**2017 PEW RESEARCH CENTER’S AMERICAN TRENDS PANEL**

**WAVE 27 MAY**

**MAY 1-15, 2015**[[1]](#footnote-1)

**ASK ALL:**

CAREREL How likely is it that, at some point in your life, you will be responsible for caring for an aging parent or family member?

1 Very likely

2 Somewhat likely

3 Not too likely

4 Not at all likely

5 I am already doing this

**ASK IF EMPLOYED (F\_E3\_FINAL=1,2):**

INDUSTRY What industry or field do you currently work in? If you have multiple jobs, please choose the one that you consider to be your main or primary occupation.

1 Hospitality or service

2 Health care

3 Manufacturing, mining, or construction

4 Retail

5 Education

6 Banking, finance, accounting, real estate, or insurance

7 Transportation

8 Government, public administration or military

9 Information/Technology

10 Other **[TEXT BOX]**

11 Not currently employed

**ASK IF EMPLOYED (INDUSTRY=1-10):**

JOBDUTY Does your work involve any of the following duties or tasks? **[RANDOMIZE WITH E ALWAYS LAST]**

*[Check all that apply]*

a. Manual or physical labor

b. Managing others

c. Working directly with clients or customers

d. Data processing or analysis

e. None of these **[EXCLUSIVE PUNCH]**

**ASK ALL:**

WORK1 If a current high school student asked you for advice on what sort of career they should pursue, what would you tell them?

**[TEXT BOX]**

**RANDOMIZE ORDER OF KNOW1 AND KNOW2**

**ASK ALL:**

KNOW1 Based on what you know, in the last 30 years has the total number of manufacturing jobs in the United States… **[RANDOMIZE OPTIONS; OPTION 3 ALWAYS LAST]**

1 Increased

2 Decreased

3 Stayed about the same

**ASK ALL:**

KNOW2 Based on what you know, in the last 30 years has the value of the goods and products manufactured in the United States… **[RANDOMIZE OPTIONS IN SAME ORDER AS KNOW1; OPTION 3 ALWAYS LAST]**

1 Increased

2 Decreased

3 Stayed about the same

**ASK ALL:**

PREDICT Do you think each of the following things will or will not happen in the next 20 years? **[RANDOMIZE ITEMS]**

1. Doctors will rely on computer programs to diagnose most diseases and determine treatments
2. Will definitely happen
3. Will probably happen
4. Will probably NOT happen
5. Will definitely NOT happen
6. Most stores and retail businesses will be fully automated and involve little or no human interaction between customers and employees
7. Will definitely happen
8. Will probably happen
9. Will probably NOT happen
10. Will definitely NOT happen
11. Most deliveries in cities will be made by robots or drones instead of humans
12. Will definitely happen
13. Will probably happen
14. Will probably NOT happen
15. Will definitely NOT happen
16. When people want to buy most common products, they will create them at home using a 3-D printer
17. Will definitely happen
18. Will probably happen
19. Will probably NOT happen
20. Will definitely NOT happen

**ASK ALL:**

CARS1 How much have you seen or heard about the effort to develop driverless vehicles – that is, cars and trucks that can operate on their own without a human driver?

1 A lot

2 A little

3 Nothing at all

**ASK IF HAVE HEARD A LOT OR LITTLE ABOUT DRIVERLESS VEHICLES (CARS1=1-2):**

CARS2 Has what you’ve seen or heard about driverless vehicles been mostly positive, mostly negative, or a mix of both?

1 Mostly positive

2 Mostly negative

3 A mix of both

**RANDOMIZE ORDER OF CARS3a AND CARS3b**

**ASK ALL:**

CARS3a How ENTHUSIASTIC are you, if at all, about the development of driverless vehicles?

1 Very enthusiastic

2 Somewhat enthusiastic

3 Not too enthusiastic

4 Not at all enthusiastic

**ASK ALL:**

CARS3b How WORRIED are you, if at all, about the development of driverless vehicles?

1 Very worried

2 Somewhat worried

3 Not too worried

4 Not at all worried

**ASK ALL:**

CARS4 How long, if ever, do you think it will take for MOST of the vehicles on the road to be driverless, rather than driven by humans?

1 Less than 10 years

2 10 to less than 50 years

3 50 to less than 100 years

4 100 or more years

5 It will never happen

**ASK ALL:**

CARS5 Would you, personally, want to ride in a driverless vehicle if you had the opportunity?

1 Yes

2 No

**ASK IF ANSWERED CARS5 (CARS5=1-2):**

CARS6 What is the main reason you **[IF CARS5=1** “would”; **IF CARS5=2** “would not”**]** want to ride in a driverless vehicle?

**[TEXT BOX]**

**RANDOMIZE ORDER OF CARS7a AND CARS7b**

**ASK ALL:**

CARS7a How safe would you feel sharing the road with a driverless passenger vehicle?

1 Very safe

2 Somewhat safe

3 Not too safe

4 Not safe at all

CARS7b How safe would you feel sharing the road with a driverless freight truck?

1 Very safe

2 Somewhat safe

3 Not too safe

4 Not safe at all

**ASK ALL:**

CARS8 If driverless vehicles become widespread, do you think that the number of people killed or injured in traffic accidents will [increase, decrease/decrease, increase], or stay about the same? **[RANDOMIZE OPTIONS; OPTION 3 ALWAYS LAST]**

1 Increase

2 Decrease

3 Stay about the same

**ASK ALL:**

CARS9 Would you strongly favor, favor, oppose, or strongly oppose the following rules and regulations for driverless vehicles? **[RANDOMIZE]**

a. Requiring them to travel in dedicated lanes

b. Restricting them from traveling near certain areas, such as schools

c. Requiring them to have a person in the driver’s seat who could take control in an emergency situation

**RESPONSE CATEGORIES**

1 Strongly favor

2 Favor

3 Oppose

4 Strongly oppose

**ASK ALL:**

CARS10 If driverless vehicles become widespread, which of the following do you think are likely to happen as a result? **[RANDOMIZE ITEMS]**

a. Elderly and disabled people will be able to live more independently

b. Many people who drive for a living would lose their jobs

c. Owning a car would become much less important to people

d. Most people would never learn how to drive a car on their own

e. There would be much less traffic in major cities

**RESPONSE CATEGORIES**

1 Yes, likely

2 No, not likely

On a different subject…

**ASK ALL:**

WORK2 Would you say that society generally places TOO MUCH importance on working and having a job, NOT ENOUGH importance on working and having a job, or is it just about right?

1 Too much importance

2 Not enough importance

3 Just about right

**ASK IF EMPLOYED (INDUSTRY=1-10):**

WORK3 Have the following technologies had a [positive impact, a negative impact / negative impact, positive impact], or no impact either way on you and your job or career? **[RANDOMIZE ORDER; RANDOMIZE RESPONSE CATEGORIES, ITEM 3 ALWAYS LAST]**

a. Industrial robots

b. Word processing or spreadsheet software

c. Email or social media

d. Software that manages your daily work schedule or routine

e. Smartphones

f. Technologies that help customers serve themselves on their own

**RESPONSE CATEGORIES**

1 Positive impact

2 Negative impact

3 No impact either way

**ASK IF EMPLOYED (INDUSTRY=1-10):**

Thinking about the different technologies you have used or that have impacted you over the course of your career…

**RANDOMIZE ORDER OF WORK4a, WORK4b AND WORK4c**

WORK4a Thinking about how DEMANDING your work is, has technology generally made your work…

1 More demanding

2 Less demanding

3 No impact either way

WORK4b Thinking about how INTERESTING your work is, has technology generally made your work…

1 More interesting

2 Less interesting

3 No impact either way

WORK4c Thinking about opportunities for advancement in your career, do you feel that technology has…

1 Increased your opportunities

2 Decreased your opportunities

3 No impact either way

Please consider the following scenario…

New developments in robotics and computing are changing the nature of many jobs. Today, these technologies are mostly being used in certain settings to perform routine tasks that are repeated throughout the day. But in the future, robots and computers with advanced capabilities may be able to do most of the jobs that are currently done by humans today.

**ASK ALL:**

ROBJOB1 How much have you heard, read, or thought about this idea before today?

1 A lot

2 A little

3 Nothing at all

**ASK ALL:**

ROBJOB2 Based on what you know, does this concept seem…

1 Extremely realistic

2 Somewhat realistic

3 Not very realistic

4 Not at all realistic

**ASK ALL, RANDOMIZE ORDER OF ROBJOB3a AND ROBJOB3b:**

ROBJOB3 Thinking about the possibility that computers and robots could do most of the work currently done by humans…

a. How ENTHUSIASTIC are you, if at all, about this possibility for society as a whole?

1 Very enthusiastic

2 Somewhat enthusiastic

3 Not too enthusiastic

4 Not at all enthusiastic

b. How WORRIED are you, if at all, about this possibility for society as a whole?

1 Very worried

2 Somewhat worried

3 Not too worried

4 Not at all worried

**ASK ALL:**

ROBJOB4 If robots and computers were able to perform most of the jobs currently being done by humans, do you think the following are likely or not likely to happen as a result? **[RANDOMIZE]**

a. Inequality between rich and poor would be much worse than it is today

b. People would have a hard time finding things to do with their lives

c. People would be able to focus less on work and more on the things that really matter to them in life

d. The economy as a whole would be much more efficient

e. The economy would create many new, better-paying jobs for humans

f. Humans would find their jobs more meaningful and fulfilling since machines would mostly be doing things that humans find unappealing

**RESPONSE CATEGORIES**

1 Yes, likely

2 No, not likely

**ASK ALL:**

ROBJOB5 In the event that robots and computers are able to do most of the jobs that are done by humans today, would you favor or oppose the following? **[RANDOMIZE]**

a. If the federal government provided all Americans with a guaranteed income that would allow them to meet their basic needs

b. If robots and computers were mostly limited to doing jobs that are dangerous or unhealthy for humans to do

c. If people had the option of paying extra to interact with a human, rather than a robot or computer, when buying a product or service

d. If the federal government created a national service program that paid people to perform tasks even if a robot or computer could do those tasks faster or cheaper

**RESPONSE CATEGORIES**

1 Strongly favor

2 Favor

3 Oppose

4 Strongly oppose

**RANDOMIZE ORDER OF ROBJOB6 AND ROBJOB7**

**ASK ALL:**

ROBJOB6 Which of the following statements best describes how you feel, even if neither is exactly right? **[RANDOMIZE OPTIONS]**

1 The government would have an obligation to take care of people whose jobs are displaced by robots and computers, even if that meant raising taxes substantially

2 Individuals would have an obligation to take care of their own financial well-being, even if robots and computers have already taken many of the jobs they might be qualified for

**ASK ALL:**

ROBJOB7 Which of the following statements best describes how you feel, even if neither is exactly right? **[RANDOMIZE OPTIONS]**

1 If businesses can receive better work at lower cost by replacing humans with robots and computers, they are justified in doing so

2 There should be limits on how many jobs businesses can replace with robots and computers, even if they can do those jobs better and more cheaply than humans can

**ASK ALL:**

ROBJOB8 Do you think it is very likely, somewhat likely, not very likely, or not at all likely that the following jobs will be mostly replaced by robots or computers in your lifetime? **[RANDOMIZE]**

a. Software engineer

b. Legal clerk

c. Nurse

d. Construction worker

e. Fast food worker

f. Teacher

g. Insurance claims processor

**RESPONSE CATEGORIES**

1 Very likely

2 Somewhat likely

3 Not very likely

4 Not at all likely

**ASK IF EMPLOYED (INDUSTRY=1-10):**

ROBJOB9 How likely, if at all, do you think it is that YOUR OWN job or profession will be mostly done by robots or computers in your lifetime?

1 Very likely

2 Somewhat likely

3 Not very likely

4 Not at all likely

**ASK ALL:**

WORK5a Have you yourself ever lost a job because your employer replaced your position with a machine, robot or computer program?

1 Yes

2 No

3 I’m not sure

**ASK IF HAVE LOST A JOB DUE TO AUTOMATION (WORK5a=1):**

WORK5b When you lost a job for this reason, was your next job…

1 A job you liked better

2 A job you liked worse

3 A similar job

4 Did not find a new job

**ASK ALL:**

WORK6 Have you ever had your pay or hours reduced because your employer replaced some aspect of your job with a machine, robot or computer program?

1 Yes

2 No

3 I’m not sure

**ASK ALL:**

WORK7 Do you personally KNOW anyone who has lost a job, or had their pay or hours reduced, because their employer replaced their work with a machine, robot or computer program?

1 Yes

2 No

**[ASSIGN PARTICIPANTS TO RECEIVE ONE OF THE FOLLOWING TWO VIGNETTES BASED ON FORM SPLIT]**

**ASK IF FORM 1:**

Next, please consider the following scenario…

Today, many older adults move into assisted living facilities when they can no longer live independently. In the future, people could be provided with a robot caregiver that would allow them to continue living in their own home as they age. This robot would be available 24 hours a day to help with household chores, test vital signs and dispense medication, or call for assistance in an emergency. It would also have conversational skills and could serve as a companion for people who live alone.

CAREGIV1 How much have you heard, read, or thought about this idea before today?

1 A lot

2 A little

3 Nothing at all

CAREGIV2 Based on what you know, does this concept seem…

1 Extremely realistic

2 Somewhat realistic

3 Not very realistic

4 Not at all realistic

**ASK IF FORM 1:**

CAREGIV3 Thinking about the possibility that older adults could have this type of robot caregiver… **[RANDOMIZE ORDER]**

a. How ENTHUSIASTIC are you, if at all, about this possibility for society as a whole?

1 Very enthusiastic

2 Somewhat enthusiastic

3 Not too enthusiastic

4 Not at all enthusiastic

b. How WORRIED are you, if at all, about this possibility for society as a whole?

1 Very worried

2 Somewhat worried

3 Not too worried

4 Not at all worried

**ASK IF FORM 1:**

CAREGIV4 Would you, personally, be interested in this type of robot caregiver for yourself or a member of your family?

1 Yes

2 No

**ASK IF CAREGIV4=1-2:**

CAREGIV5 What is the main reason you **[IF CAREGIV4=1** “would”; **IF CAREGIV4=2** “would not”**]** be interested in this type of robot caregiver?

**[TEXT BOX]**

**ASK IF FORM 1:**

CAREGIV6 If robot caregivers such as these were developed, do you think the following are likely or not likely to happen as a result? **[RANDOMIZE ITEMS]**

a. Young people would feel less worried about caring for their aging relatives

b. Society would save money on caring for older adults

c. Many older adults would treat their robot caregiver like a human friend

d. Older adults would feel more isolated than they do today

e. Older adults would feel more independent and self-sufficient

f. These robots would only be used by people who could not afford a human caregiver for their loved one

**RESPONSE CATEGORIES**

1 Yes, likely

2 No, not likely

**ASK IF FORM 1:**

CAREGIV7 Would you feel better, worse, or would it not make a difference if the robot caregiver in this scenario had a camera so that a human operator could monitor the situation at all times?

1 Better

2 Worse

3 No difference

**ASK IF FORM 2:**

Next, please consider the following scenario…

Today, when companies are hiring they typically have someone read applicants’ resumes and conduct personal interviews to choose the right person for the job. In the future, computer programs may be able to provide a systematic review of each applicant without the need for human involvement. These programs would give each applicant a score based on the content of their resume, application, or standardized tests for skills such as problem solving or personality type. Applicants would then be ranked and hired based on those scores.

HIRING1 How much have you heard, read, or thought about this idea before today?

1 A lot

2 A little

3 Nothing at all

HIRING2 Based on what you know, does this concept seem…

1 Extremely realistic

2 Somewhat realistic

3 Not very realistic

4 Not at all realistic

**ASK IF FORM 2:**

HIRING3 Thinking about the possibility that job candidates might be evaluated using this sort of computer program… **[RANDOMIZE ORDER]**

a. How ENTHUSIASTIC are you, if at all, about this possibility for society as a whole?

1 Very enthusiastic

2 Somewhat enthusiastic

3 Not too enthusiastic

4 Not at all enthusiastic

b. How WORRIED are you, if at all, about this possibility for society as a whole?

1 Very worried

2 Somewhat worried

3 Not too worried

4 Not at all worried

**ASK IF FORM 2:**

HIRING4 Would you, personally, want to apply for a job that used this type of computer program to make hiring decisions?

1 Yes

2 No

**ASK IF HIRING4=1-2:**

HIRING5 What is the main reason you **[IF HIRING4=1** “would”; **IF HIRING4=2** “would not”**]** want to apply for a job that uses this type of computer program to make hiring decisions?

**[TEXT BOX]**

**ASK IF FORM 2:**

HIRING6 Do you think these computer programs would do a better job, a worse job, or do about the same as humans when it comes to… **[RANDOMIZE ITEMS]**

a. Hiring candidates who are well-qualified

b. Hiring candidates who fit well with the company’s culture

c. Choosing candidates from a diverse range of backgrounds

d. Providing opportunities for candidates with non-traditional experiences

**RESPONSE CATEGORIES**

1 Better job than humans

2 Worse job than humans

3 About the same

**ASK IF FORM 2:**

HIRING7 Would you feel better, worse, or would your opinion of this scenario not change in each of the following scenarios… **[RANDOMIZE ITEMS]**

a. If these computer programs included public data about each candidate – such as the material they post on social media – in making their evaluations

1 Better

2 Worse

3 No difference

b. If companies used these computer programs to conduct initial screenings of potential candidates, but then interviewed those candidates in the traditional way

1 Better

2 Worse

3 No difference

**ASK FORM 1:**

On a final topic…

VOICE1 Do you ever use a voice-controlled digital assistant, such as Apple Siri, Amazon Alexa, Google Assistant, or Microsoft Cortana?

1 Yes

2 No

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1):**

VOICE2 On what type of device do you use a digital assistant? **[RANDOMIZE 1-3 WITH ITEM 4 LAST]**

*[Check all that apply]*

1 Smartphone

2 A stand-alone device, like an Amazon Echo or Google Home

3 Computer or tablet

4 Some other type of device

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1):**

VOICE3 Do you ever use a digital assistant to control other devices in your home, such as a stereo, TV, thermostat, or lighting?

1 Yes

2 No

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1):**

VOICE4 When you use digital assistants, how often do they accurately respond to your commands?

1 Most of the time

2 Some of the time

3 Not very often

**ASK IF USE DIGITAL ASSISTANT (VOICE1=1):**

VOICE5 Which of the following, if any, are reasons why you use a voice-controlled digital assistant? **[RANDOMIZE]**

a. It lets me use my phone or device while doing other things with my hands

b. Spoken language feels more natural than typing

c. It’s easier for children to use

d. It’s fun

**RESPONSE CATEGORIES**

1 Major reason

2 Minor reason

3 Not a reason

**ASK IF DO NOT USE DIGITAL ASSISTANT (VOICE1=2):**

VOICE6 Which of the following, if any, are reasons why you do not use digital assistants? **[RANDOMIZE 1-4 WITH ITEMS 5 AND 6 LAST AND IN ORDER]**

*[Check all that apply]*

1 Privacy concerns

2 Don’t own any devices that offer this feature

3 Too complicated to use

4 Just not interested

5 Some other reason

6 None of these **[EXCLUSIVE PUNCH]**

**ASK FORM 2:**

On a final topic…

DRONE1 Do you personally own a flying drone?

1 Yes

2 No

DRONE2 Have you ever seen someone operating a drone?

1 Yes

2 No

**ASK FORM 2:**

DRONE3 If you happened to see a drone flying close to where you live, which of these emotions, if any, would you feel? **[RANDOMIZE WITH ITEM 8 LAST]**

*[Check all that apply]*

1 Scared

2 Nervous

3 Indifferent

4 Interested

5 Excited

6 Curious

7 Angry

8 None of these **[EXCLUSIVE PUNCH]**

**ASK FORM 2:**

DRONE4 Do you think that private citizens should or should not be allowed to pilot drones in the following areas? **[RANDOMIZE]**

a. Near people’s homes

b. Near crime scenes or traffic accidents

c. On beaches

d. In public parks

e. At events, like concerts or rallies

**RESPONSE CATEGORIES**

1 Should be allowed

2 Should not be allowed

3 It depends

1. Open-end responses are excluded from public datasets to protect the confidentiality of ATP panelists. Lines across page designate a page break. [↑](#footnote-ref-1)