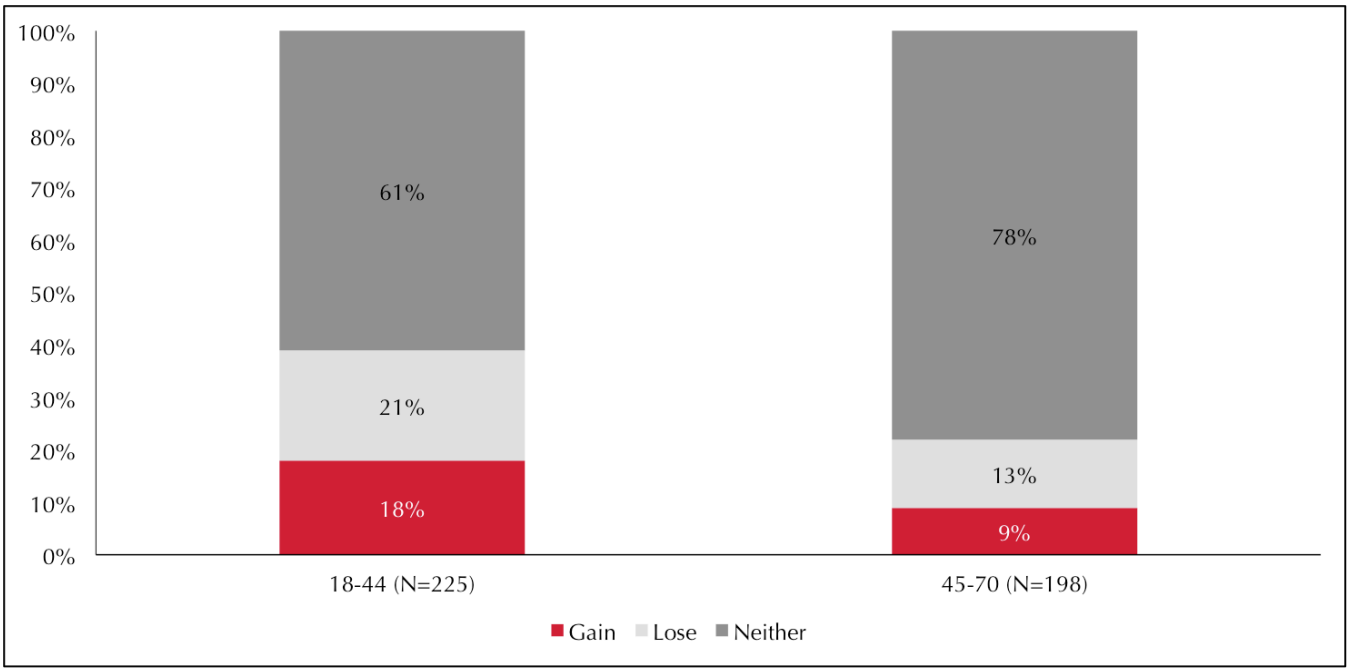
Figure 6. Worry about keeping up with pace of technological change in workplace, based on labor force working in next two years (N=430)



Slightly more lower-income earners, almost one third (29%) of workers making less than $50K annually, say they are very or somewhat worried about staying shoulder to shoulder with the changes technology will bring to their future professional lives, compared to 16% of middle-income earners ($50K to $100K), and 19% with an annual income of $100K+. The nation's youngest workers, age 18 to 34, are slightly more likely to say that they're worried (27%) than workers age 35 to 49 (15%) and age 50 to 70 (20%).

Workers are also convinced that their workplaces will change to a considerable extent due to the impact of technology beyond 2018, more so than in the past. In January 2000, a majority of employed Americans — 9 in 10 (89%) — said that they would disagree (giving a ranking of 0 to 4) with the statement that "I believe that my job will be replaced by a computer or some sort of technology within the next three years." Two decades later, the public thinks change is more likely. Just over 1 in 10, or 15% of the labor force, says they think their workplace will gain employees because of technology. Another 2 in 10, or 18%, believe workers will lose their jobs, but 68% say this is a far removed idea from their own place of work. Some differences are apparent when considering age on this measure, between the youngest and oldest workers. Figure 7 shows that 4 in 10 (39%) workers age 18 to 44 think their workplace could gain or lose jobs in the next three to five years as the result of technological change, compared to 2 in 10 (22%) workers age 45 to 70.

Figure 7. Future workplace job change estimates because of technological advances, based on labor force working in next two years, by age



Less than one fifth of the labor force (17%) (who also expect to be working in the next two years) are worried that their job could be replaced by technology. This measure varies slightly by age, education level, and income level. Younger workers, people having less education, and Americans living in households at lower-income levels — roughly one quarter of all groups — are more concerned than older, more-educated, higher-paid workers — or about one tenth of these groups. Younger, less-educated, lower-paid workers also predict that is it more likely that their job will be replaced by some form of technology in the next three to five years:

- 21% of workers age 18 to 34 say they are very or somewhat worried their jobs will be replaced by technology in the next three to five years. A similar number (25%) say they think it is very or somewhat likely this could happen.
- 24% of workers with a high school degree or less are very or somewhat worried their jobs will be replaced by technology in the next three to five years. Again, a similar number (22%) say it's likely they will lose their jobs to technology.
- 26% of workers with a household income of less than $50K annually express some degree of worry about their jobs, and believe it is very or somewhat likely their jobs will be replaced by technology.

These differences are summarized in Tables 11 and 12.

Table 11. Worry that job will be replaced by technology in next three to five years, based on labor force working in next two years

	Very/Somewhat Worried	Not too/Not at All Worried	N
Age			
18-34	21%	79%	148
35-49	17%	83%	126
50-70	8%	92%	149
Education			
College graduate	10%	90%	175
Some college	15%	86%	121
High school or less	24%	76%	136
Household Income			
$100K+	10%	90%	166
$50K to $100K	14%	86%	139
Less than $50K	26%	74%	127

Table 12. Likelihood that job will be replaced because of technology in three to five years, based on labor force working in next two years

	Very/Somewhat Likely	Not too/Not at All Likely	N
Age			
18-34	25%	75%	148
35-49	16%	84%	126
50-70	8%	92%	149
Education			
College graduate	11%	89%	175
Some college	20%	81%	121
High school or less	22%	79%	136
Household Income			
$100K+	13%	87%	166
$50K to $100K	14%	86%	139
Less than $50K	26%	74%	127

CONCLUSION

Notwithstanding the predictions of widespread economic dislocations due to the introduction of artificial intelligence, the Internet of things, robotics, and other technological advances, most Americans are not worried about the impact of technology on their jobs or the American economy. American workers know that technology has changed work in the United States, and will continue to do so in the future. These concerns, however, rank far lower than other worries. American workers are far more concerned about decisions made in Washington, D.C. and in corporate boardrooms.

Americans with no more than a high school degree, having an annual income of less than $50K, and hourly workers believe they are more vulnerable to the effects of technology on their own jobs and in the workplace. High school graduates and lower-income earners are more likely to say that they lack the technological skills they need to perform well in the workplace, compared to college graduates and workers in higher-income brackets, who are confident in their current skillset. Regardless of where workers are on the socioeconomic ladder, however, they are interested in acquiring new skills so they can keep pace with advances in technology. Younger workers, too, say they've been able to keep up with the swift changes in technology they've observed in their jobs, but know they'll need to make training a priority as they anticipate rapid change to continue and worry about what is in store for them in the coming years. If training and workforce development are not available, they are at greater risk of being left behind in a rapidly changing economy.

END NOTES

[1] C. Van Horn and J. Starace. (2018). *A Glass Half Full or Half Empty? Americans Agree the Economy is Strong, but Worry about the Future*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.

[2] This report considers the opinions, attitudes, and experiences of several groups of respondents that participated in the August 2018 survey. This includes the total sample (N=827) and the labor force (N=504), which is made up of currently employed Americans and Americans who are unemployed and looking for work. The authors also base several questions on whether members of the labor force indicate technology use is a critical, very important, or not very important aspect of performing the job well. Many questions are asked of the entire labor force — and combine answers asking about either an employed person's current job, or the most recent position held by a person who is currently unemployed but looking for work. The base explanations, including sample sizes, are included per question in the topline for reference (see Appendix B).

[3] John J. Heldrich Center for Workforce Development. (2000). *Nothing but Net: American Workers and the Information Economy*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, and Center for Survey Research at the University of Connecticut. Telephone survey of 1,005 members of the U.S. labor force conducted January 5 to 19, 2000.

[4] The *Nothing but Net* survey asked respondents about their experiences, behaviors, and opinions related to the computer, as this was the technology leading the transformation of the "new economy" in 2000. In the *What Me Worry?* survey, respondents are asked about technological impact in general, referring to the role that computers, the Internet, automation, and robots play in today's economy — a statement all respondents read prior to answering question TJ1 (see Appendix B for the verbatim description).

[5] Subgroup differences discussed in this report are subject to sampling error that is based on the sample sizes of the groups in question. As sample sizes of subgroups decrease, sampling error for each subgroup increases — decreasing the probability that any observed differences between these groups are statistically significant, though they may appear substantively significant. When reviewing the tables, it is important to note that observed substantive differences in percentages between groups may be differences that are not statistically significant due to sample size, especially for subgroups having less than 200 respondents. The report includes the sample sizes for each subgroup displayed in the tables, and makes an effort to highlight in the text those differences that are statistically significant.

[6] The 2000 *Nothing but Net* survey asked job-related questions to currently employed Americans only. The 2018 survey asks questions of the labor force, which includes Americans who are currently unemployed and looking for work, by asking those without a job to think about their most recent job.

[7] In 2000, respondents were asked to rate their opinions on a battery of statements using a scale of 0 to 10, where 0 was strongly disagree, 10 was strongly agree, and 5 was neither agree nor disagree. In this telephone survey, respondents could use any number, 0 to 10, to rate their agreement/disagreement with each statement. In this report, the authors consider a rating of 0 to 4 "disagree," and 6 to 10 "agree," with a rating of 9 to 10 an indication of strong agreement. See the *Nothing but Net* report topline for a breakdown of responses per question.

[8] Respondents' technology use in the workplace (TJ1 and TJ9) was asked to exclude from questions asking about technology those workers who don't or didn't use technology on a regular basis in their current or most recent positions.

[9] For questions based on the respondents' use of technology in the workplace (TJ1 and TJ9), topline percentages are shown two ways — based on the group that was given the question (excluding respondents who said they don't or didn't use technology in their current or most recent jobs), and based on the total labor force. In the labor force charts, respondents who said they don't or didn't use technology in their jobs are labeled as "Doesn't/didn't use technology in job" for questions asking about current/most recent jobs, or "Won't use technology" for questions asked about future jobs.

[10] This is an example of numbers that appear substantively significant but are not statistically significant. Fifty-one percent versus 37% is a statistically significant difference; 51% versus 40% is not a statistically significant difference given the size of these subgroups.

[11] Percentage totals may not equal 100% due to rounding.

[12] C. Van Horn and J. Starace. *A Glass Half Full or Half Empty?*

[13] The 2000 *Nothing but Net* survey asked job-related questions to currently employed Americans only. The 2018 survey asks questions of the labor force, which includes Americans who are currently unemployed and looking for work, by asking those without a job to think about their most recent job.

[14] The purpose of this brief analysis of the survey's open-ended question is purely qualitative — to gauge the opinions and ideas of respondents related to technological skills they think they'll need, in order to identify patterns and themes across responses. It is not intended to make any quantitative conclusions about the findings.

[15] *A Glass Half Full or Half Empty?* numbers from the September 2018 release that are reported here are recalculated to base percentages on the labor force, instead of the total sample.

[16] Includes currently employed workers who were asked about their current jobs, and the unemployed and looking, who were asked about their most recent positions.

[17] Questions asking respondents their opinions about how technology may affect their future are based on the labor force who expect to be working in the next two years. This includes employed Americans who think they will either stay in their current job or will be working in some other job in the next two years, and Americans who are unemployed and looking for work.

Appendix A. Methodology

What Me Worry? Most Americans Not Concerned about the Impacts of Technology on Jobs was fielded August 8 to 19, 2018 online with a national probability sample of 827 U.S. residents age 18 or older. The study has been weighted on various demographic categories such as age, gender, race/ethnicity, census region, education, primary language, and household income.

All surveys are subject to sampling error, which is the expected probable difference between interviewing everyone in a population versus a scientific sampling drawn from that population. The sampling error for 827 respondents is +/- 3.4 percentage points, at a 95% confidence interval. The sampling error for 504 respondents is +/- 4.4 percentage points, at a 95% confidence interval. Sampling error increases as the sample size decreases, so statements based on various population subgroups, such as separate figures reported for potential voters, are subject to more error than are statements based on the total sample. Sampling error does not take into account other sources of variation inherent in public opinion studies, such as non-response, question wording, or contextual effects.

The survey was calculated using GfK's web-enabled KnowledgePanel®, a probability-based panel designed to be representative of the U.S. population. Initially, participants are chosen scientifically by a random selection of residential addresses. Persons in selected households are then invited by telephone or by mail to participate in the web-enabled KnowledgePanel®. For those who agree to participate but do not already have Internet access, GfK provides at no cost a laptop and ISP connection. People who already have computers and Internet service are permitted to participate using their own equipment. Panelists then receive unique login information for accessing surveys online, and then are sent e-mails throughout each month inviting them to participate in research.

Appendix B. Topline Survey Results

GfK/Knowledge Networks/online

Field dates: August 8 to 19, 2018

N=827 total sample

N=504 labor force (currently employed, and unemployed and looking)

N=457 currently employed

Percentage totals may not equal 100% due to rounding

Refused #'s are counted as missing data and are not included in reported percentage totals

[s] denotes single-response question and [m] denotes multiple-response question

Base: All respondents

QEMPSTATSUM [s]

Which of the following best describes you?

1. Employed
2. Unemployed and looking for work
3. Unemployed and not looking for work
4. Retired

	N
Employed	457
Unemployed and looking	47
Unemployed and not looking	94
Retired	225
Refused	4
Total	827

Base: ASK IF QEMPSTATSUM=1

EMPLOYED [s]

Please mark the following that applies to you:

1. Employed full time
2. Employed part time
3. Self-employed full time
4. Self-employed part time
5. Military

	N
Employed full time	349
Employed part time	72
Self-employed full time	26
Self-employed part time	7
Refused	3
Total	457

Base: ASK IF QEMPSTATSUM=2

UNEMPLOYED_LOOKING [s]

Please mark the following that applies to you:

1. Looking for full-time work
2. Looking for part-time work (15-20 hours)
3. Looking for either part-time or full-time work

	N
Looking for full-time work	18
Looking for part-time work	9
Looking for either part-time or full-time work	20
Total	47

Base: DISPLAY IF QEMPSTATSUM=1 or 2

QPAY [s]

[IF QEMPSTATSUM=1] Thinking about your current job…if you work in multiple jobs, please think about the one you consider your *primary* occupation…

[IF QEMPSTATSUM=2] Thinking about your most recent job…if you worked in multiple jobs, please think about the one you considered your *primary* occupation…

[IF QEMPSTATSUM=1] How are you paid?

[**IF QEMPSTATSUM=2]** How were you paid?

1. Salary
2. By the hour
3. Self-employed/commission/stipend

Based on labor force (N=504)

	August 2018
Salary	39%
By the hour	54%
Self-employed/commission/stipend	8%
Total	101%

Base: ASK IF QEMPSTATSUM=1,2

QJOB [s]

Of the following categories, which industry or field describes your **[IF QEMPSTATSUM=1**: current/**IF QEMPSTATSUM=2**: most recent**]** job? **[IF QEMPSTATSUM=1**: If you work in multiple jobs, please think about the job you consider your *primary* occupation. **IF QEMPSTATSUM=2**: If you worked in multiple jobs, please think about the job you considered your *primary* occupation.**]**

1. Private, for-profit business
2. Government/military
3. Nonprofit/academic
4. Self-employed
5. Other

Based on labor force (N=504)

	August 2018
Private, for-profit	55%
Government/military	12%
Nonprofit/academic	13%
Self-employed	8%
Other	11%
Total	99%

Qs ECON - JS3 released 9/2/2018

Base: ASK ALL

[display2] Turning to another topic…

Q8 [m]

Please check which device, if any, you have in your home:

1. Smartphone
2. Laptop or desktop computer
3. Tablet computer
4. Broadband Internet service - a very high-speed Internet capacity

Based on total sample (N=827)

	August 2018
Smartphone	85%
Laptop or desktop computer	86%
Tablet computer	57%
Broadband Internet service - a very high-speed Internet capacity	65%

Base: ASK ALL

[DISPLAY3] Over the past 20 years, developments in technology, such as computers, have changed many aspects of the U.S. economy, including the availability of goods and services to consumers and the nature of jobs in the workplace. Advances in these new technologies, including widespread use of the Internet, automation of job tasks and processes, and the use of robots are changing how people work.

Base: ASK IF QEMPSTATSUM=1,2

TJ1 [s]

[IF QEMPSTATSUM=1] How important is your ability to use technology for you to do your job well?

[IF QEMPSTATSUM=2] In your most recent job, how important was your ability to use technology for you to do your job well?

1. Critical - I couldn't do my job without it
2. Very important
3. Not very important
4. **[IF QEMPSTATSUM=1** Don't/**IF QEMPSTATSUM=2** Didn't**]** use technology at my job

Based on labor force (N=504)

	August 2018
Critical - I couldn't do my job without it	39%
Very important	35%
Not very important	20%
Don't/didn't use technology at my job	7%
Total	101%

Base: ASK ALL

QTECHseries [display]

On the following screens, you will see a series of statements. Please indicate whether you agree a lot, agree a little, disagree a little, or disagree a lot with each one.

Base: ASK ALL

Scripter: Randomize items **QTECH**a to **QTECH**l and record the order. Never ask **QTECH**a first one item per screen

[Display] Do you agree a lot, agree a little, disagree a little, or disagree a lot?

QTECHa [IF QEMPSTATSUM=1] New technologies have changed my job for the better.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on employed (N=457)

	August 2018
Agree a lot	33%
Agree a little	48%
Disagree a little	13%
Disagree a lot	6%
Total	100%

QTECHb. New technologies are good for the economy.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on total sample (N=827)

	August 2018
Agree a lot	44%
Agree a little	49%
Disagree a little	5%
Disagree a lot	2%
Total	100%

QTECHc. The jobs created by these new technologies are good jobs.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on total sample (N=827)

	August 2018
Agree a lot	33%
Agree a little	54%
Disagree a little	11%
Disagree a lot	2%
Total	100%

QTECHd. [**IF QEMPSTATSUM=1 AND TJ1 DNE 4]** I have the necessary technological skills to perform my current job. **[IF QEMPSTATSUM=2 AND TJ1 DNE 4]** I had the necessary technological skills to perform my most recent job.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=471)

	August 2018
Agree a lot	63%
Agree a little	32%
Disagree a little	4%
Disagree a lot	1%
Total	100%

Based on labor force (N=504)

	August 2018
Agree a lot	59%
Agree a little	30%
Disagree a little	4%
Disagree a lot	1%
Doesn't/didn't use technology in job (TJ1=4)	7%
Total	101%

QTECHe. [IF QEMPSTATSUM=1,2] I will need more technological skills to achieve my career goals.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on labor force (N=504)

	August 2018
Agree a lot	22%
Agree a little	43%
Disagree a little	25%
Disagree a lot	10%
Total	100%

ASK IF QTECHe=1,2

QTECHopen. What are the most important technological skills you think you'll need?

[TEXT BOX]

(N=196)

QTECHf. [IF QEMPSTATSUM=1 AND TJ1 DNE 4] My employer does a good job of providing me with training opportunities in technology. **[IF QEMPSTATSUM=2 AND TJ1 DNE 4]** My employer did a good job of providing me with training opportunities in technology in my most recent job.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=471)

	August 2018
Agree a lot	24%
Agree a little	43%
Disagree a little	19%
Disagree a lot	15%
Total	101%

Based on labor force (N=504)

	August 2018
Agree a lot	22%
Agree a little	40%
Disagree a little	18%
Disagree a lot	14%
Doesn't/didn't use technology in job	7%
Total	101%

QTECHg. [IF QEMPSTATSUM=1 In my current job, I use the computer or email as my primary means of communicating with others during the workday.] **[IF QEMPSTATSUM=2** In my most recent job, I used the computer or email as my primary means of communicating with others during the workday.**]**

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on labor force (N=504)

	August 2018
Agree a lot	47%
Agree a little	22%
Disagree a little	13%
Disagree a lot	18%
Total	100%

QTECHh. [IF QEMPSTATSUM=1,3] If I look for another job, I plan to use the Internet to assist my job search efforts. **[IF QEMPSTATSUM=2]** I am using the Internet to assist my job search efforts.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on employed, unemployed and looking, and unemployed/not looking (QEMPSTATSUM=1,2,3) (N=598)

	August 2018
Agree a lot	66%
Agree a little	26%
Disagree a little	6%
Disagree a lot	2%
Total	100%

QTECHi. New technologies eliminate more jobs than they create.

1. Agree a lot
2. Agree a little
3. Disagree a little
4. Disagree a lot

Based on total sample (N=827)

	August 2018
Agree a lot	13%
Agree a little	43%
Disagree a little	36%
Disagree a lot	8%
Total	100%

Base: ASK IF TJ1=1,2,3

TJ2 [s]

Thinking over the past three to five years, how quickly **[IF QEMPSTATSUM=1:** has technology changed in your job? **IF QEMPSTATSUM=2:** did technology change in your most recent job?**]**

1. Very quickly
2. Quickly
3. Slowly
4. Hasn't really changed

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=463)

	August 2018
Very quickly	16%
Quickly	45%
Slowly	23%
Hasn't really changed	16%
Total	100%

Note: Eight respondents are excluded due to refusing TJ1.

Based on labor force (N=496)

	August 2018
Very quickly	15%
Quickly	42%
Slowly	22%
Hasn't really changed	15%
Doesn't/didn't use technology in job	7%
Total	101%

Base: ASK IF TJ1=1,2,3

TJ3 [s]

Please choose which statement you agree with more:

1. It has been hard to keep up with how fast technology changes at work
2. Keeping up with the pace of changing technology at work hasn't been a problem for me

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=463)

	August 2018
It has been hard to keep up with how fast technology changes at work	15%
Keeping up with the pace of changing technology at work hasn't been a problem for me	85%
Total	100%

Based on labor force (N=496)

	August 2018
It has been hard to keep up with how fast technology changes at work	14%
Keeping up with the pace of changing technology at work hasn't been a problem for me	79%
Doesn't/didn't use technology in job	7%
Total	100%

Base: ASK IF TJ1=1,2,3

TJ4 [s]

Keeping up with technology in my **[IF QEMPSTATSUM=1:** job has been:**] [IF QEMPSTATSUM=2:** most recent job was:**]**

1. Very easy
2. Somewhat easy
3. Somewhat difficult
4. Very difficult

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=463)

	August 2018
Very easy	30%
Somewhat easy	58%
Somewhat difficult	11%
Very difficult	1%
Total	100%

Based on labor force (N=496)

	August 2018
Very easy	28%
Somewhat easy	54%
Somewhat difficult	10%
Very difficult	1%
Doesn't/didn't use technology in job	7%
Total	100%

Base: ASK IF TJ1=1,2,3

TJ5 [s]

Changes in technology **[IF QEMPSTATSUM=1:** have made my job **IF QEMPSTATSUM=2:** made my most recent job**]**:

1. More interesting to do
2. Less interesting to do
3. No different in how interesting it **[IF QEMPSTATSUM=1:** is/**IF QEMPSTATSUM=2:** was**]**

Based on labor force and use(d) technology in current/most recent job (QEMPSTATSUM=1,2 AND TJ1=1-3) (N=463)

	August 2018
More interesting to do	46%
Less interesting to do	11%
No different in how interesting it is/was	43%
Total	100%

Based on labor force (N=496)

	August 2018
More interesting to do	43%
Less interesting to do	10%
No different in how interesting it is/was	41%
Doesn't/didn't use technology in job	7%
Total	101%

Base: ASK IF QEMPSTATSUM=1,2

TJ6 [s]

The place where I **[IF QEMPSTATSUM=1:** work **IF QEMPSTATSUM=2:** worked most recently**]** has:

1. Been losing employees because of advances in technology
2. Been gaining employees because of advances in technology
3. Not gained or lost employees because of advances in technology

Based on labor force (N=504)

	August 2018
Been losing employees because of advances in technology	9%
Been gaining employees because of advances in technology	15%
Not gained or lost employees because of advances in technology	77%
Total	101%

Base: IF QEMPSTATSUM=1,2:

[display4] Now, please think about the NEXT three to five years…

ASK IF QEMPSTATSUM=1

TJ7 [s]

How likely are you to be at the same place of work you are now?

1. Definitely will
2. Probably will
3. Probably will not
4. Definitely will not

Based on employed (N=457)

	August 2018
Definitely will	23%
Probably will	46%
Probably will not	21%
Definitely will not	11%
Total	101%

Base: ASK IF TJ7=3,4

TJ8 [m]

Why don't you think you will still be there?

1. Won't be working anymore
2. This is a temporary job/normal moving on
3. My current job will be replaced by new technology
4. The job will require skills that I don't have
5. I plan to move to a better/different job
6. Other
9. Don't know

Based on employed and probably will not/definitely will not stay in current job (N=139)

	August 2018
Won't be working anymore	18%
This is a temporary job/normal moving on	22%
My current job will be replaced by new technology	3%
The job will require skills that I don't have	2%
I plan to move to a better/different job	57%
Other	10%
Don't know	4%

Base: ASK IF TJ8=2-5

TJ8a [s]

Do you expect to be working at a new job in the next two years, or not?

1. Yes
2. No

Based on employed and probably will not/definitely will not stay in current job due to skills/replacement/moving to different job (N=91)

	August
Yes	82%
No	18%
Total	100%

Base: (tj7 EQ 1 OR 2) OR (tj8a EQ 1)

[display5] And still thinking about the next three to five years…

Base: (tj7 EQ 1 OR 2) OR (tj8a=1) OR QEMPSTATSUM=2

TJ9 [s]

How important will your ability to use technology be for you to do your **[IF QEMPSTATSUM=2 OR TJ8a=1:** next**]** job well?

1. Critical (won't be able to do my job without it)
2. Very important
3. Not very important
4. Will not use technology at my job

Based on employed and will stay in current job or work in next two years AND unemployed/ looking (N=432)

	August 2018
Critical - won't be able to do my job without it	33%
Very important	50%
Not very important	12%
Will not use technology at my job	4%
Total	99%

ASK IF TJ9=1-3

TJ10 [s]

How quickly do you think technology will change in your **[IF QEMPSTATSUM=2 OR TJ8a=1:** next**]** job in the next three to five years?

1. Very quickly
2. Quickly
3. Slowly
4. Will not change

Based on labor force who will use technology in current/next job (N=412)

	August 2018
Very quickly	18%
Quickly	49%
Slowly	28%
Will not change	4%
Total	99%

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=430)

	August 2018
Very quickly	18%
Quickly	47%
Slowly	27%
Will not change	4%
Won't use technology	4%
Total	100%

Note: Two respondents are excluded due to refusing TJ9.

Base: ASK IF TJ9=1-3

TJ11 [s]

Choose which statement you agree with more:

1. It will be hard to keep up with how fast technology changes at work
2. Keeping up with the pace of changing technology at work will not be a problem for me

Based on labor force who will use technology in current/next job (N=412)

	August 2018
It will be hard to keep up with how fast technology changes at work	19%
Keeping up with the pace of changing technology at work will not be a problem for me	81%
Total	100%

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=430)

	August 2018
It will be hard to keep up with how fast technology changes at work	18%
Keeping up with the pace of changing technology at work will not be a problem for me	78%
Won't use technology	4%
Total	100%

No TJ12

Base: ASK IF TJ9=1-3

TJ13 [s]

How worried are you that you won't be able to keep up with how fast technology changes in your **[IF QEMPSTATSUM=2 OR TJ8a=1:** next**]** job in the next three to five years?

1. Very worried
2. Somewhat worried
3. Not too worried
4. Not at all worried

Based on labor force who will use technology in current/next job (N=412)

	August 2018
Very worried	4%
Somewhat worried	18%
Not too worried	47%
Not at all worried	31%
Total	100%

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=430)

	August 2018
Very worried	4%
Somewhat worried	17%
Not too worried	45%
Not at all worried	30%
Won't use technology	4%
Total	100%

Base: (tj7 EQ 1 OR 2) OR (tj8a=1) OR QEMPSTATSUM=2

TJ14 [s]

In the next three to five years, do you think the place where you work will:

1. Gain employees because of advances in technology
2. Lose employees because of advances in technology
3. Not be affected by technology when it comes to gaining or losing workers

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=432)

	August 2018
Gain employees because of advances in technology	15%
Lose employees because of advances in technology	18%
Not be affected by technology when it comes to gaining or losing workers	68%
Total	101%

Base: ASK IF (tj7 EQ 1 OR 2) OR (tj8a EQ 1) OR QEMPSTATSUM=2

TJ15 [s]

How worried are you that the job **[IF TJ7=1,2:** you have now **IF TJ8a=1 OR QEMPSTATSUM=2:** you will have next**]** will be replaced by technology in the *next three to five years*?

1. Very worried
2. Somewhat worried
3. Not too worried
4. Not at all worried

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=432)

	August 2018
Very worried	3%
Somewhat worried	14%
Not too worried	39%
Not at all worried	45%
Total	101%

Base: ASK IF (tj7 EQ 1 OR 2) OR (tj8a=1) OR QEMPSTATSUM=2

TJ16 [s]

How likely is it that your employer could use technology to replace **[IF TJ7=1,2:** the job you are doing **IF TJ8a=1 OR QEMPSTATSUM=2:** the job you have next**]** in the *next three to five years*?

1. Very likely
2. Somewhat likely
3. Not too likely
4. Not at all likely

Based on employed and will stay in current job or work in next two years, AND unemployed/ looking (N=432)

	August 2018
Very likely	3%
Somewhat likely	15%
Not too likely	32%
Not at all likely	51%
Total	101%