UNIT 1 Strange & Unusual

Reading 1 Ghost Detectives

Ghost Detectives

Dale Kaczmarek believes in ghosts, and he has been the president of the Ghost Research Society since 1982. In his career, Kaczmarek has met many people who think that the subject of his research does not exist. When they find out that he studies ghosts, they consider him a fool. So one of Kaczmarek's goals is to make ghost research more scientific. Not everyone believes in ghosts, but most people trust science.

Kaczmarek follows a careful process to investigate ghosts. The process is initiated when someone telephones Kaczmarek about bizarre things happening in their home. These may include the sound of a voice in an empty room, a sudden coldness in the air, or even a strange smell. During the first phone call, Kaczmarek has a preliminary interview with the caller to determine whether it is a serious case or not. If he decides to accept the case, Kaczmarek asks the client what he or she wants him to do. Some people just want him to find out if paranormal activity is the cause of the strange events, while others want him to remove a ghost from their house.

After the phone call, Kaczmarek contacts other members of the Ghost Research Society and forms a team. They visit the client's house, but Kaczmarek never tells the team members any details about the case. This is very important for keeping the investigation objective; if the team members knew the details, they might imagine something that wasn't there. After a thorough inspection of the location, the team talks to the homeowner, and they explain what they have observed. Waiting until this time to share the details, Kaczmarek says, makes his method of investigation reliable.

Kaczmarek shares his expertise on ghosts by writing books and giving tours of haunted places. He published a book called *Windy City Ghosts* about ghosts in Chicago. One of the stories in this book is about ghost horses and their ghost riders. People sometimes see these ghosts on 95th Street—a busy road in Chicago's South Side that runs through a forest near some stables. When people ride horses from the stables into the forest, they must cross 95th Street. Over the years, there have been several accidents in which horses and riders were killed by fast-moving cars. Sometimes at night, people driving through the forest report seeing ghostly horses and riders crossing the street. They stop their cars to let the horses and riders pass, but when they look closely, the horses and riders have disappeared! All of these reports have come from the area where the horse trail crosses 95th Street.

Kaczmarek gives tours of this location and tries to explain the world of ghost research to his guests. Through his books, tours, and the scientific process of his investigations, Kaczmarek hopes to improve the reputation of ghost researchers.

SUPPLEMENTAL READING

Bloody Mary

Go into a room with a mirror. Turn off all the lights. Light a candle, look into the mirror, and start chanting, "Bloody Mary." Say this spooky phrase thirteen times, and the image of Bloody Mary will appear in the mirror! She will be standing behind you, over your left shoulder!

But beware: Bloody Mary has surprises waiting for those who call her. She sometimes kills the person. Other times,

she scratches out his or her eyes. She can drive the person crazy. Sometimes she grabs people and pulls them into the mirror with her!

The urban legend of Bloody Mary has been around for generations. Schoolchildren all around the world have entered dark bathrooms to try this game. Many run away in fright as they say “Bloody Mary” for the thirteenth time.

In 1978, folklorist Janet Langlois became interested in the Bloody Mary legend. At that time, the legend was already widespread in the United States. Langlois visited a Catholic girls’ school and interviewed eighty students. She compared their stories and determined that the story of Bloody Mary might come from an old legend about the crying ghost of a woman who eternally searches for her murdered children. However, no one really knows who Mary may have been.

The Bloody Mary legend is renewed with each generation of daring adolescents. Generations from now, schoolchildren will probably still be scaring themselves with this timeless, terrifying legend.

Reading 2 The Laughter Epidemic

The Laughter Epidemic

Have you ever started laughing and then couldn’t stop? Most of us have experienced this when we found something really funny; everyone knows that laughter can be infectious. But the famous case of uncontrollable laughter in Tanzania wasn’t really funny at all.

It all started on January 30, 1962, at a girls’ boarding school in the village of Kashasha. Three girls started laughing—for unclear reasons—and the laughter spread to their classmates. The problem was that the laughter didn’t stop—it kept spreading and continued for weeks. More than half of the school’s 159 students, aged between twelve and eighteen, were affected. Eventually, so many kids were laughing that teachers, who were immune for some reason, couldn’t conduct lessons. By March 18, the school had to close, and the students were sent home.

The laughter was not continuous. People can only laugh for about twenty seconds at a time since laughter is actually very tiring for the abdominal muscles as well as the respiratory system. Victims of the laughter epidemic would laugh for a while, seem to get better, and then begin laughing again. They also showed several other symptoms, including crying, fainting, and even skin rashes. For each victim, symptoms lasted from a few hours to about two weeks. The laughers were not enjoying themselves. In fact, they were in pain and unable to go about their normal daily activities.

When the girls left school and went home, they began spreading the epidemic to the rest of Kashasha and beyond. In June and July, two more villages were “infected.” The outbreak then spread to other parts of the country. Incredibly, the laughter epidemic lasted somewhere between six months and a year, and may even have affected people in the neighboring countries of Uganda and Kenya. In all, fourteen schools had to be closed, and victims numbered over 1,000. The victims were all children or young adults and included members of both sexes. Then suddenly, the strange infectious laughter stopped as mysteriously as it had started.

What would cause such an odd phenomenon? Physicians could find no medical reason for it; tests of the schools and the food eaten by victims showed nothing unusual. Most experts who have studied the incident

call it a case of mass hysteria, or Mass Psychogenic Illness (MPI). “Mass” means “affecting many people,” and “psychogenic” means “having a psychological cause.” Stress is often mentioned as the most likely reason for MPI. According to this theory, the young people were extremely stressed both by academic pressures and by major changes in Tanzania, which had just become independent from Britain.

This is just a guess, however. MPI is more of a label than an explanation, and we do not really understand it yet. No one has ever really been able to explain why the epidemic started when it did, why it affected only young people, or why it ended.

SUPPLEMENTAL READING

The Dancing Plague of 1518

In July 1518, a woman in Strasbourg, France, started to dance in the street for no reason. There was no music playing, and she did not seem to be happy, but she continued dancing for days.

A week later, thirty of her neighbors had joined her, feeling the same mysterious need to dance without stopping. After a month, the number of people affected had reached 400. The dancers were so out of control that some of them had heart attacks or developed other serious health problems. Several of them danced until they died!

Feeling afraid and helpless, the citizens of Strasbourg called in doctors and government officials for help. For reasons that don’t make much sense to us today, these officials believed that the only cure for the “dancing plague” was more dancing. They even built a stage and hired professional dancers to join in. Sometime in early September, the epidemic finally came to an end.

Modern historians disagree about how to explain the event. But it seems likely that the dancers were in a trance state. This is a special mental state in which you are neither asleep nor completely awake in the normal sense. Scientists don’t fully understand trance states, but they seem to occur more often in people who believe in spirits and in those who are under extreme stress. The people of Strasbourg believed that a saint named St. Vitus had the power to take control of their minds, and they were also suffering from hunger and disease.

Whatever caused the dancing plague of 1518, it shows how little we still understand about the human mind.

UNIT 2 Computers & Technology

Reading 1 The Evolution of Music Media

The Evolution of Music Media

Chances are you sometimes listen to music on the radio. Maybe you've downloaded your favorite songs to your phone, but you also stream the latest music online. And your parents and grandparents probably have some old CDs and vinyl records. These days, we have so many music formats to choose from. How did we get so many choices? Well, ever since the music industry was born, companies have been trying to make it more convenient for people to play their favorite music when and where they choose.

Vinyl records were the first medium for commercial music reproduction. This was the most popular music format from the 1950s until the 1990s. The standard kind of vinyl record was the LP. "LP" stands for "long play," as these were the first records that could continuously play twenty minutes or more of music. Of course, no one could carry LPs around and listen to them on the bus or subway. Record players, or turntables, were too big. So teenagers usually gathered at a friend's house, where they listened to records together. In that way, music was a social activity.

In the 1970s, Sony began selling a revolutionary device: the Walkman. This portable device allowed music lovers to take their music anywhere and listen to it privately—even in public places. The Walkman played compact audiocassette tapes, which were a new kind of music format.

Cassettes lost popularity with the introduction of the compact disc, or CD. CD technology was released in the United States in 1983, but it took until the mid- 1990s for this format to dominate the music market. One reason is that CDs and CD players were fairly expensive at first. Also, many people thought vinyl records had a superior sound. In fact, there are still some LP enthusiasts who prefer listening to records.

At the start of the 21st century, CDs held the largest portion of the market. But by 2007, sales of CDs had fallen sharply as people swapped them for the new digital format, MP3. By converting music to MP3 files, users could store several times more music on a CD. But more important was the 1997 invention of the MP3 player, and, a few years after that, the smartphone—devices that could hold thousands of songs. They allowed users to buy music online, download it, and listen to it immediately.

Change didn't stop there, of course. In recent years, online streaming on platforms such as YouTube and Spotify has been replacing downloadable MP3s as the dominant medium in places with reliable internet access. In 2018, YouTube reported that more than a billion people streamed music on their app each month. Both YouTube and Spotify now allow users to access ad-free music streaming for a monthly fee, and the popularity of these services is growing fast.

No one knows what the future holds for music media. But think about how many new formats have been invented in the past century. We can probably expect another revolutionary new way to listen to music before very long.

SUPPLEMENTAL READING

Can Musicians Still Make Money?

The technology we use to access and listen to music is constantly evolving. And while such changes usually benefit music fans, they don't always help musicians. When the MP3 format became popular, people quickly discovered how

to download music without paying for it. Piracy—getting and sharing music illegally—reduces the income that musicians make from their work. Now streaming services are reducing musical artists' profits even further.

Consumers can pay a monthly fee for streaming services that allow them to listen to an unlimited amount of music online. As a result, fewer MP3s files are being purchased and downloaded. Internet music services must pay royalties (fees) to record companies in order to play the songs that these companies own. But most of that money is kept by the record companies, and little is left over for the musicians.

One songwriter and keyboardist kept track of his royalties from streaming over three months. His songs were played more than 14,000 times—but he made only $35.09. Even major stars have similar experiences. Members of the British bands Led Zeppelin and Radiohead have participated in a government investigation of streaming services and their profits.

Of course, famous musicians can make a lot of money in other ways: by giving huge concerts, selling their songs for ads, and so on. But new and lesser-known musicians do not have these options. It is easier than ever for young musicians to share their work with the world. But with piracy and streaming, it is getting harder for them to make a living from it.

Reading 2 Hackers and Crackers

Hackers and Crackers

In the Information Age, many words related to computers are used in everyday conversation. For example, almost everyone knows the word "hacker," and to many people, this word has a negative connotation. Actually, hackers are excellent programmers who can write programs that are efficient and even artistic. They take great pride in their work. The term "hacker" was first used at the Massachusetts Institute of Technology (MIT) around 1969. The word "hack" was already in use at MIT to describe student pranks—very creative tricks or jokes. Computers were new to universities at that time, and there were not many computer manuals available, so the students had to figure things out by themselves. In the process, they often wrote small sections of code to make programs do what they wanted. This soon became known as "hacking" because the students had to use their creativity, just as they used their creativity for their pranks.

Because of this history, hackers consider themselves noble and curious people. They use hacking to satisfy their curiosity and to learn new computer skills, but most do not believe in destroying information or causing trouble. In fact, hackers have an ethical belief: "do no harm." They believe it is all right to probe a computer system for weaknesses, as long as none of the data is damaged. In addition, they always notify the administrator of the system so that the weakness can be fixed.

On the other hand, malicious programmers exploit weaknesses in systems. Hackers call these people "crackers." Crackers are people who break into (or crack open) computer systems with selfish motives. Sometimes they steal information, and sometimes they release viruses into the systems. Hackers are not happy when computer criminals are called hackers. Unfortunately, most people use the word "hacker" for both hackers and crackers. The actions of crackers, who are also called "black hats," give hackers a bad reputation. Hackers are sometimes hired by companies to test computer security. This kind of hacker is called a "white hat." The white hat will try to break into the company's computer system. If he or she succeeds, the company can find and fix the problem. In recent years, even governments have been hiring hackers to improve national security.

Hackers spend a lot of time developing technology. In fact, if it were not for hackers, the only programs available to computer users would be expensive ones from companies like Microsoft. Who do you think writes those freeware

programs we download? For example, the popular Mozilla Firefox browser was developed by hackers. Hackers have also contributed to the Linux operating system, as well as many other open-source programs. They spend hundreds of hours working on projects and receive no pay at all.

Hackers are the misunderstood heroes of modern culture. Without them, we would not have such excellent computer systems. While there are some unethical crackers in the world, we should be careful not to blame hackers for what crackers do.

SUPPLEMENTAL READING

Bugs, Worms, and Viruses

Most people use popular words like “bug,” “worm,” and “virus” all the time. But have you ever wondered exactly what they mean or where these terms come from?

Even in Thomas Edison’s time, problems with electrical devices were called “bugs.” No one knows why this word was used, but the word gained new popularity in 1945. A famous computer expert was investigating a problem and found a moth trapped in her computer. When she removed the moth, she called it a “bug.” Nowadays, a problem with a computer or program is called a “bug,” and the process of solving the problem is called “debugging.”

A “worm” is a program that searches for and uses information on your computer. The word comes from John Brunner’s 1975 science-fiction novel, The Shockwave Rider. In the novel, “worms” could replicate themselves, just as real worms can. The term was made popular in the computing community by engineers at a Xerox research center in 1979. They used the word to describe a short program that could search a network for idle processors. Today, worms travel through email and steal personal data from our computers.

The term “virus” came from a student at the University of Southern California in 1983. He used the word to describe a program that could change other programs. Often, viruses replicate themselves and cause damage—just like biological viruses.

UNIT 3 Health & Medicine

Reading 1 Healthy Body Images

Healthy Body Images

The way you think about your own body is called your body image. If you have a negative body image, it means you don't like your body. And if you don't like your body, you probably don't like yourself. In this way, body image is connected to self-esteem. Self-esteem is how much you value yourself. There are several ways to improve your body; however, they do not always result in higher self-esteem.

Plastic surgery is one way of changing your body that is tried by millions of people around the world each year. Many people with a negative body image think that a surgical procedure can solve their problems, but this is rarely realistic. The real reason for their negative body image may be largely psychological. Thus, plastic surgery alone probably won't help them, and they are disappointed afterward. Such people need to learn to appreciate everything about themselves, not just their appearance.

People also try to improve their bodies by changing their diets. A good diet consists of the proper amounts of healthy foods. If you make healthy eating a permanent part of your lifestyle, you can lose weight and feel better about yourself in the long term. Unfortunately, many people are impatient; they have a negative body image and want to change their bodies immediately. To lose weight, they simply stop eating or eat very small amounts for a short period of time. This is called crash dieting, and it is a mistake. While crash dieting may help people lose weight temporarily, they often regain it after returning to their normal eating habits. Gaining the weight back undermines their confidence and actually lowers their self-esteem further. Proper dieting can help people improve their body image, but crash dieting is both unhealthy and ineffective.

A third way people change their bodies is through exercise. Being physically active can bring about a transformation in body shape, make people feel more energetic, and relieve stress. These are important because a mood change can change body image, too. But too many people join health clubs and then quit after a few days or weeks because exercising is difficult. Their muscles hurt, and they do not see immediate results, so they give up. As a result, they feel they have failed, which lowers their self-esteem even more. Exercise, like a proper diet, takes a long time to have a noticeable effect. People who include regular exercise in their daily lives experience long-term benefits for both their appearance and their health. Exercising for only a few days will not produce the desired effects.

People with negative body images might benefit from plastic surgery, diet, or exercise. However, these methods are only successful when people use them correctly.

SUPPLEMENTAL READING

Advertising and Self-Image

We have known for a long time that women are pressured by images in advertising. We see hundreds of ads every day. As a study by Dr. Jean Kilbourne points out, the women in TV ads are mostly tall, thin models. And in print ads and online, companies use Photoshop to make models appear even more "perfect." Although people claim to be unaffected by it, Dr. Kilbourne says that advertising affects all of us subconsciously.

Women frequently compare their bodies to those of others. Researchers have found that continually seeing beautiful bodies negatively affects a woman's body image. In one study, some women were shown pictures of thin models, and other women were shown pictures of average and overweight models. In this survey, the "thin model" group said the models made them feel insecure about their own attractiveness.

Lately, we have learned that men's body images are also affected by advertisements. In one study, one group of men were shown ads featuring sexy male models without shirts. Another group of men saw ads with men in business suits. The "shirtless male model" group felt depressed and less satisfied with their appearance.

Women and men both feel pressure from advertisements. When companies begin to advertise products using realistic models, maybe people will feel more secure about their own bodies.

Reading 2 Pollution In Our Bodies

Pollution In Our Bodies

Everyone knows about pollution in the environment. The water, air, and land are all polluted, which means that pollution is everywhere. Recently, scientists have been looking inside human beings to learn about body pollution.

In 2015, a team of Spanish scientists tested body tissue from nearly 300 adults. They measured the amount of certain pollutants in these tissues. The results of the study were worrying: the adults with the most pollutants in their bodies were more likely to be obese. They had higher levels of cholesterol, a major risk factor for heart disease, as well. Another study from 2003 found that people had an average of fifty-three cancer-causing chemicals in their bodies. They also had an average of sixty-two chemicals that can damage the brain and fifty-five that can harm babies in pregnant women. In many cases, the amounts of these chemicals were so small that they were probably not hurting people. Nonetheless, scientists are concerned because most of these substances were created by humans, and they did not exist eighty years ago. This proves that we have not only polluted the world—we have polluted our own bodies. But how?

Pollutants commonly enter our bodies through food, especially fish and meat. Chemicals from the environment build up in the fat of animals, and then they enter our bodies when we consume those animals. But we also come into contact with harmful substances in products like soap and shampoo. For example, many shampoos contain diethanolamine (DEA) and triethanolamine (TEA). These chemicals may seep into the skin and then prevent the absorption of a helpful nutrient called choline. Choline plays an important role in producing the brain's memory cells, especially in young people. Researchers worry that when kids are washing their hair, they could be erasing their memories!

Everyone knows they should brush their teeth regularly. However, at least one popular US toothpaste brand contains a substance called triclosan. Although more research is needed, a few studies show that triclosan harms growth in young animals and increases the risk of cancer.

Women are probably exposed to more chemicals than men because they use more beauty products. Harmful chemicals called phthalates have been found in nail polish, hairspray, deodorant, and perfume. Studies on animals show that phthalates can damage the liver, kidneys, and lungs. Cosmetic companies say that their products contain safe levels of phthalates, but public health groups disagree. They say women use so many products that the sum total is actually quite high. So the more frequently women use these products, the more they could be harming their health.

In a science fiction story by Ray Bradbury, a man found an unpolluted river on a new planet. When he drank from the river, he died. Why? His body was so polluted that pure water was a poison to him! Perhaps that is only a story, but it reminds us to be careful about our bodies. We must find ways to minimize the pollution we take in.

SUPPLEMENTAL READING

Organic Diet for Kids

Chemicals in food are especially dangerous for children because their bodies are small and still developing. One way we can reduce the number of harmful chemicals our children consume is to feed them organic produce. Organic foods are grown without pesticides (used for killing insects and weeds), synthetic fertilizers, or other artificial chemicals.

The University of Washington conducted a study to compare children who eat non-organic fruits and vegetables and children who eat organic produce. They watched forty families for three days. Each family kept a diary of what foods their children ate. Then the doctors in the study analyzed the different chemicals found in the children's urine. The pesticide levels in children who ate non-organic produce were six to nine times higher than the levels found in kids with organic diets.

Organic foods cost more than non-organic ones because less of the crop is harvested. When farmers don't use pesticides, part of the crop is destroyed by insects and other threats. Also, farmers have to spend more time taking care of their crops by hand instead of using chemicals.

Still, organic foods benefit the environment by reducing the amount of poison in our soil, water, and bodies. Most people also say that organic foods have more flavor. Finally, people feel peace of mind when they eat organic produce. They can help save the environment and protect their children's health at the same time.

UNIT 4 Social Issues

Reading 1 Crossing Borders, Breaking the Law

Crossing Borders, Breaking the Law

Moving to a foreign country is a scary idea. This is especially true if you must leave your possessions, friends, and family behind. Nonetheless, millions of people do this every year, and many are breaking laws in order to migrate.

The flow of illegal migrants is mostly from poorer countries to richer ones. More than ten million unauthorized immigrants live in the United States alone. Approximately half a million try to enter the country illegally every year. Most of these migrants arrive in search of jobs, and in fact, they make up five percent of the American labor force. But in recent years, the European Union has seen the greatest increase in unauthorized immigrants. In 2015 alone, more than a million people entered the EU without permission. Some were attracted by Europe's strong economy, but many others were escaping conflict at home.

It is easy to feel sympathy for unauthorized migrants who just want a chance at a better life. On the other hand, every country has the right to enforce its laws and control its borders. This is a very tricky problem, and no country has found a perfect solution. A balanced approach to the problem should include prevention of illegal immigration, punishment for those who profit from it, and the return of illegal immigrants to their home countries.

A sensible way to prevent illegal immigration is to create more jobs in the immigrants' home countries. If they can find good jobs at home, they will have no reason to leave. A truly global economy would mean that each country has enough jobs. Second, people need to be warned against illegal immigration before they leave their home countries. If more people are educated about the risks, maybe they will be less inclined to make the trip.

Measures to penalize illegal immigration are also important. The immigrants, though, are not the only ones who are breaking the law. Human smugglers are those who transport immigrants into a country illegally, and since the immigrants must pay the smugglers a high fee, smuggling is a very profitable business. So is the hiring of illegal immigrants to work for very low pay. Punishment should focus more on the smugglers and dishonest employers. Finally, these laws need to be strictly enforced. The best law in the world is useless if everyone ignores it.

The final part of the solution is to provide ways to return immigrants to their home countries. It is best if immigrants leave of their own volition. Their home country's government might even provide ways to help them return. Governments, however, must consider each case individually. Sometimes it is better to let people remain in their new country. For example, some immigrants cannot safely return for political reasons or because of war.

The unauthorized movement of people across international borders will continue to be a problem until people everywhere can enjoy peace and prosperity. Until that day comes, nations must work together to enforce their immigration laws, while helping those that need it most.

SUPPLEMENTAL READING

Open Borders: Pros and Cons

People do not always need permission to move to a different country. Certain national borders are open, meaning that

people can move back and forth across them without restrictions. Examples of countries that share open borders include India and Nepal, as well as most nations within the EU.

Open borders are now pretty rare, but they used to be the norm. It was not until the 20th century that people needed passports and visas to travel or migrate. Now there is a movement to return to a world of open borders and free migration. Many people who want to remove limits on migration argue that freedom of movement is a basic human right. They say it is wrong to treat people differently just because they were born on the other side of an imaginary line. They also argue that when people are allowed to go where jobs are available, the global economy grows, and everyone benefits.

Opponents of open borders reply that this idea cannot work. Without immigration laws, governments could not keep criminals and terrorists out. Also, certain countries attract a lot of immigrants. For those countries, the number of people arriving could be too large to handle. There might not be enough jobs, housing, schools, and other services for the immigrant population. Furthermore, people worry that large numbers of immigrants would make it hard to maintain individual cultures. In fact, a recent survey by the UN found that most people around the world oppose opening their country's borders.

Reading 2 The Glass Ceiling

The Glass Ceiling

Many professional women fear that they can never make it to the top. Even though they work hard, few reach the most powerful positions in business. We call this the "glass ceiling." Although women are told they are equal to men, there seems to be an unseen barrier preventing them from rising higher. Among the Fortune Global 500—the world's 500 biggest companies ranked by Fortune magazine—only forty-one had women as CEOs in 2020. But why? There are different theories.

Some feminists put most of the blame on sex discrimination. Attitudes toward women almost certainly inhibit women's progress in some ways. For example, women are generally thought of as more caring and less aggressive than men. But high-level managers tend to think aggressiveness and competitiveness are positive traits for leaders. A study in 2018 found that women who deliberately showed these "masculine" traits at appropriate times were more successful. Other research has found that most people link leadership with qualities that are typically associated with men, such as being decisive. Qualities that are usually considered more feminine, such as cooperativeness, are viewed as less important. Although these attitudes can be considered sexist stereotypes, the researchers found they are held by both men and women.

But sexist attitudes may not be the whole explanation. Some people point to the choices women make as reasons why they are less likely to hold the most high-powered, high-paying jobs. Most women become mothers in their twenties and early thirties, an event that may interrupt their careers. Whether it is fair or not, having children is usually a greater burden on a mother than a father in terms of time and effort—and that means less time at the office. Research shows that women tend to work fewer hours than men in the same industry and are more likely to choose part-time over full-time jobs. The trend toward companies giving more paid time off to both new mothers and new fathers might help correct this inequality. However, women are much more likely than men to seek work in areas such as human resources, which rarely lead them to the highest levels in business. Some argue that most women simply prefer jobs that allow them more time with their families. But critics say that sexism in the corporate world discourages women from trying to compete in it.

Despite the debate about why there are few women heading corporations, most people agree that equal opportunity and more diverse business leadership are good goals. And women are making progress in breaking through the glass

ceiling. Although forty-one female CEOs in the Fortune Global 500 is a low number, it is also the highest ever reached. As more women take top positions in the corporate world, they pave the way for others to do the same.

SUPPLEMENTAL READING

Women in World Politics

Margaret Thatcher was one of the most famous female politicians of the 20th century. She knew that the world was watching her and judging all women as leaders. When she became the United Kingdom's first female prime minister in 1979, she said, ″A great deal, I think, of the future of women at the top will depend on how I do." Even those who disagree with her admit that she was an effective political leader. Thatcher was re-elected twice. Her strength and determination earned her the nickname "Iron Lady." Since Thatcher, many other women have become leaders of countries. But as with female CEOs, they remain a small minority.

Some have argued that women make especially good leaders. Chandrika Kumaratunga became president of Sri Lanka in 1994. She felt women brought certain advantages to politics. "Where there is a dedicated, honest, and sincere woman somewhere at the top, she can bring in a much more human touch and a much more practical approach to problems, and that's very important in politics," Kumaratunga said.

Like Thatcher, however, successful female politicians are not always seen as having a different, ″feminine" leadership style. Angela Merkel has led Germany since 2005 as its first female head of state. She is one of the longest-serving and most powerful leaders in her country's history. Merkel and her supporters have never focused on her sex but rather on her intelligence and talents. As one journalist put it, she "has perhaps made the idea of a woman leading her country feel normal."

UNIT 5 Environmental Issues

Reading 1 Living Near Volcanoes

Living Near Volcanoes

In 1991, Mt. Pinatubo in the Philippines surprised the world. On June 15, this volcano on the island of Luzon erupted after standing silent for five hundred years. The inhabitants of the area had never expected it to wake up. It was the second most powerful eruption of the 20th century. More than a million people had to be evacuated, and between 700 and 900 people were killed. Surprisingly, only a few years later, life was back to normal on Luzon, and people were once again building homes and working in the shadow of the volcano.

Why do people live near volcanoes? There are logical reasons. They might live there because the volcano is beautiful or because a large city already exists there. In many countries, people migrate to cities to find employment. They don't worry about volcanoes; they are trying to feed their families. Some people also live near volcanoes because the land provides farmers with good harvests. Volcanoes release ash from the earth, and the ash contains nutrients that increase soil fertility. Whatever the reason, most people who live around a volcano probably do not realize how hazardous it can be.

"Volcanoes and their surrounding environment are beautiful places to live, work, and recreate, and the number of people moving into volcanic hazard zones is increasing in post-industrial as well as developing countries," said C. Dan Miller, chief of the US Geological Survey's Volcano Disaster Assistance Program. Miller offered southern Italy as an example.

Mt. Vesuvius is located right on the edge of Naples, and it has a 2,000-year history of eruptions. Yet, there are 3.75 million people living within a thirty-kilometer radius of the summit. "What would these people do if Vesuvius erupted again?" Miller wonders. "No one can imagine evacuating a city the size of Naples."

One of the world's most legendary volcanoes is Mt. Etna in Sicily. Sicily is an island in the Mediterranean Sea with more than five million inhabitants who are generally proud to be living near such a famous volcano. Mt. Etna has been very active over recent years, with eruptions nearly every year, but the eruptions are calm enough to attract countless tourists wanting to see a "safe" active volcano. These eruptions are beautiful to watch, and observers are rarely hurt. Sicilians call Etna a "good mountain." They compare the volcano to a mother because it has bestowed on them such a good life. In fact, many people who live near Etna call themselves "Etneans."

Despite their aesthetic value, there are no safe volcanoes, according to scientists. All volcanoes can be dangerous, but it is unlikely that people will stop relocating to areas near volcanoes. So if there's a mountain looming above your town, take a good look. Is it just a pile of rocks? Or is it a sleeping dragon?

SUPPLEMENTAL READING

Hot Springs

Most people will never see a volcano erupt, but volcanoes are not the only way that the Earth reveals its inner energy. Hot springs are smaller, gentler ways to enjoy the Earth's hot interior.

Hot springs are found where hot underground water flows up from the ground. The water is heated far below the ground by magma. Because heated water can hold more dissolved solids, hot springs often contain a lot of minerals. Some people believe these mineral waters are good for their health. For example, they believe that sulfur relieves nasal congestion, calcium helps circulation, and salt water improves digestion. Not all of these healing properties have been scientifically proven. However, studies do suggest that soaking in a hot mineral spring can decrease arthritic pain.

The countries most famous for hot springs are New Zealand, Iceland, and Japan. New Zealand has more than two dozen popular hot spring areas. Iceland, on the other hand, has about 800 hot springs in 250 areas around the country. Iceland's largest hot spring, Deildartunguhver, has a flow of 150 liters of boiling water per second! Japan boasts about 3,000 hot spring resorts. In Japan, going to hot springs for relaxation is a national obsession.

The energy inside the Earth is unimaginable. It can make mountains explode. Yet, it can also provide relaxing, healing waters. That's something to think about the next time you are soaking in a hot spring.

Reading 2 Water Rights, Water Fights

Water Rights, Water Fights

According to *Fortune* magazine, water is the oil of the 21st century, "the precious commodity that determines the wealth of nations." Similarly, the US Central Intelligence Agency (CIA) has predicted that access to drinking water could be one of the main reasons for the next major war.

Judging by all available information, the world faces an imminent water crisis. The world's current population of nearly eight billion people is expected to swell to nine billion by 2050. The UN estimates that if we continue to use water at today's rates, up to 5.7 billion people will be facing acute water shortages by then.

Worldwide, we are draining so much water from our rivers that in some, hardly any water reaches the sea. The Colorado River, once powerful enough to carve the Grand Canyon, is now being siphoned to supply water to several states in the American Southwest. Likewise, the mighty Nile and Yangtze Rivers are reduced to a trickle before reaching their seas.

But wait! If two-thirds of the Earth's surface is covered with water, why don't we have enough water to drink? Of all the water in the world, only one percent can be used in homes and in farming. The rest of the water is either salt water or polar ice. So shouldn't global warming release some of that water? In fact, global warming will make the situation worse. Now, water is released gradually from ice and snow into rivers and lakes. This water source is then replaced in winter. As winter temperatures rise because of global warming, however, the polar ice melts faster than it can be replaced. Worse still, most of the additional water will simply flow into oceans and seas.

While some people see the water crisis as a humanitarian issue, others see it as an economic one. We all need water, and some companies are set to make a healthy profit from the situation. In the Bolivian town of Cochabamba, the government gave a forty-year contract to a single water company. Shortly after receiving the monopoly, the company raised water prices drastically. Local citizens revolted. Finally, the government was forced to cancel the contract. Denmark is one country that is taking action to protect water for the future. The Danish government has a ten-step program to ensure the quality and quantity of water. For one thing, 170 pesticides have been banned because these poisons leak into the water supply. Together with this step, organic farming is being promoted because it does not use harmful chemicals. Additionally, other steps are being taken to protect important aquifers. Aquifers are large areas of stone underground that hold and filter water. They are essential for maintaining a healthy, natural water supply.

Other nations must follow Denmark's example, and soon. As the UN has warned, "ensuring the sustainable use of the

planet's resources is vital for ensuring long-term peace and prosperity."

SUPPLEMENTAL READING

What's in Your Bottled Water?

Why do people drink bottled water? Most people say they drink bottled water because it is healthy. But is it really? Bottled water is marketed as a pure product, but that's not always what you find in the bottle.

In North America, about forty percent of all bottled water comes from city water supplies. Sometimes the bottled water receives treatment to clean it, but one-quarter of such water receives no treatment at all! There are no laws requiring companies to clean the bottled water they sell. A company can fill bottles with the same water that we use in our sinks and showers at home, and then they can sell that water to us at a much higher price!

Bottled water is labeled in three different ways. The first, "spring water," really comes from a natural spring. Next, there is "mineral water." This only indicates that the water contains some minerals. It does not mean that the water is purified or that it comes from a natural source. Finally, there is "purified water." Purified water has been cleaned in some way. However, there is no way for consumers to know where the water came from.

When you pick up a bottle of refreshing water, do you really know what you are drinking?

UNIT 6 Law & Crime

Reading 1 Bans On Smoking

Bans On Smoking

Tobacco use, including smoking, is the number-one cause of preventable deaths. According to the World Health Organization (WHO), tobacco-related illnesses kill about eight million people every year. Cigarette smoke also harms non-smokers. Smoking costs billions of dollars in medical expenses, and most of this money comes from insurance companies and government healthcare programs. Over the last decade, governments across the globe have tried to reduce the damage by prohibiting people from lighting up in public places.

In March 2004, Ireland became the first country to pass a nationwide ban on smoking in workplaces. That included the pubs where people gather to drink alcohol. Anyone caught violating the ban can be fined up to 3,000 euros (US $3,300). Some smokers and business owners had objections, but more than eighty percent of Irish people supported the law. And it has been strictly enforced from the beginning.

Just one day after the law was passed, a politician was caught lighting up in a bar near the Irish Parliament. He was immediately fired from the Cabinet! If the goal of the ban was to save lives by getting smokers to quit, it has been fairly successful. Irish authorities say that since 2004, the smoking rate has dropped from about twenty-five percent of adults to fifteen percent, and smoking-related deaths have declined. The anti-smoking law in Ireland has been highly influential, motivating dozens of other countries to do the same.

However, not all smoking bans have been received enthusiastically or effectively enforced. In France, smoking in indoor public places was made illegal in 2006. Yet by 2010, the smoking rate among adults had increased from twenty-eight to thirty percent. Some observers said this was due to the “rebellious spirit” of the nation’s people. “The French are great at making laws, but no one follows them,” an anti-smoking activist told the Christian Science Monitor in 2014. Since then, France has adopted other anti-smoking measures, including higher prices on tobacco and changes to cigarette packaging. These efforts seem to have been more successful than the ban, as the country’s smoking rate has finally begun to drop.

With over 300 million smokers, more than a third of the global total, China presents perhaps the biggest challenge for anti-smoking laws. The city of Shanghai officially outlawed smoking in restaurants during the 2010 World Cup. And the following year, the Chinese government attempted a nationwide ban on lighting up indoors in public. Both laws were largely unsuccessful. So in 2015, the capital, Beijing, passed an even stricter new law against indoor public smoking, with a fine of 10,000 yuan (US $1,600) for businesses that did not comply. Despite these efforts, almost one-fourth of the country’s people continue to smoke.

The global trend toward laws restricting smoking has produced mixed results. These bans might seem like a simple, straightforward way of fighting an unhealthy and expensive habit. However, not all countries react the same way to anti-smoking laws.

SUPPLEMENTAL READING

Vaping

As smoking cigarettes becomes less common in many countries, vaping becomes more common. The word “vaping”

comes from “vaporizer.” Personal vaporizers (PVs), also called e-cigarettes, are electronic substitutes for cigarettes.

Generally, PVs are filled with an “e-liquid.” The PV heats the liquid, and the user breathes in the resulting vapor as if it were cigarette smoke. There are many kinds of e-liquids. Some contain nicotine, the addictive drug in cigarettes. Others contain only propylene glycol (a type of liquid sugar) and flavoring.

The main advantage of vaping is that instead of releasing smoke into the air, it releases only water vapor. Thus, people need not fear the effects of secondhand smoke. There is also good reason to believe that e-liquids are safer for smokers than tobacco since they contain fewer toxic chemicals. Moreover, makers of e-cigarettes say that they are a great way to help people stop smoking. Some research supports this claim. One large study found that most vapers were smokers who were trying to quit and that PVs helped them more than other nicotine replacements did.

Not everyone agrees that vaping is a good idea. Critics want more restrictions on e-cigarettes. They point out that nicotine is still a harmful drug, whether it is in a cigarette or a PV. They also wonder about the long-term effects of breathing e-liquid vapor, and they criticize the sweet flavors of some e-liquids, which could appeal to kids. Since this is still a relatively new technology, research and debate on the safety of vaping will surely continue.

Reading 2 Victimless Crimes

Victimless Crimes

Every crime has a criminal, but not every crime has a victim. When criminals steal, the people whom they steal from are the victims. Other crimes, called victimless crimes, do not have victims. For example, when someone drives without wearing a seat belt, there is no victim—but it may be against the law. Normally, laws are made to protect people, but if there are no victims of these acts, why are they illegal?

Sometimes the issue is not so simple. For example, many people support laws against selling alcohol to kids. They say that if we do not control alcohol sales, even young children could obtain alcohol. Even though there is no specific victim, these laws protect our society. People supporting such laws believe that if we didn’t have laws against victimless crimes like using drugs, watching pornography, or gambling, our society would fail. They say that freedom requires responsibility and that democracy requires laws to protect society.

To clarify this viewpoint, let’s look at one example of a victimless crime: drug use. It might be correct to assume that if people use drugs in their homes, they are not hurting anyone. However, there are indirect victims. If addicts want drugs but lack the money to pay for them, they are liable to steal or violently rob people. Drugs are connected to many crimes in this way, so even though drug use itself is victimless, it leads to crimes that have victims. Moreover, many people believe that drug use is morally wrong, even if the users hurt no one but themselves. Thus, people may support laws against drugs purely as a way of expressing the moral norms of the community.

Nevertheless, others say that every law against victimless crime is bad. They say that governments waste time and money by catching these “criminals,” taking them to court, and then putting them in jail. One author estimates that eighty-six percent of the people in federal US prisons are there for victimless crimes. According to critics, no one should go to prison for doing something that did not harm any other person. They say we should not try to control citizens’ private behavior.

Let’s look at seat-belt laws to improve our understanding of this point of view. Drug use and seat belt use are very different matters, and critics say there is no legitimate reason to mandate wearing seat belts. If you refuse to wear a seat belt and you have a car accident, the only result is that you might be personally injured. Unlike drug use, this behavior does not harm other people, even indirectly, and it does not harm our society. So, they ask, what right do we

have to make others wear seat belts?

As with all controversial topics, people will continue to debate victimless crimes. In time, our lawmakers might find better ways to address these issues, but in the meantime, it's up to the police and courts to exercise good judgment in each case.

SUPPLEMENTAL READING

An Unusual Criminal

People who drink too much alcohol and then drive their cars create a public danger. When police see drunk drivers, they pull them over. That's how it usually happens, but one drunk driver's case is surprisingly different.

Ian McCollin, a police chief, was driving his police car when he saw another car at an intersection. The other car was moving across the street very slowly, so McCollin paid attention to the car as he drove by. He noticed that the driver's face looked confused. At first, McCollin thought the driver was lost. McCollin pulled his car to the side of the road. He waited for the other car to approach him. When the other car was next to his, the driver told McCollin something very odd. He said he wanted to be arrested because he was drunk.

McCollin was startled. "I was just a little nervous about it," he said. "It just wasn't natural." Drunk drivers are usually a little violent when they are arrested. They deny that they are drunk and refuse to obey the police officers. But this driver, Bryan S. Condo, did not act that way. "He was a gentleman, very polite and very cooperative," McCollin said. "I think he was looking for or needed help."

The police chief charged Condo with drunk driving and driving without a license.

UNIT 7 Language & Literature

Reading 1	Steve Jobs's Commencement Address At Stanford University

Steve Jobs's Commencement Address At Stanford University

[excerpted and adapted]

I'm honored to be with you today for your commencement. This is the closest I've ever gotten to a college graduation. I dropped out of Reed College after six months, but then stayed around as a drop-in for another eighteen months before I really quit. So why did I drop out? It started before I was born. My biological mother was a young graduate student, and she decided to put me up for adoption. She felt strongly that I should be adopted by college graduates, so everything was all set for me to be adopted at birth by a lawyer and his wife, except that they decided they really wanted a girl at the last minute. Instead, my parents got a call asking, "We've got an unexpected baby boy. Do you want him?" They said, "Of course." My biological mother found out later that my mother had never graduated from college and that my father had never graduated from high school. She refused to sign the final adoption papers. She only relented when my parents promised that I would go to college.

Seventeen years later, I did go to college, but I naively chose a college that was almost as expensive as Stanford, and all of my working-class parents' savings were being spent on my tuition. After six months, I couldn't see the value in it, so I decided to drop out and trust that it would all work out OK. It was pretty scary at the time, but looking back, it was one of the best decisions I ever made. The minute I dropped out, I could stop taking uninteresting classes and begin dropping in on the ones that looked far more interesting.

Much of what I stumbled into turned out to be priceless. For example, since I didn't have to take the normal classes, I decided to take a calligraphy class one semester. I learned about what makes typography great. It was beautiful, historical, artistic, and subtle in a way that science can't capture, and I found it fascinating.

Ten years later, when we were designing the first Macintosh computer, it all came back to me, and we designed it into the Mac. It was the first computer with beautiful typography. If I had never dropped in on that single course, the Mac would have never had multiple typefaces or proportionally spaced fonts, and since Windows copied the Mac, it's likely that no personal computer would have them.

You can't connect the dots looking forward. You can only connect them looking backwards, so you have to trust that the dots will somehow connect in your future. You have to trust in something—your gut, destiny, whatever. Follow your instincts, even when they lead you off the well-worn pathways, and that will make all the difference.

SUPPLEMENTAL READING

Graduates Wanted

Students drop out of college for many different reasons. A few brilliant businessmen such as Steve Jobs become so successful at a young age that they do not need to graduate. And exceptional athletes, such as NBA star Kobe Bryant, can leave school early and play professional sports. But while some dropouts are successful, most people still need a diploma to get a decent-paying job. Although he never finished college himself, Bill Gates believes that getting a

degree is generally the right choice. He also argues that universities must work harder to ensure that students graduate with valuable career skills.

Most dropouts do not leave school to follow a dream. Many give up because they cannot handle the academic challenges and because they do not receive enough guidance from the university. Others leave because they have trouble paying tuition. As Gates once pointed out on his blog, these dropouts end up feeling badly about themselves. “Their entire sense of what they can achieve in life is damaged,” he wrote. In fact, statistics show that college graduates have more rewarding jobs and higher incomes. They even appear to be healthier than those who did not finish college. Thus, universities should do more to keep struggling and low-income students in school.

It is not only the students themselves who benefit from graduating, however. We are all better off when more people graduate because a healthy economy depends on it. Educated workers will only be more in demand in the future. Salaries will continue to rise for these workers, while salaries will fall for those without college degrees. As Gates warns, this will increase poverty and inequality.

Reading 2 “The Premature Burial” By Edgar Allan Peo

“The Premature Burial” By Edgar Allan Peo

[excerpted and adapted]

To be buried while still alive is certainly the worst fate that a human being can imagine. Yet it has happened. The boundary between life and death is shadowy and vague. Over the years, there have been many strange stories of the premature burials of living people. In each case, the person appeared to be dead, but it was discovered, often tragically too late, that the person was in fact still alive.

One remarkable story recently occurred in the city of Baltimore. The wife of a respected lawyer contracted a sudden, mysterious disease. No doctor could offer a diagnosis, and after intense suffering, she died. She looked like any other corpse and had no pulse, so she was pronounced dead. The funeral was held quickly to prevent the body from decaying. After the funeral, the woman’s coffin was placed in her family tomb, where it lay undisturbed for three years. Then there was another death in the family. When the iron doors of the tomb were opened, the woman’s skeleton fell into her shocked husband’s arms!

After close inspection, her family came to the horrifying conclusion that she had not really been dead at the time of burial. They believed that she had woken up shortly after her burial and had tried to escape, which caused her coffin to fall and break open. They found a large piece of the coffin’s wood, and it seemed that she had used this to try to break down the iron door. However, she had failed and had died, trapped inside.

Another strange example of the burial of a living person happened in France in 1810. In this case, the victim was a beautiful young girl named Victorine, who came from a very rich family. Among her many suitors was Julien Bossuet, a poor but talented journalist whom Victorine liked. However, due to his poverty, she chose to marry a wealthy banker instead. After marriage, her new husband treated her terribly, and she lived a miserable life with him. Just a few years after their wedding, Victorine died and was buried in a simple grave in the village where she was born.

Julien was very sad when he heard about her death and went to visit her grave. He arrived at the grave at midnight, where he dug the coffin from the earth and embraced his old love. As he did so, he saw her open her eyes and was overjoyed to discover she was not dead at all. Victorine had been so ill and unhappy that she could not move, but the kind touch of her lover awakened her. Julien carried her to his home, where he secretly nursed her back to health. So that she would not have to return to her husband, the young couple fled the country together.

SUPPLEMENTAL READING

Dead or Alive?

Edgar Allan Poe's short story "The Premature Burial" centers on a man's intense fear of being buried alive. During the 1800s, Poe wrote four stories that dealt with this theme, which was a common fear for people—especially in rural areas. Occasionally, people who were not really dead were put into coffins and buried because some doctors, particularly in the countryside, were not very good at identifying death. This was because, in the 1800s, medical technology was very primitive. Sometimes all doctors had to go by were their own eyes. They had no special tools or equipment. If someone looked dead, then they must be dead.

Many doctors did not know about a medical condition called catalepsy, in which people fall into a deep, deep sleep with slow breathing and a quiet heartbeat. This condition can sometimes last for days, and during this time, the person appears dead. In Poe's time, if the doctor was not skillful, the person might quickly be put into a coffin and buried.

But if a person were buried alive, how would others know? Occasionally, people walking through a cemetery would hear screams coming up from someone buried below. Some people thought that these were the sounds of ghosts or monsters, but other people knew that these were the screams of living people and quickly ran to dig up the grave and rescue the person. Sometimes graves had to be dug up and moved. At those times, people would open the coffin and check whether there were scratch marks on the inside of the lid—a clear sign that the person was alive when he or she was buried, woke up, and tried to get out!

UNIT 8 Space & Exploration

Reading 1 Spin-Offs From Space

Spin-Offs From Space

There are people who think that countries are wasting their money when they invest in space programs. They say that the money should be used to improve the quality of life on Earth. What they might not know is that missions into outer space have helped improve the quality of life here on Earth. Technology, materials, and devices that were first developed for use in space are now helping people every day. These items are called “spin-offs.”

NASA’s labs have produced various technologies that we now find around us every day. The lightweight metals used in modern tennis rackets are one example. NASA also developed metals that have a “memory.” When these metals are bent, they return to their original shape. We use them in eyeglass frames to make them flexible and sturdy. Eyeglasses also utilize another NASA development: scratch-resistant lenses. And the shock-absorbing materials originally developed for moon boots are now used in all kinds of athletic shoes.

Space research has also made progress in health and safety. A thermometer pill was designed to be swallowed by astronauts in order to monitor their body temperature during missions. Now it helps serious athletes prevent dangerous heat-related illnesses while training or competing. NASA produced advanced robotic arms for repairing the International Space Station, and similar robots are helping doctors to make surgery simpler and safer.

Other spin-offs have ecological benefits. Some NASA innovations help reduce energy use. In the 1990s, NASA was trying to build uncrewed, solar-powered aircraft that could fly for days. These machines required efficient solar panels that did not weigh too much. Engineers on the project developed the single-crystal silicon solar cell, which provides up to fifty percent more energy than other solar cells. These efficient cells are now widely used for clean power in homes and businesses. In addition, homeowners can save energy by using thin insulation that was first developed for use in space. Thin insulation is more efficient and easier to install than traditional insulation.

Other technology developed for space can directly make our environment cleaner. Water is precious in space, so researchers have developed a process for getting drinkable water from astronauts’ breath, sweat, and urine. People in many developing countries struggle to find safe drinking water. Now they can make use of NASA’s process to clean up their local water sources. Another spinoff, the Petroleum Remediation Product (PRP), has changed the way we clean up oil spills. PRP is made up of tiny balls of beeswax that draw in the oil and trap it. Then bacteria feed on the oil until it is no longer dangerous to living things.

These are only a few of the 30,000 space innovations that benefit our lives on Earth. There will always be people who oppose space exploration, but if they say it wastes money, remind them that life on this planet is better in many ways due to space research.

SUPPLEMENTAL READING

Science Fiction or Science Fact?

Decades before humans traveled in space or walked on the moon, science-fiction writers were selling stories about such events. These authors invented incredible devices in their tales. Some of these very science-fiction devices are used by people today.

Maybe the best example is one from Howard Fast's 1959 story, "The Martian Shop." In the story, Fast describes a device with speech-recognition capabilities. These days, speech recognition is widely used on smartphones. Fast also describes a tiny music box that can remember vast amounts of music—just like today's mobile devices.

In 1958, author Isaac Asimov wrote about a calculator small enough to hold in one's hand. Remember that in those days, there were no home computers, no digital cameras, and not even calculators. About twenty years after Asimov wrote the story, calculators became available.

Robert A. Heinlein was both a science-fiction author and inventor. He worked with the US Navy to develop a pressure suit for underwater use. This technology led almost directly to the development of space suits. But twenty-one years before anyone walked on the moon, Heinlein published a story about this very technology!

The next time you see some amazing new invention in a science fiction movie, imagine using it in real life. Only time will tell if it is indeed science fiction or science fact.

Reading 2 A New Space Race

A New Space Race

In the 1950s and 1960s, the United States and the USSR were engaged in a race to dominate space exploration. The USSR launched the first man-made satellite, Sputnik, into orbit around the Earth in 1957. In 1961, it also became the first country to put a man in space. Then, in 1969, the United States put the first man on the moon. Feelings of nationalism thus turned space into a political arena, not just a scientific one. In the 21st century, however, a new space race has emerged: the one for commercial space travel.

For decades, the only people to fly into space were government astronauts. But in April 2001, an American engineer and businessman named Dennis Tito became the first space tourist. He paid the Russian Federal Space Agency a huge amount of money—$20 million, reportedly—for a rocket ride to the International Space Station (ISS). (NASA did not approve.) Three years later, Mike Melvill became the first astronaut to pilot a spacecraft for a private company. He took SpaceShipOne to the "edge of space"—one hundred kilometers above the Earth's surface.

The company that made SpaceShipOne was one of twenty-six firms from various countries competing to win the Ansari X-Prize. This was a $10 million award established by donors in order to motivate private companies to develop spaceships. The assignment: become the first commercial group to send three people into space twice within two weeks, in the same vehicle. After its first flight in July 2004, SpaceShipOne made two more trips into space in early October 2004, thereby winning the prize.

The Ansari X-Prize was inspired by the beginnings of aviation history. In the early days, private persons and companies, not governments, pioneered air travel, pushing the boundaries of what was possible at that time. Take, for example, the pilot Charles Lindbergh. In 1927, he won the $25,000 Orteig Prize for making the first solo flight across the Atlantic Ocean. Since those first thrilling flights, hopes have been high for private space travel to replicate the success of private air travel. Numerous entrepreneurs are competing for the top spot in the commercial sphere. Elon Musk's company, SpaceX, built a multi-purpose craft called the Dragon, and in 2012 it became the first commercial space vehicle to dock with the ISS. But it only carried equipment, not people. So far, only a handful of companies, including Richard Branson's Virgin Galactic, offer to take paying customers on flights. And they can only do so with the help of Russia's space agency. SpaceX wants to change that. It has announced plans for four private missions on its own spacecraft to take place over the next several years.

Today, space tourism is still only an option for the very rich. A Virgin Galactic ticket, for example, costs $250,000. But the price may come down as technology improves. One thing is for sure: we are witnessing a whole new space race.

SUPPLEMENTAL READING

Life on Mars?

Mars is our closest neighbor in the solar system and has been studied by humans for hundreds of years. It was named after the Roman god of war because its red color reminded ancient people of blood.

The first spacecraft to visit Mars, *Mariner 4*, orbited the planet in 1965. Several other space missions followed, including *Mars 2*, the first spacecraft to actually land on Mars. Over the years, missions to Mars have continued, with one of the most interesting being the Phoenix lander, which landed on the northern plains of the planet in 2008 to search for traces of water. This mission was particularly important because finding water increases the possibility of finding evidence of life. Even though there is no known life on Mars now, it would be amazing to discover that there was life in the past.

Phoenix had special equipment that was able to dig into the hard clay soil of Mars, analyze a sample of the soil, and send the results back to Earth. Fortunately, it did not have to look far to find a soil sample that contained water—directly below Phoenix was a chunk of ice! Scientists concluded that it was very similar to Earth ice. In 2012, *Curiosity* landed on Mars and provided further hope that the planet might be suitable for life. It found nitrogen, oxygen, carbon, and other substances that are considered “building blocks” of living things. The search for life, past or present, goes on. A craft called Perseverance landed on the red planet in 2021 with the goal of building on previous discoveries. Martian life may be nothing more than microbes. But the discovery of any form of life there would be very exciting. It would mean we had Martian “cousins”—even if they were just tiny bacteria.

UNIT 9 Sports & Fitness

Reading 1 Yoga and Pilates

Yoga and Pilates

Fitness trends can change every few years. In the 1970s, bodybuilding was very popular. People thought that having large muscles was a sign of good physical health; they would spend hours in the gym lifting heavy weights to develop their physiques. Then, in the 1980s, the trend turned to jogging and running. Big, powerful bodies were not as fashionable, and the trend turned to lean, trim physiques. The 1990s saw the rise of cross-training—doing several different types of exercise that employ different muscle groups in an attempt to work the whole body. This "whole-body" workout concept remains popular today. However, many people now want a slower, lower-intensity workout that focuses on strength, flexibility, and balance. Two popular types of exercise that fit this description are yoga and Pilates.

"Yoga" is a Sanskrit word that roughly means "to control" or "to unite." There are many types of yoga, but all combine breathing exercises, concentration, stretching, and muscle control. Though yoga is currently a popular fitness trend around the world, it has been practiced in India for over 3,000 years.

Pilates was developed in Germany in the 1920s by a man named Joseph Pilates. Largely inspired by yoga, it focuses on building a strong "core." The core is the part of the body that includes the abdomen, lower back, and hips. As with yoga, a Pilates workout involves deep concentration and controlled breathing. According to its practitioners, the goal is to create a fusion of mind and body so that without thinking about it, we can move with efficiency, grace, and balance.

Why are exercises like Pilates and yoga so popular these days? Maybe because they combine physical fitness with meditation to maximize the fitness experience. According to Cedric X. Bryant, Chief Science Officer of the American Council on Exercise, "Consumers want to engage in workouts that provide multiple benefits, due to time and economic limitations." This means that people want the most results for their time and money. With yoga and Pilates, people can develop their bodies and minds simultaneously.

Yoga and Pilates are fitness fads now, and taking classes with a specialized instructor can be beyond the means of many people. Fortunately, such classes are not absolutely necessary. It's possible to do both types of exercise at home with no special equipment other than a mat. And novices can find plenty of free instructional videos online. However, fitness experts point out that Pilates and many types of yoga are not enough by themselves to achieve optimal fitness. This is because they do not sufficiently work the heart and lungs. Experts, therefore, recommend combining a Pilates or yoga workout with swimming, running, or another aerobic exercise.

SUPPLEMENTAL READING

The Roots of Pilates

Pilates is a popular form of exercise that many movie stars and celebrities claim helps them keep fit and slim. However, Pilates is not a new way of exercising. It was invented by Joseph H. Pilates, the son of a German gymnast, in the early 20th century.

Joseph Pilates was a weak and sickly child, so he devoted his whole life to improving his physical strength. He studied all kinds of exercise, including yoga and bodybuilding, and concluded that bad health was caused by bad posture, poor breathing techniques, and lazy modern lifestyles. He devised a series of exercises and training techniques to help people overcome these problems and improve their physical and mental health.

In 1912, Pilates moved to England, where he worked as a boxer and a self-defense trainer. There, he started to develop the exercises that would later become known as Pilates. In 1925, he moved to the United States. He and his wife opened an exercise studio and taught his methods to students.

Though Joseph Pilates was considered a health guru, he was not so clean-living himself. He liked smoking cigars and drinking whisky. Pilates died in 1967 of emphysema (caused by too much smoking) at the age of eighty-seven.

While Pilates is very trendy these days, there are criticisms. Some people say that Pilates puts too much pressure on the spine and can actually lead to bone weakness and cause the spine to bend over into a hump. However, even these criticisms are not enough to stop the continuing popularity of Pilates.

Reading 2 The Future of Sports

The Future of Sports

Not all sports need a ball. Some are played with a controller. Competition in games like *Dota 2*, *Call of Duty*, and *League of Legends* have turned fan following into a fast-growing industry called esports. Esports have many of the characteristics of traditional sports: passionate fans, fierce competition, and star players. Large esports events also bring in large investments. Companies such as the Monster Beverage Corporation and celebrities such as Michael Jordan and Drake are all proud sponsors of esports teams. Organizers now hope to raise the status of esports to match that of traditional sports. They want players to be recognized as athletes, and they want to compete at global events such as the Olympics. Yet, despite the growing success of the industry, there is still controversy over whether or not esports can be considered genuine sports. Critics believe that esports, while competitive, are more similar to games such as chess or checkers than sports like football and tennis—requiring brains but not athleticism.

If sports are classified only by the amount of physical effort they require, then these critics may have a good argument. But let's not be so quick to judge. Esports players might not have the strongest throwing arms or fastest legs. But they do have certain athletic abilities. Video games require strong hand-eye coordination and motor skills. Studies have found that esports players can achieve up to 400 movements on a keyboard and mouse per minute. Also, esports players' levels of cortisol (the hormone linked to stress) can rise as high as a Formula 1 driver's. And their heart rates can reach speeds of 160 to 180 beats per minute—a rate equivalent to that of someone running at a fast pace.

Esports players need more than just quick reflexes. They also have to have strategic minds, teamwork and communication skills, and the ability to work under pressure. This is why many esports players and teams train like professional athletes and maintain strict training regimes. Players will often live with other players or teammates and practice at least eight hours a day. They also have coaches who help by reviewing their past performances, analyzing their competitors' strategies, and coming up with counterstrategies to use in tournaments. Some teams' training sessions even simulate esports events. Loud music, cheering fans, and blinding lights are used to distract players and give them practice under pressure.

Esports are already a huge hit. Millions of people tune in to platforms like Twitch and YouTube Gaming every day to watch their favorite players. Tournaments attract studio audiences in the thousands and online viewers in the millions. Although there are many who believe esports are not true sports, their preference for physical excellence shouldn't prevent esports players from gaining the credit they deserve as professional athletes.

SUPPLEMENTAL READING

Racing to Save the Planet

Motorsports are exciting for many, but this excitement could be coming at a cost. Many people are starting to question motorsports such as Formula 1, NASCAR, and MotoGP because of their impact on the environment. It's estimated that over 1.8 million kilograms of carbon dioxide are released per year from NASCAR races alone. As people everywhere wake up to the reality of climate change, many are wondering whether motorsports can continue to be justified.

But if it's time to turn off the engines, where will fans turn for entertainment?

For car and bike fans, there's an alternative that's far less of a threat to the environment: video games. Racing games are becoming increasingly realistic, making them a practical alternative to real racing. The potential of esports racing was highlighted in 2020 when the COVID-19 pandemic caused the delay or cancellation of several motorsports events. Online racing games experienced a notable increase in viewers as a result.

Of course, there are many reasons why fans will continue to prefer real racing to the digital kind. In particular, the sense of danger in real racing doesn't exist in video games. Drivers' decision-making and abilities vary greatly when you factor in all the conditions they face on real racetracks. People also have to accept that the sound and feel of watching or being in a real race will likely never be fully reproduced in a digital format. But surely, when we think about the health of our planet, there must be room for compromise.

UNIT 10 People & Opinions

Reading 1 The Architecture of Wright

The architecture of Wright

We can all name dozens of famous singers, actors, and athletes, but how many famous architects can you think of? If you're like the majority of people, probably not many. In fact, if you ask one hundred people, "Who is the most famous architect?" they might all give the same answer—Frank Lloyd Wright. Frank Lloyd Wright once said, "I intend to be the greatest architect of all time." So far, maybe he is.

Some architects design a building by thinking about what they want the building to look like. But Wright's stance was that the design should fit the purpose of the building. In this belief, he was influenced by his mentor, Louis Sullivan, who liked to say that "form follows function." Wright took the idea further and invented the philosophy of organic architecture, meaning that a building's design should come from its natural surroundings. He rejected using standard ideas of design and believed that the design of each building must be contemplated individually.

Wright also used natural building materials. He once said, "Buildings, too, are children of Earth and Sun," so he chose materials with natural colors and textures. The result was the integration of his buildings with their surroundings.

Wright's masterpiece is a house called Fallingwater, built on a waterfall near Bear Run, Pennsylvania. In accordance with his organic philosophy of architecture, Wright planned this house to be in harmony with its environment. For example, the structure is built from sandstone found in the nearby area. "Study nature; love nature; stay close to nature. It will never fail you," Wright once said. Wright was very proud of Fallingwater. He expressed its unity with nature by saying that rocks, forest, and water are combined so perfectly with his building that "You listen not to any noise whatsoever although the music of the stream is there. But you listen to Fallingwater the way you listen to the quiet of the country." In other words, the building seems to merge with the surrounding environment.

Wright designed around 1,000 buildings in his life, though fewer than 500 were built. Among his best-known works, the Guggenheim Museum in New York City is notable. The principle of "form follows function" is easy to see in the Guggenheim's round structure. Visitors first take an elevator to the top of the building, and then they view the art without interruption as they descend the spiral ramp.

Construction of the Guggenheim Museum was delayed several times. Though Wright accepted the job in 1943, the building was not finished until October 1959. Unfortunately, Wright never got to see the completed project. In April 1959, he had surgery and died a few days later.

SUPPLEMENTAL READING

The Legacy of Frank Lloyd Wright

Frank Lloyd Wright's influence on his country's architecture will probably last forever. American homes have been strongly influenced by Wright. He believed that American homes should represent American lifestyles. Some say that Wright created a unique American style of architecture in which native materials were used in buildings.

In order to keep his new style of architecture alive, Wright passed it on to his students. He worked and taught at his home in Wisconsin, called Taliesin. The students studied, worked, and lived in shelters they made from native materials. They also took care of crops in order to become "closer" to the land. If students were familiar with the land, Wright believed, they would be better able to choose proper materials when designing.

In 1937, Wright opened a second school called Taliesin West in Arizona. Arizona was a warm place to escape to from cold Wisconsin. Eventually, the school permanently moved to Arizona.

In 2007, Taliesin West celebrated its eightieth birthday. It is now the main campus of the Frank Lloyd Wright School of Architecture. Today, people continue to learn about architecture by visiting the school and studying the buildings left there by Wright and his students.

Reading 2 Streaming Services: Helpful or Harmful?

Streaming Services: Helpful or Harmful?

Video-streaming services such as Netflix, Amazon Prime Video, and YouTube have made finding things to watch easier than ever before. Most people praise these services for their convenience. However, there are consequences to streaming services that need to be taken into account. For instance, the reliability of the information on shows is starting to decrease as different companies apply different standards to their content. Streaming services are also problematic because their curation systems often keep people from experiencing new genres and ideas. And worst of all, streaming services can even facilitate the decline of social relationships.

There are plenty of great shows on streaming platforms. Unfortunately, though, there are also a lot of bad ones. And by bad, I mean harmful. These shows can incite violence, promote bad science, or spread biased journalism. To illustrate, a show that affirms pseudoscientific practices like energy healing and the use of medical mediums (people who claim they speak with spirits for medical advice) as alternatives to science-based medicine can cause lots of unintentional harm. Granted, these shows aren't a recent phenomenon. They existed on traditional broadcast television as well. But the growth in the frequency and availability of this type of content is rising because of streaming services.

Streaming services don't just host shows. They also offer recommendations based on your viewing history. This can be very convenient but also very limiting. Platforms that utilize targeted advertising and curation tend to direct users toward content focused on a very narrow set of topics and viewpoints. For some, this goes unnoticed or is seen as a minor inconvenience. But this type of targeting can become harmful when it leads a person down a path towards fringe groups such as anti-vaxxers (people opposed to vaccinations) and then continues to provide content that reinforces these radical ideas.

Although some criticize traditional broadcast television for its inconvenience, it does provide people with common ground. People bond by watching television together and talking about their favorite shows. Broadcast television gives families a reason to gather together and allows friends and coworkers to connect over shared interests. Sadly, though, streaming services have contributed to the decline in these kinds of meaningful interactions. Since streamed shows are available on demand, there's no reason to wait to watch them with friends or family. There's also no reason to go out of your way to see the first airing or to catch a rerun. Smart devices allow every family member to watch whatever they want, whenever they want. While convenient in some cases, this works to divide a family's tastes and interests further.

At a glance, video-streaming services are incredible. They're so convenient. They revitalize canceled shows and keep us from having to wait for reruns. But every rose has its thorn. The time has come to think and act responsibly about what we view and how we view it.

SUPPLEMENTAL READING

From Courtroom to Living Room

True-crime documentaries can be a fascinating look into a country's justice system. They can also be a useful tool to bring the public's attention to injustices. New evidence revealed in several documentaries has even led to innocent people being released from prison. The Thin Blue Line, released in 1988, focused on one such case. It told the story of Randall Dale Adams, a man imprisoned for the murder of a police officer in Texas. The documentary called the

handling of Adams's case into question. A year after the documentary's release, Adams was granted a new trial, and his charges were dropped. Thanks to the growth of video-streaming services, more true-crime documentaries are being produced than ever before. Net ix has created several popular true-crime shows, including Making a Murderer, which details the trial and conviction of Steven Avery. After watching the first season of the show, which questioned the evidence against Avery, a viewer named Kathleen Zellner decided to help Avery change the court's decision. Zellner is a lawyer, and her e- orts to get Avery released became the focus of the documentary's second season.

Helping to build public awareness of injustices is definitely a benefit of having more true-crime shows. But are there any disadvantages? Perhaps there are. As streaming platforms compete to produce fresh content and gain more viewers, the quality of research into such criminal cases will likely begin to fall. As a result, courts might find themselves flooded with attempts to free people who are, in fact, guilty.

UNIT 11 Cross-Cultural Viewpoints

Reading 1 Approaches to Education

Approaches to Education

Parents all over the world seek to give their children the best education possible so they can lead happy and successful lives. But what is the most effective way to teach the next generation?

Many people believe Singapore provides a clear model for success. The city-state has achieved outstanding academic results by implementing a rigorous education system. Schools value hard work and diligence. And those that achieve top grades in national examinations are rewarded with places at elite universities and high-paying jobs.

Singaporean classrooms are known for being both strict and competitive. Students are typically very well-behaved and listen carefully to their teachers. Teachers act mainly as lecturers, while students are expected to take notes and answer questions correctly when called on. Homework and additional study outside of the classroom are also a central part of the education system. According to recent research, Singaporean high-school students spend an average of ten hours per week on homework. Most also spend time at after-school academies or with private tutors.

The success of the Singaporean model would seem to confirm many parents' belief that hard work, repetition, and memorization are the keys to educational success. However, Finland illustrates how a very different approach can also have exceptional results. As with Singapore, the European nation features at the top of international rankings for educational achievement.

The school experience in Finland is very different from that in Singapore. The school day is much shorter, and students are assigned little homework. Classes are usually smaller, and there is far more group- and project-based learning. The result is that classrooms tend to feel more relaxed and informal than in Singapore. Teachers are expected to be mentors rather than instructors. And they tend to stay with a specific class throughout that class's school career. This allows them to get to know each student's strengths and weaknesses and guide them accordingly. Another important difference between the two systems is the emphasis on competition. Finnish students are judged on their achievement of personal goals rather than their scores on national tests.

Despite achieving consistently high rankings, both countries have found some aspects of their education systems criticized in recent years. Constant competition and long hours can be very hard on young Singaporeans, who often suffer from stress and fatigue. As a result, the Singaporean government is now encouraging teachers to create more student-focused classrooms with less emphasis on study for examinations. Conversely, some people in Finland now worry that the government has given teachers and students too much independence. Without regular testing, there are concerns that some schools may not be performing as well as others. This has led some to suggest that the government should be given more direct control over the school curriculum.

Whether or not these changes further improve these education systems is yet to be seen. What is clear, however, is that school systems around the world will continue to learn a lot from this pair of high achievers.

SUPPLEMENTAL READING

Forest Schools

Around the world, students are expected to spend most of the day sitting, making notes, and completing assignments. However, research continues to show that the stress of study can have negative effects on a child's health and development. As a result, many researchers are now looking for ways to give young people more freedom to explore and enjoy the world away from their desks.

One such approach is known as “forest school.” Started in Scandinavia in the 1950s, this type of school was first aimed at very young learners. Kindergarten students were encouraged to play freely in nature under their teachers’ supervision. Studies found that these learners became more confident and independent than regular kindergarten students. They were more willing to share—say, a pretty flower or an interesting bug—with other children. They were also more caring when others got upset.

And it is not only very young learners who can benefit from more time spent outdoors. Many Scandinavian elementary, middle, and high schools now encourage teachers to hold classes outside at least one day a week. These teachers continue to follow the curriculum, but they use the natural world to teach math, science, and even languages. For example, students might calculate the volume of a tree or write poetry about nature.

Many countries now have forest-school programs for very young learners. But there is still concern that this approach could harm older children’s academic performance. Nevertheless, evidence that learning outdoors can reduce stress and improve the well-being of all age groups continues to grow. This means that we may see more schools of this type opening up around the world very soon.

Reading 2 Responding to Declining Populations

Responding to Declining Populations

A UN projection suggests that the global population will peak at 10.9 billion by the year 2100 and then begin dropping. This growth, however, will not be universal among nations. The populations of many countries are already falling or are expected to fall in the next several decades. This is mainly due to decreasing birth rates. Some researchers connect the drop in fertility to unintended consequences of improvements in women’s education and access to contraception. Increased living costs and less societal pressure to have children are also contributing factors. Many authorities are now taking steps to reverse the worrying trend of decreasing births.

Germany is one example. Its population dropped in 2020 for the first time in ten years. In 2021, it averaged only 1.6 offspring per woman—far below the 2.1 births required to maintain a steady population. Germany is already one of the world’s oldest nations, with people over sixty-five making up twenty-one percent of residents. The number of German taxpayers is decreasing just as the number of those who depend on the government in retirement is growing. As a result, the country has begun allocating more money to childcare and paid time off for parents in order to encourage families to have more children.

Hungary has gone even further. In 2011, it had the lowest birth rate in the EU, at only 1.2 births per woman. Several years later, the government decided to compensate couples with large families. Women with four or more offspring do not have to pay income taxes ever again. Married couples with multiple children can also now have their homes and cars partially paid for by the state. This effort seems to be working. Hungary’s birth rate has been slowly increasing since those policies were put in place.

Another country whose government is concerned over falling fertility is Iran. Its population is expected to start declining in about twenty years. Because of poverty caused by a lack of international trade, Iran does not have enough wealth to provide direct help the way Germany and Hungary can. Instead, vasectomies7 are no longer provided by state hospitals. They are only available for men who can prove the procedure’s medical necessity.

Of course, some people have no objection to falling birth rates. Studies have identified potential8 benefits, such as more affordable9 homes, cleaner air, and more green spaces. The British economist Adair Turner argues that a smaller working population could mean less spending on construction and less pressure on the environment.

Yet most nations with declining birth rates continue to encourage having more children. Many supporters of these policies believe that a decrease in population is a loss to us all, and not just economically. The more people, the better, they argue. People produce new ideas, art, and inventions—everything that makes life interesting. As a writer for the Irish Times put it, “human innovation and ingenuity bless the world far more than human appetites damage it.”

SUPPLEMENTAL READING

Boosting Populations with Immigration

Developed nations have long used immigration to make up for a lack of workers. For example, thirteen percent of staff in the UK's National Health Service were born outside of the country. The COVID-19 pandemic showed that such workers often work on the very front line of the healthcare system.

Although also highly developed, Taiwan has always had a low rate of immigration, with strict laws governing how many people can move to the country. As a result, the streets of Taiwanese cities such as Taipei are not particularly diverse. However, because of its low fertility rate (1.07 births per woman, one of the lowest in the world), Taiwan's population is both falling and rapidly aging. One study found that by 2065, more than half of Taiwanese people will be sixty-five or older. For years the government has attempted to encourage its citizens to have more children, without much success.

Some believe that immigration could be an important part of the solution to this problem. Over the past ten years, Taiwan has made it easier for students and workers to enter the country for long-term stays. In 2020, there were nearly 800,000 foreign residents in Taiwan, an all-time high.

This approach to boosting the population seems to be succeeding. But while immigrants to Taiwan appear to be fairly welcome, they are still at risk of unfair treatment. Many arrive from developing countries. Like elsewhere, they might be badly paid, work dangerous jobs, and live in poor accommodations. Countries undoubtedly benefit from immigration, but they also need to ensure those arriving are treated fairly.

UNIT 12 Business & Economics

Reading 1 The Gig Economy

The Gig Economy

The emergence of the gig economy has changed employment. A gig economy comes about when companies tend to hire freelancers, also known as "gig workers," rather than full-time or permanent employees. Jobs are flexible and temporary. Gig workers taking these jobs connect directly with clients or customers, usually through an online platform.

There are estimates that as many as thirty percent of American workers are already involved in gig work. There are many benefits to this kind of economy, both for workers and for the companies involved. Gig workers can independently choose what jobs they want to take. This is unlike permanent, full-time employees, who must accept whatever tasks their employers give them. These freelancers can take on work that fits their schedules. They can also more readily make money by picking up extra projects.

This has benefits for companies, too. Companies that cannot afford to hire permanent employees can take on freelancers for short-term projects. Additionally, companies are not charged payroll taxes on the money they pay to freelancers. More projects and less overhead mean these businesses make more money. Both gig workers and the companies that employ them have much more flexibility when compared with the traditional economy. Thus, one result of a gig economy is often cheaper and more efficient services. Think of Uber or Airbnb as examples.

However, the gig economy has been viewed more critically in recent years, as certain negatives of the system have become apparent. Given the greater freedom to move between jobs, workers now tend to feel less connection to their workplace and less enthusiasm for the work they do. As a result, businesses are finding it ever harder to hire and keep permanent, full-time staff. Some companies even say they have seen a drop in productivity—that is, neither full-time employees nor gig workers work as hard as fully permanent workforces did in the past.

Nevertheless, the reduction in costs made possible by using gig workers likely outweighs these negatives. More evident, however, are the downsides experienced by gig workers themselves. Legally speaking, gig workers are considered self-employed rather than employed. This means that they do not qualify for certain benefits. As a result, companies do not have to provide these workers with health insurance, pensions, or sick leave. Unfortunately, being self-employed also affects government benefits. Gig workers cannot receive unemployment insurance, as the government does not recognize them as having been employed. This became a particular issue during the COVID-19 pandemic, when large numbers of gig workers found that they did not qualify for government support.

There has been a growing push to provide gig workers with more protection and benefits. However, changes are slow in coming and are usually challenged by companies that use these workers. Like it or not, though, the gig economy is probably here to stay. In the end, it exists because businesses, workers, and customers all have something to gain.

SUPPLEMENTAL READING

Uber and Its "Employees"

Uber Technologies, Inc. is well known for being the "face" of the gig economy. First established in 2009, Uber has grown to become a global company, making billions of dollars yearly. And the way it did this was through the gig economy. You might think Uber provides transportation services, but this is not entirely the case. Instead, what Uber mainly provides is a connection between independent drivers and riders who want to hire them. Uber sets the fees and terms and then gets a share of each fare.

It is not surprising, then, that Uber is a big supporter of maintaining the gig economy. It is also one of the major companies resisting changes to the working conditions of gig workers. Drivers have gone to court, and legal changes

have been proposed by governments. Nevertheless, both Uber and the US Department of Labor maintain that the drivers are “independent contractors” and thus do not qualify for benefits as full employees. Gig workers, for Uber and other large companies, continue to benefit from the flexibility such jobs can offer. But they still risk financial hardship when the economy is bad.

However, a recent court decision in the UK could change things. The UK Supreme Court has ruled that Uber drivers are employees, not independent contractors. Uber will have to provide better payment or benefits to its UK workers. And no doubt, Uber drivers in other countries are hoping this will inspire changes for them as well.

Reading 2 Evolving Wallets

Evolving Wallets

“Cash is king” was an expression one used to hear quite often. It was meant to suggest that, for customers and retailers alike, paper money was the most effective, direct, and powerful means of payment. Over the last twenty years, however, this old axiom might well have been adapted: the card became king. In recent years, contactless card payment has made using a card in-store quicker, more secure, and more hygienic. But physical cards remain easy to lose and easy to steal. And, as lifestyles and consumer habits continue to change, our wallets are changing, too.

A major factor driving the payment revolution is the growth of e-commerce. If this was a large market pre-COVID-19, it is now vast. Recent estimations by Statista suggest that online retail may be worth more than $5 trillion by the end of 2021. In the past, banks and stores struggled to keep pace with online retail. Today, they are left with little choice. They are working with tech companies to improve and simplify methods of payment to keep up with demand.

Mobile wallets like ApplePay and GooglePay are perhaps the most widely adopted newer means of payment. These effectively gather all of a customer’s bank cards into one smartphone, allowing them to authorize payments at the click of a fingerprint-reading button. Other forms of biometric authentication, like face and voice recognition, are also improving the security of mobile wallets. The number of smartphone owners increased from 2.5 billion people in 2016 to 3.8 billion in 2021 and is set to continue growing. This makes mobile wallets an increasingly convenient and popular choice.

Stores are also trying to ensure a more convenient experience for customers. Mobile Point of Sale (POS) technology gives customers the ability to pay anywhere within a store or even at a market stall. By carrying a small wireless device, staff effectively bring the register to the customer. This is a real advantage because the convenience of e-commerce has left many customers too impatient to wait in slow-moving lines.

Avoiding close contact while shopping is also going to be a priority in a world adjusting to COVID-19. That’s why some stores are making use of biometric authentication themselves. Customers at Amazon Go stores in the US need not even reach for their smartphones. They pay simply by scanning their hands. Amazon is clearly ahead of the times, but it plans to bring its technology to other stores soon.

Not everyone is convinced, however. Some shoppers may be resistant to handing over personal information like hand-prints to large corporations. They worry about how this data could be used. Also, for some older people, or those without the money to purchase new technology, the pace of change may be too fast. The form money takes will almost certainly continue evolving. Even those who feel up-to-date may soon find themselves behind the times. Wallets, whether leather or mobile, may be living on borrowed time.

SUPPLEMENTAL READING

The Developing Digital Economy

The COVID-19 pandemic sank the world into a recession which caused the global economy to shrink by 4.3 percent in

the first year alone. However, with stores closed and people mostly staying home, some e-commerce businesses saw their profits and stock prices rise sharply. Before the pandemic, Amazon, for example, was valued at $920 billion. One year later, it was worth $1.49 trillion.

Some other e-commerce businesses also made more money due to the virus outbreak. Mercado Libre provides similar services to Amazon in eighteen South American countries. Its business doubled during the pandemic. However, very few companies gained financially from the virus, and those that did were mostly based in the US or China.

Obviously, the benefits of the digital economy are not open to everyone. Already at an economic disadvantage, many developing nations run the risk of being left further behind. In those countries, face-to-face deals often remain the best, most secure way to shop, and cash is still the primary means of payment. Across Africa, for example, it is estimated that only twenty-two percent of people have access to the internet.

Dr. Amani Abou-Zeid is responsible for increasing access to the digital economy in the African Union. She leads the African Digital Transformation Strategy (ADTS). By installing a vast network of broadband cables across the continent, the ADTS plans to bring 300 million more African citizens online by 2025. Abou-Zeid hopes that African and international e-commerce businesses will pay for most of these developments. In her view, it is these companies that will benefit most in the long run. This is something Amazon's success would seem to confirm.