



Engineering

8

| | |
|--------------------------|--------------------------------------|
| LISTENING | listening for causes and effects |
| NOTE-TAKING | taking notes on causes and effects |
| CRITICAL THINKING | making appraisals |
| VOCABULARY | idioms |
| GRAMMAR | real conditionals |
| PRONUNCIATION | thought groups |
| SPEAKING | adding to another speaker's comments |



UNIT QUESTION

What are the consequences of progress?

A. Discuss these questions with your classmates.

1. What are some important inventions of the past 50 years? How did they change people's lives for the better?
2. What are some unintended consequences of recent inventions? What problems that we face now are the result of "progress"?
3. Look at the photo. What technology is shown here? How could this technology be used?



B. Listen to *The Q Classroom* online. Then answer these questions.

1. Sophy and Marcus talk about some problems using smartphones can cause. Can you think of any others?
2. According to Felix, the pros of using smartphones might outweigh the cons. Do you agree? Why or why not?

iQ PRACTICE Go to the online discussion board to discuss the Unit Question with your classmates. *Practice > Unit 8 > Activity 1*

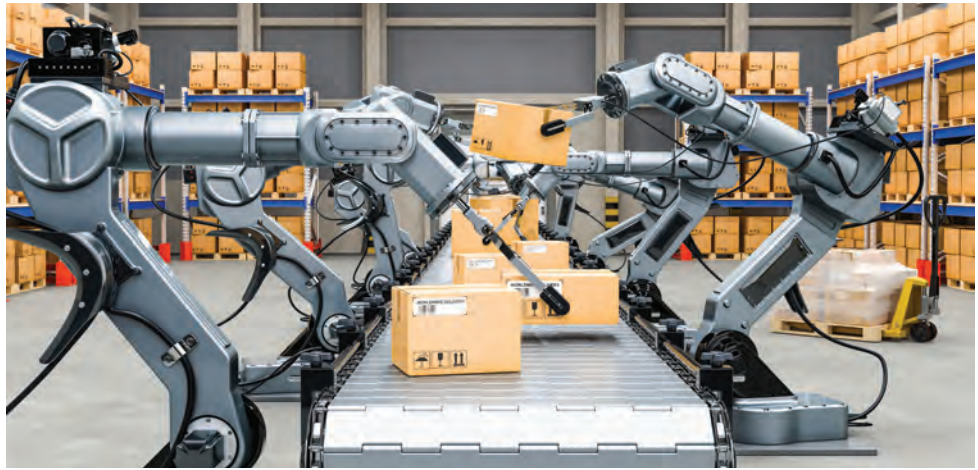
UNIT OBJECTIVE

Listen to a radio interview and a lecture and gather information and ideas to present your opinions about the consequences of progress.

LISTENING 1 Automation and Us

OBJECTIVE ▶

You are going to listen to a radio interview about automation from the Canadian Broadcasting Corporation. It explores some of the consequences of the use of machines to do work that was previously done by people. As you listen to the interview, gather information and ideas about the consequences of progress.



PREVIEW THE LISTENING

- A. **PREVIEW** What do you think are some consequences of automation? Look at the photos of three different advancements. Make a note about a possible positive consequence and a possible negative consequence. Then discuss your answers with a partner.



| | | | | | |
|---|--|---|--|---|--|
| + | | + | | + | |
| - | | - | | - | |

B. VOCABULARY Read aloud these words from Listening 1. Check (✓) the ones you know. Use a dictionary to define any new or unknown words. Then discuss with a partner how the words will relate to the unit.

| | | |
|-----------------------|-------------------|---------------------------|
| dependency (n.) | generic (adj.) 🔑 | necessarily (adv.) 🔑 OPAL |
| diversity (n.) 🔑 OPAL | idle (adj.) | philosophical (adj.) 🔑 |
| engagement (n.) 🔑 | intimate (adj.) 🔑 | subtle (adj.) 🔑 |
| fulfilled (adj.) | manual (adj.) | uniformity (n.) |

🔑 Oxford 5000™ words

OPAL Oxford Phrasal Academic Lexicon

iQ PRACTICE Go online to listen and practice your pronunciation.

Practice > Unit 8 > Activity 2

WORK WITH THE LISTENING



A. LISTEN AND TAKE NOTES Listen to the radio interview and use the chart below to take notes on the unexpected effects of automation.

iQ RESOURCES Go online to download extra vocabulary support.

Resources > Extra Vocabulary > Unit 8

| Type of automation | Expected effects | Unexpected effects |
|-------------------------|---------------------------------------|--------------------|
| medical record-keeping | - doctors would become more efficient | - - |
| automatic pilot systems | - flying would become safer | - |

B. EXTEND Work with a partner. Use your notes to summarize the consequences of automation. Did any surprise you? Explain why.

C. IDENTIFY Match each cause with its effect.

- | | |
|---|--|
| ___ 1. People are working. | a. People are doing less diverse and creative work. |
| ___ 2. Doctors bring tablets into exam rooms. | b. People are generally safer. |
| ___ 3. Much of our work involves data entry and looking at screens. | c. People get more unnecessary medical tests. |
| ___ 4. Automated systems are used to fly airplanes. | d. People are in danger when automatic systems fail. |
| ___ 5. Pilots fall out of practice manually operating an airplane. | e. People are happier and more fulfilled. |



D. IDENTIFY Listen to the radio interview again. Circle the answer that best completes each statement.

1. According to Nicholas Carr, people tend to feel more satisfied if they are working because ____.
 - a. they make money to support their families
 - b. they can use their talents to overcome challenges
 - c. they can use automation to make their jobs easier
2. People assumed that automation would allow doctors to ____.
 - a. share information more easily
 - b. see more patients in a day
 - c. order more unnecessary tests
3. Tablets and computers are actually causing a lack of intimacy between doctors and patients because ____.
 - a. doctors are assuming that patients need more tests than they actually do
 - b. doctors are busier entering data into a computer, and they don't have time to talk to their patients
 - c. doctors aren't making eye contact with their patients as much during a visit
4. According to Nicholas Carr, when we do more of our work using automation, our work becomes ____.
 - a. more uniform and less interesting
 - b. more diverse and skillful
 - c. more satisfying

5. Because automation has taken over the physical job of a pilot, ____.
- a. pilots are free to concentrate on flying the plane more safely
 - b. pilots manually fly the plane for about three minutes every flight
 - c. pilots have totally forgotten how to respond in an emergency

E. IDENTIFY Read the statements. Check (✓) the opinions that Nicholas Carr would probably agree with. Then compare your answers with a partner and explain your choices.

- 1. “This concern about automation is a little exaggerated. Unless you work in a factory, you are not going to lose your job to a robot.”
- 2. “Automation is the future, whether we like it or not. We need to learn how to develop automation that complements what humans are already good at.”
- 3. “Increased automation in the workforce is most certainly going to result in an increased demand for creativity. Robots can do the boring work, and we’ll do the fun, imaginative work.”
- 4. “One of the dangers we need to think about as automation becomes the norm for many of us is that it may cause humans to become lazy. We might lose the ability to perform important skills.”
- 5. “Government or industry leaders need to start thinking about a strategic way forward so that the decisions we make about automation aren’t guided by what technology can do for us but by what it should do for us.”



VOCABULARY SKILL REVIEW

Remember to use context to figure out the meaning of a word that is new to you. The sentence in which the word appears and even the text as a whole may contain clues about the word's meaning.



F. VOCABULARY Here are some words from Listening 1. Read the sentences. Then write the number of each bold word next to the correct definition.

1. As we grow up, our **dependency** on our parents decreases.
2. Rainforests are important because they are home to a great deal of plant and animal **diversity**.
3. I made my children leave their smartphones at home for a whole day with the family. When they bring them, I see less **engagement** between them.
4. I'm really **fulfilled** in my current job. I have no interest in applying for a different position.
5. As an artist, his goal is to produce unique, creative pieces. He does not want his art to feel **generic** and unoriginal.
6. I took three weeks of vacation over the summer. It felt wonderful to just be **idle** and not rushing around.
7. It's important that doctors develop an **intimate** relationship with their patients so they are comfortable discussing personal health matters.
8. I went to college so I could avoid doing **manual** labor.
9. The number of tickets is **necessarily** limited due to the size of the theater.
10. We were having a **philosophical** debate about good and evil.
11. He gave **subtle** hints about what gift he wanted for his birthday, but even though he wasn't direct, I could still guess.
12. In the suburbs, there is often a **uniformity** to the houses so that many in a neighborhood will look the same.
 - ___ a. (*adj.*) shared by, including, or typical of a whole group of things; not specific
 - ___ b. (*adj.*) involving using the hands or physical strength
 - ___ c. (*adj.*) feeling happy and satisfied that you are doing something useful with your life
 - ___ d. (*adv.*) used to say that something cannot be avoided
 - ___ e. (*n.*) the fact of not varying and of being the same in all parts and at all times
 - ___ f. (*n.*) a range of many people or things that are very different from each other
 - ___ g. (*adj.*) not working hard
 - ___ h. (*adj.*) connected with philosophy
 - ___ i. (*n.*) the state of relying on somebody/something for something
 - ___ j. (*adj.*) having a close and friendly relationship

___ k. (n.) being involved with somebody/something in an attempt to understand them/it

___ l. (adj.) not very noticeable or obvious

iQ PRACTICE Go online for more practice with the vocabulary.

Practice > Unit 8 > Activity 3

iQ PRACTICE Go online for additional listening and comprehension.

Practice > Unit 8 > Activity 4



SAY WHAT YOU THINK

DISCUSS Work in a group to discuss the questions.

1. Would you prefer to see a doctor who uses an automated system to store your medical records or one who uses paper files? Why?
2. What are some solutions to the problems described in Listening 1? Should governments set a policy limiting the development of automation? Should customers complain?

LISTENING SKILL Listening for causes and effects

A speaker may talk about what **causes** something to happen or what **happens because of** some other action or event. Speakers usually use **signal words** that connect two events or ideas.

These are some of the signal words that speakers use to show a **cause**.

because (of) as a result of due to since by

Due to our belief that we don't like to work, we might think we want to be free from labor.

Because doctors bring tablets into the exam room, they are less connected with their patients.

Since we are trading deep engagement with the world for interaction with computers, we might be less satisfied with our work.

These are some of the signal words that speakers use to show a **result**.

because of this / that as a result therefore so the result is

A lot of our time is spent looking at screens. **The result is** uniformity in activities, skills, and talent.


Doctors now are not as connected with their patients, **so** they may miss important information they would have noticed before.

Architects and lawyers are finding their work is increasingly involving data entry; **therefore**, they are engaging with the world differently than before.

Knowing these words and phrases will help you understand how the information is organized and predict what a speaker will say next.

ACADEMIC LANGUAGE

There are several other phrases we use to signal causes and effects in speech:

 *the effect(s) of*
what happens if
what happens to
one of the reasons
the reason for
the reason why
so that
to see how

As you speak, try to use different phrases to introduce causes and effects so your speech is interesting and varied.

 OPAL
Oxford Phrasal Academic Lexicon

TIP FOR SUCCESS

When listening to a presentation that mentions causes and effects, mark each cause or effect in your notes. Label them with a *C* or an *E*. This will help you make important connections when you review.

iQ RESOURCES Go online to watch the Listening Skill Video.

[Resources](#) > [Video](#) > [Unit 8](#) > [Listening Skill Video](#)

A. IDENTIFY Listen to the sentences. Circle the word or phrase you hear in each sentence.

Sentence 1

- a. as a result of b. the result is

Sentence 2

- a. therefore b. because of this

Sentence 3

- a. because of b. due to

Sentence 4

- a. as a result b. the result is

Sentence 5

- a. therefore b. because

Sentence 6

- a. since b. now that

B. CATEGORIZE Read each sentence. Is the underlined section the *cause* or the *effect*? Write *C* (cause) or *E* (effect).

- ___ 1. Since automation often allows companies to lower costs, we can expect to see lower prices as well.
- ___ 2. Due to increased automation, travel agents have experienced employment declines.
- ___ 3. People are concerned about losing good jobs to automation, so they argue that it should be limited to dirty or dangerous jobs.
- ___ 4. Other people are worried that automation could cause worldwide unemployment. Therefore, they are calling for universal basic income, where the government pays all adults whether they are working or not.
- ___ 5. Despite these fears, we need to remember that economic growth could be negatively affected as a result of limits placed on automation.
- ___ 6. Since it looks like automation developments are here to stay, we need to do more to help workers transition from threatened jobs into new jobs.

iQ PRACTICE Go online for more practice listening for causes and effects.

[Practice](#) > [Unit 8](#) > [Activity 5](#)

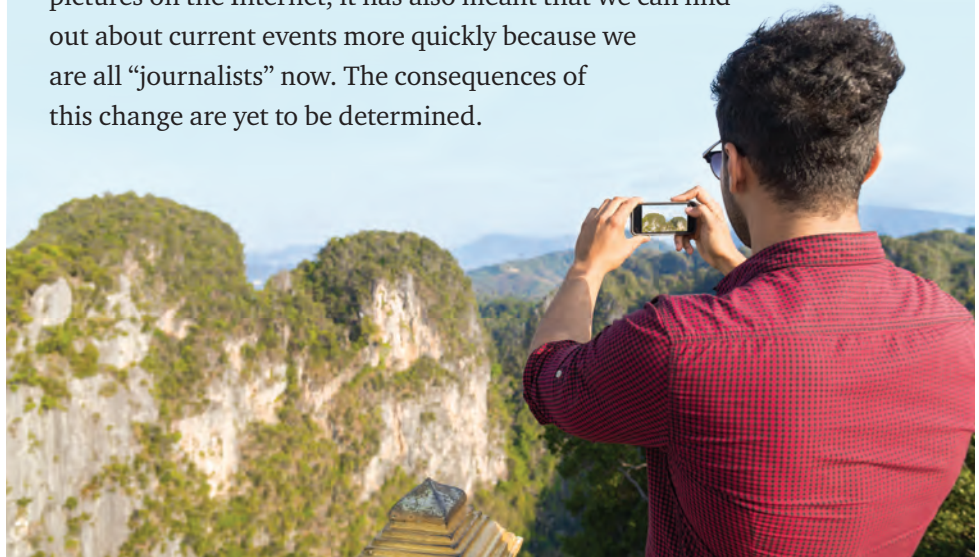
NOTE-TAKING SKILL Taking notes on causes and effects

When you are listening to a report, a lecture, an interview, or any kind of presentation that deals with causes and effects, list the causes and effects separately. One way to do this is by using a T-chart. Write causes on one side of the chart and effects on the other side. This will help you understand how the causes and effects relate to each other, and it will make reviewing your notes easier.



A. IDENTIFY Listen and read this section of a lecture on the benefits of digital cameras. Circle the words and phrases that introduce the causes. Underline the words and phrases that introduce effects.

Digital camera technology has made it possible for just about anyone anywhere to take pictures of anything. When you take a picture, the camera captures light rays that enter through the lens. Engineers invented an image sensor chip. When light hits the chip, it basically turns the light rays into a long number. Because of this, they have been able to put digital cameras into our smartphones. Since smartphones are available to almost everyone, it means that everyone can take pictures whenever they have their phones. Also, because digital images are essentially numbers, the pictures we take are easy to edit. We don't need to hire professional photographers as often because we can do the work ourselves for free. So, these days, regular people can take pictures of everything from their meals to events of political or historical importance. While this has resulted in some very silly pictures on the Internet, it has also meant that we can find out about current events more quickly because we are all "journalists" now. The consequences of this change are yet to be determined.





B. CATEGORIZE Complete the student's notes by writing down the missing causes and effects. Listen again if needed.

| Causes | Effects |
|-------------------------------------|---|
| engineers invented _____ | - cameras put into smartphones |
| smartphones are everywhere | - _____ |
| digital pictures = _____ | - _____ - we don't hire photographers as often |
| people everywhere can take pictures | - _____ - _____ - _____ |

iQ PRACTICE Go online for more practice taking notes on causes and effects.
Practice > Unit 8 > Activity 6

LISTENING 2 Driverless Cars

OBJECTIVE ▶

You are going to listen to a lecture in an engineering class. As you listen, gather information and ideas about the consequences of progress.



PREVIEW THE LISTENING

- A. **PREVIEW** This lecture is about driverless cars. How much do you know about them? How comfortable would you be riding in one? Discuss with a partner.
- B. **VOCABULARY** Read aloud these words from Listening 2. Check (✓) the ones you know. Use a dictionary to define any new or unknown words. Then discuss with a partner how the words will relate to the unit.

abstract (*adj.*) 🔍

gut (*n.*) 🔍

outcome (*n.*) 🔍 OPAL

cater to (*v. phr.*)

harm (*n.*) 🔍 OPAL

prospective (*adj.*) 🔍

dive into (*v. phr.*)

loosely (*adv.*)

theoretically (*adv.*) OPAL

entirely (*adv.*) 🔍 OPAL

notion (*n.*) 🔍 OPAL

🔍 Oxford 5000™ words

OPAL Oxford Phrasal Academic Lexicon

iQ PRACTICE Go online to listen and practice your pronunciation.

[Practice](#) > [Unit 8](#) > [Activity 7](#)

WORK WITH THE LISTENING



- A. **LISTEN AND TAKE NOTES** Listen to the lecture and complete the chart. Then compare your chart with a partner.

iQ RESOURCES Go online to download extra vocabulary support.

[Resources](#) > [Extra Vocabulary](#) > [Unit 8](#)

| Causes | Effects |
|--|---------|
| Workers not driving | |
| People not behind the wheel | |
| Cars can be programmed to do least harm in an accident | |



B. IDENTIFY Read the sentences. Circle the answer that best completes each statement.

1. Some experts are predicting that, because of driverless cars, ____.
 - a. millions of jobs will disappear
 - b. more accidents will happen
 - c. cars will still look the same
2. We may not need to buy insurance because driverless cars will ____.
 - a. never crash
 - b. be completely safe
 - c. never make human errors
3. Our notion of what a car looks like will change ____.
 - a. based on insurance companies' rules
 - b. to provide us with things to do while on the road
 - c. as a result of changes in the economy
4. When they are asked, most people say that cars should be programmed to ____.
 - a. make decisions that do the least harm
 - b. protect the weakest members of society
 - c. make the same decisions that a human would make
5. When people were asked who a driverless car should protect if they were passengers, they said ____.
 - a. the car should always protect the youngest, healthiest pedestrian
 - b. they wanted the car to be programmed to do the least harm
 - c. they wouldn't buy a car that didn't protect the passenger
6. Self-driving cars are an example of technological progress ____.
 - a. with unintended consequences
 - b. that causes many problems
 - c. making life better for everyone



C. APPLY Listen again. Complete these sentences.

1. As a result of the invention of driverless cars, truck stops
_____.
2. Because of driverless cars, car designers
_____.
3. Due to the creation of movie cars and spa cars,
_____.
4. People don't want to buy a car that wouldn't protect them, so
_____.
5. Overall, driverless cars will reduce the number of accidents. Because of this,
_____.

D. DISCUSS Work in a small group to discuss the questions.

1. Who should be responsible for helping people who lose their jobs as driverless cars become more common? Should the government help them find new employment? How?
2. If you were a designer of a driverless car, what special features would you include in your design to make traveling more comfortable and enjoyable for passengers?
3. How do you feel about cars having the power to make life-or-death decisions? What are some advantages and disadvantages of this?
4. Some people predict that car ownership will decline and people will order driverless cars to take them places rather than pay to buy and maintain a personal vehicle. Would you prefer to order or own a car?



E. VOCABULARY Here are some words from Listening 2. Complete each sentence with the correct word.

| | | | |
|--------------------------|-----------------------------|-------------------------------|--------------------------|
| abstract (<i>adj.</i>) | cater to (<i>v. phr.</i>) | dive into (<i>v. phr.</i>) | entirely (<i>adv.</i>) |
| gut (<i>n.</i>) | harm (<i>n.</i>) | loosely (<i>adv.</i>) | notion (<i>n.</i>) |
| outcome (<i>n.</i>) | prospective (<i>adj.</i>) | theoretically (<i>adv.</i>) | |

1. It's easy to understand the meaning of new English words when you can see a photo, but understanding _____ vocabulary can be more difficult.
2. When you work in a kitchen, you have to be careful not to _____ yourself with anything very hot or sharp.
3. When I take on a new project, I just _____ the work.
4. I'm not sure if it will work, but _____ the plans make sense.
5. Children's stores usually _____ a younger customer.
6. The movie is _____ based on the novel. The plot is similar, but there are some pretty big differences.
7. When he met her, he knew in his _____ that she was the right person for him to spend the rest of his life with.
8. The contest is really close, and people are very curious about the _____.
9. I really wasn't sure what the class was about. I only had the _____ that we would be learning about philosophy.
10. She spent the day showing the house to _____ buyers, but no one made an offer to buy it.
11. Their menu was almost _____ made up of pizza and pasta. There weren't many other options.

iQ PRACTICE Go online for more practice with the vocabulary.

Practice > Unit 8 > Activity 8



CRITICAL THINKING STRATEGY

Making appraisals

In Unit 5, you learned about evaluating information. Evaluating information allows you to make appraisals. When we read or listen to information, we may need to give a value to the information or the topic of the text based on the facts and opinions the text contains. When you come across new information, you need to think about where it is coming from and use your background knowledge to judge if the claims seem reasonable. Then you can use your evaluation of the information to decide how much of your money, time, or energy something is worth. This demonstrates a deeper understanding of the material and allows us to make informed decisions about information we receive.

iQ PRACTICE Go online to watch the Critical Thinking Video and check your comprehension. *Practice > Unit 8 > Activity 9*

- F. **IDENTIFY** Look at the advertisements. Make an appraisal of the products they describe. For each product, decide whether you would be willing to pay the average price, a lower price, or a higher price. Discuss your answers with a partner.



“Nine out of ten dentists agree that Toothy Toothpaste is the most effective toothpaste on the market for preventing cavities.”



“Engineers believe the Wave is the safest car available to consumers, and the Wave is the winner of three national safety awards.”



“Researchers agree that the future of weight loss is the Weight Loss Winner pill. Just one pill a day melts the fat away.”

G. DISCUSS Work with a partner. Answer the questions about each advertisement.

1. Where is the information coming from? Can you believe the “experts”? Why or why not?
2. Think about what you know about life and what you learned in school. Does the information in each advertisement seem possible? Why or why not?

WORK WITH THE VIDEO



A. PREVIEW In some places, driverless trucks are already being used. Look at the picture below. How would you feel if you were sitting in the passenger seat of a driverless semitrailer truck? What concerns would you have?



VIDEO VOCABULARY

disrupt (*v.*) to make it difficult for something to continue in the normal way

freight (*n.*) goods that are transported by ships, planes, trains, or trucks

pedal (*n.*) a part of a bicycle, car, etc., that you push or press with your foot to make the machine move or work

from scratch (*idm.*) from the very beginning, not using any of the work done before

traitor (*n.*) a person who works against their friends, country, etc.

remotely (*adv.*) from a distance

autonomously (*adv.*) with the ability to work without any help from anyone

iQ RESOURCES Go online to watch the video about new technology that may soon make many trucks driverless. [Resources](#) > [Video](#) > [Unit 8](#) > [Unit Video](#)

B. IDENTIFY Watch the video two or three times. Take notes about the effects that driverless technology could have on the world.

| Causes | Effects |
|--|---------|
| Stefan and his team are adapting existing trucks. | |
| Stefan and his team added a computer to control a truck's pedals and steering wheel. | |
| Stefan's type of self-driving truck will still require drivers. | |
| Stefan and his team are focusing specifically on highway driving. | |

- C. **DISCUSS** Read the quotation from the speaker in this video and answer the questions. Discuss with a partner.

“Once you’re out there doing it and you’re dealing with real-life problems, things going slightly wrong, fixing them up, you can then demonstrate to the world that we have made this thing work. We’re not going to wait around for all the regulations. And then almost by virtue of demonstrating its power, it forces the world to change around it.”

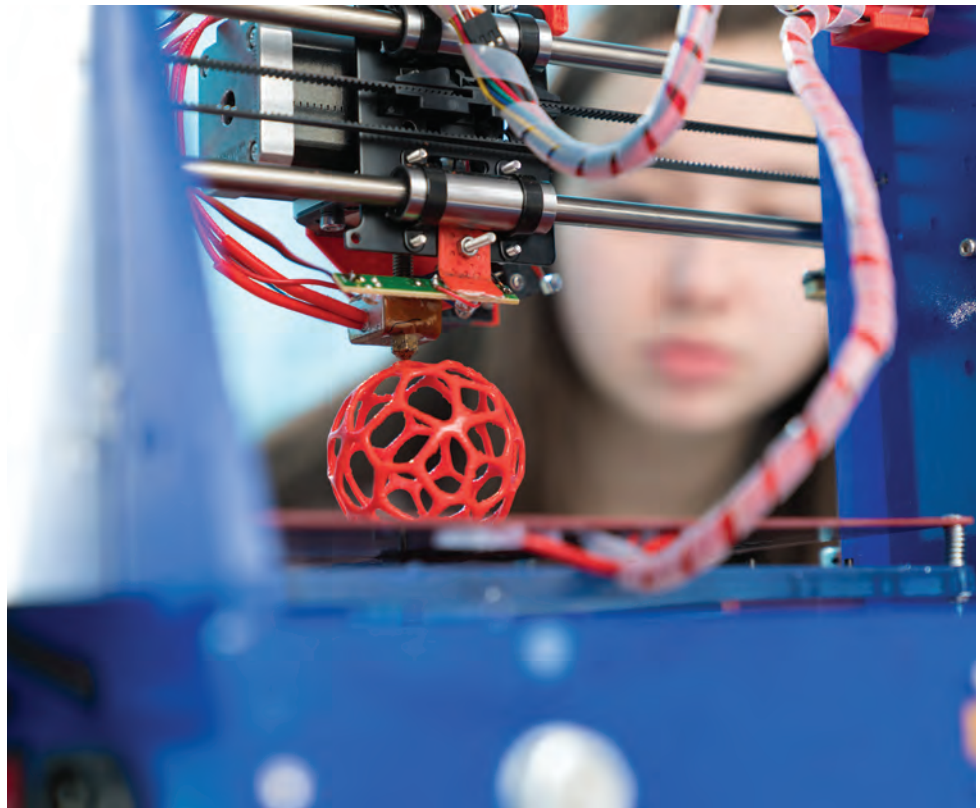
1. Do you think this is a good way to cause change?
2. What are some of the potential consequences of changes that come too quickly?



SAY WHAT YOU THINK

SYNTHESIZE Think about Listening 1, Listening 2, and the unit video as you discuss the questions.

1. In general, does making progress usually have positive or negative consequences? What examples can you think of to support your opinion?
2. Whose job should it be to regulate progress? An international agency, like the United Nations? The government in each country? Businesses? Scientists and engineers?



VOCABULARY SKILL Idioms

An **idiom** is a particular group of words that has a specific meaning different from the individual words in it. Idioms function as a separate unit, almost as if they were a single word.

On the other hand means “in contrast.”

□ But **on the other hand**, isn't flying, for instance, safer than ever before, thanks to automation?

Fall victim to means “to be negatively affected by something.”

□ Pilots often **fall victim to** what researchers call “automation complacency.”

Because idioms have specific meanings, much like individual words do, it is useful to remember these “chunks” of language in the same way you memorize individual words.

There are thousands of idioms. Most of these idioms are not in the dictionary. For this reason, it is important that you notice them when they occur and use context clues to figure out their meaning.



A. IDENTIFY Listen to the excerpts from Listening 1 and Listening 2. Listen for each idiom and how it is used. Then match each idiom with its definition in the box.

TIP FOR SUCCESS

Idioms can be difficult to understand, especially in conversation.

When someone uses an idiom you are not familiar with, use a clarification strategy.

You can also use context to understand the meaning, and some idioms can be found in a collocations dictionary.

- something to worry about
- remember
- not as good as it used to be because you have not been practicing
- at risk
- with no particular activities; free

- ___ 1. at leisure
- ___ 2. rusty
- ___ 3. cause for concern
- ___ 4. on the line
- ___ 5. keep in mind

B. COMPOSE Create sentences using the five idioms in Activity A. Practice saying the sentences with a partner.

iQ PRACTICE Go online for more practice using idioms.

Practice > Unit 8 > Activity 10

OBJECTIVE ▶

At the end of this unit, you are going to share your opinions about the consequences of progress. As you speak, you will need to add to other speakers' comments.

GRAMMAR Real conditionals

Real conditional sentences show a possible or expected cause and effect. They can give information about the present or the future.

Most real conditionals have a conditional clause containing *if* and a simple present verb connected to a main clause with a simple present or future verb.

conditional clause
main clause

 If driverless cars **become** popular, people **will** lose their jobs.
 (People will lose their jobs as a result of driverless cars becoming popular.)

Conditional clauses can also begin with *when* or *whenever* to describe a general truth or habit.

conditional clause
main clause

 When a doctor **has** a computer, the doctor **will order** more diagnostic tests.
 (Doctors order more tests as a result of having a computer.)

The conditional clause can come before or after the main clause. If the conditional clause comes first, there is a pause, shown by a comma, between the clauses.

If you don't have to drive, how do you spend your time?
 How do you spend your time if you don't have to drive?

Real conditionals can be used to express many kinds of ideas.

Things that will become true

If he can find old wood, Rick will make a guitar.

Predictions

If we don't have to drive cars anymore, how they look will change.

Habits

When doctors bring their computers into an exam room, they order more tests.

Deals, compromises, and promises

"I'll make Bob Dylan a guitar from Chumley's wood if he asks."

Advice

If you rely too much on automation, do a couple of things manually each day.

Warnings

When pilots don't get enough manual practice, they make mistakes in emergency situations.

Instructions

When you see someone throwing away old wood, grab it from them.



A. APPLY Read the sentences. Rewrite or restate each one so that the conditional clause comes first. Then practice saying the sentences with a partner.

1. More automation is not necessarily good when it isn't designed to benefit humans.
2. We can require pilots to practice flying manually if we are worried about their skills getting rusty.
3. You should think about getting into a different industry if you are worried about a robot replacing you.
4. I don't like getting more medical tests when I don't need them.
5. I'll buy an exercise car when they are invented.
6. They'll redesign cars when they all become driverless.
7. You can't be sure of people's answers if you don't ask them the question.
8. Automation advancements are certain if things continue as we expect.

B. COMPOSE For each situation, write a conditional sentence using the type of conditional in parentheses. Then compare answers with a partner.

1. A car company wants to sell a driverless car that is programmed to protect pedestrians in case of an emergency. (warning)
2. Your friend just bought a driverless car. You'd like a ride. In exchange, you can offer to pay for the gas. (deal)
3. You believe that computers in cars will be able to communicate with each other in the next couple of years. (prediction)
4. Your friend is a journalist. She is worried about her job being taken by a computer programmed to write news stories. (advice)

iQ PRACTICE Go online for more practice with real conditionals.

Practice > Unit 8 > Activity 11

iQ PRACTICE Go online for the Grammar Expansion: review of real and unreal conditionals. *Practice > Unit 8 > Activity 12*

PRONUNCIATION Thought groups

Speakers don't talk in a steady, continuous stream of words. Instead, they say their words as **thought groups** to help listeners understand their ideas. Speakers separate thought groups with brief pauses.

A thought group may be a short sentence.



Automation isn't always a good thing.

thought group

It may be part of a longer sentence.

I'm not worried that robots will take over the planet.

thought group 1

thought group 2

However, I think my father is suspicious about his new virtual assistant.

thought group 1

thought group 2

thought group 3

It may be a word, a short phrase, or a clause. The end of a sentence is always the end of the thought group.

Ultimately, we usually like technology that makes life easier.

thought group 1

thought group 2

thought group 3

When speaking, think about how to form your ideas into thought groups to help your listeners understand your ideas.



A. IDENTIFY Listen to the speaker. Draw slashes (/) between the thought groups.

people always ask me what advice do you have for workers who are facing an increasingly automated workplace first get a college education experts agree that blue-collar jobs will be most in danger second focus on working in a job that machines and robots haven't proven very good at such as working with customers being creative planning managing people or directing finally if it looks like the writing is on the wall for your particular field of expertise be flexible consider transitioning to other work

B. APPLY Practice reading the sentences in Activity A with a partner. Focus on separating thought groups.

iQ PRACTICE Go online for more practice with thought groups.

Practice > Unit 8 > Activity 13

SPEAKING SKILL Adding to another speaker's comments

One way to keep a conversation interesting is to **build on someone else's ideas**. Sometimes you want to communicate that you agree with another speaker or add other ideas related to the topic.

These phrases can be used to add to the conversation.

To show agreement

I agree
That's a good point
That's true
Right
Exactly

To build on an idea

Plus . . .
Furthermore . . .
I would add that . . .
Another important point is (that) . . .
To build on what you said . . .
Going back to what you before . . .

Phrases of agreement can be combined with phrases that build on an idea.

I agree. I would also add (that) . . .
Exactly. I would also add (that) . . .

Listen to the conversation.



Sung-ju: So, while I really enjoy using social media to keep in touch with friends and family, it's a bit creepy when the site automatically labels or tags my photos. I am all for intelligent machines, but I'm not sure I like the idea of my computer watching and remembering what I do.

David: That's true! Plus, I hate when social networking sites push advertisements that they think I'm interested in.



A. IDENTIFY Listen to a discussion about potential consequences of a common form of automation. Check (✓) the phrases of agreement and the building phrases you hear. Then work with a partner to summarize the main points.

- | | |
|---|---|
| <input type="checkbox"/> Another important point is that . . . | <input type="checkbox"/> That's a good point. |
| <input type="checkbox"/> And to build on what John said earlier . . . | <input type="checkbox"/> Exactly! |
| <input type="checkbox"/> Going back to what John said, . . . | <input type="checkbox"/> I would add that . . . |

B. EXTEND Create a list of at least four consequences of using voice recognition.

C. DISCUSS Work in a group. Discuss the reasons you listed in Activity B. Agree with or add to the ideas you hear.

iQ PRACTICE Go online for more practice adding to another speaker's comments. *Practice > Unit 8 > Activity 14*



UNIT ASSIGNMENT Share opinions about the consequences of progress

OBJECTIVE ▶

In this assignment, you are going to share your opinions about the consequences of progress—both good and bad. As you prepare to share your opinions, think about the Unit Question, “What are the consequences of progress?” Use information from Listening 1, Listening 2, the unit video, and your work in this unit to support your opinions. Refer to the Self-Assessment checklist on page 202.

CONSIDER THE IDEAS

DISCUSS Work with a partner. Discuss the questions about technology and growing older.

1. What challenges do people face as they grow older?
2. What technological advancements have made life easier for elderly people?
3. What challenges do some older people have with technology? How will future products need to be adapted to be useful to older users?
4. Are there any possible negative consequences associated with older people using technology to improve their lifestyles?

PREPARE AND SPEAK

TIP FOR SUCCESS

When participating in a group discussion, write down ideas that you think of while others are speaking. This will help you to remember your ideas when you have an opportunity to take a turn.

- A. GATHER IDEAS** Look at the photos of technological advancements designed to improve the lives of elderly people. List two potential positive consequences and two potential negative consequences.



| Robotic pet | Personal assistant | Medical caregiver |
|-------------|--------------------|-------------------|
| + | + | + |
| + | + | + |
| - | - | - |
| - | - | - |

- B. ORGANIZE IDEAS** Work with a partner. Compare the positive and negative consequences you listed for each product in Activity A. Add to the chart.

C. SPEAK Work in a small group. Follow these steps. Refer to the Self-Assessment checklist below before you begin.

1. Conduct a group discussion on this topic: What are the consequences of elderly people using technology designed to improve their lives?
2. Take turns expressing your ideas. Try to use conditional sentences to express your ideas. Also try to use some of the phrases you learned to add to other speakers' comments. As you speak, use pauses to separate your thought groups.
3. As a group, try to reach a consensus about the most useful (and least potentially harmful) product. Which do you think you would most appreciate when you get older?

iQ PRACTICE Go online for your alternate Unit Assignment.
Practice > Unit 8 > Activity 15

CHECK AND REFLECT

CHECK Think about the Unit Assignment as you complete the Self-Assessment checklist.

| SELF-ASSESSMENT | Yes | No |
|---|--------------------------|--------------------------|
| I was able to speak easily about the topic. | <input type="checkbox"/> | <input type="checkbox"/> |
| I took notes on causes and effects. | <input type="checkbox"/> | <input type="checkbox"/> |
| My partner, group, and class understood me. | <input type="checkbox"/> | <input type="checkbox"/> |
| I made appraisals. | <input type="checkbox"/> | <input type="checkbox"/> |
| I used real conditional sentences. | <input type="checkbox"/> | <input type="checkbox"/> |
| I used vocabulary from the unit. | <input type="checkbox"/> | <input type="checkbox"/> |
| I added to other speakers' comments. | <input type="checkbox"/> | <input type="checkbox"/> |
| I used thought groups while speaking. | <input type="checkbox"/> | <input type="checkbox"/> |

D. REFLECT Discuss these questions with a partner or group.

1. What is something new you learned in this unit?
2. Look back at the Unit Question—What are the consequences of progress? Is your answer different now than when you started the unit? If yes, how is it different? Why?

iQ PRACTICE Go to the online discussion board to discuss the questions.
Practice > Unit 8 > Activity 16



TRACK YOUR SUCCESS

iQ PRACTICE Go online to check the words and phrases you have learned in this unit. *Practice > Unit 8 > Activity 17*

Check (✓) the skills and strategies you learned. If you need more work on a skill, refer to the page(s) in parentheses.

- | | |
|--------------------------|--|
| LISTENING | <input type="checkbox"/> I can listen for causes and effects. (p. 185) |
| NOTE-TAKING | <input type="checkbox"/> I can take notes on causes and effects. (p. 187) |
| CRITICAL THINKING | <input type="checkbox"/> I can make appraisals. (p. 193) |
| VOCABULARY | <input type="checkbox"/> I can understand idioms. (p. 196) |
| GRAMMAR | <input type="checkbox"/> I can use real conditional sentences. (p. 197) |
| PRONUNCIATION | <input type="checkbox"/> I can recognize and use thought groups. (p. 199) |
| SPEAKING | <input type="checkbox"/> I can add to another speaker's comments. (p. 200) |
| OBJECTIVE ▶ | <input type="checkbox"/> I can gather information and ideas to share my opinions about the consequences of progress. |