

College Guild
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INVENTIONS

Unit 4 of 5

Modern Concerns

In Unit 3 we touched on some of the issues created by modern technology, like cyberbullying. In this Unit, we'll take a close look at some concerns people have about new inventions.

Everything is Dangerous

If you think hard enough, you can come up with reasons why any invention is dangerous. Bicycles? You could fall off and hurt yourself. A good book? Paper cuts. By existing in this world, we are always taking risks. It's a part of life. However, sometimes we invent things that cause a significant amount of harm, and we have to wonder if we should have made them at all or if there's anything we can do to protect ourselves from our own creations.

1. **Choose three inventions and come up with a serious danger for each invention. For example, a kitchen knife could cut someone's finger.**
2. **Choose three more inventions and come up with a far-fetched danger for each invention. For example, a balloon could cause a loud popping sound, causing someone to jump and hit their head on a low ceiling.**

Self-Driving Cars

One common accident is car crashes. Safety features have been invented to make crashing less damaging to cars and their passengers. However, the latest innovation in car technology is causing more accidents. Self-driving cars are just what they sound like—cars that drive themselves. Companies like Google, Tesla and Uber have been testing them on streets, and there have been a few accidents as of 2018, some of which killed people. The hope is that one day, self-driving cars will be the norm and there will never be any crashes because there won't be any humans behind the wheel and the tech will be advanced enough. This would eliminate the accidents caused by drivers operating under the influence or while using their phones. Still, we don't know how many more people will die before we get to this point.

3. **Do you think it is ethical to continue testing self-driving cars knowing that there may be more deaths but that this technology might prevent deaths later? Explain your answer.**
4. **Would you rather have a self-driving car or a flying car (that worked perfectly)? Explain your answer.**



Health

There are also issues in health where the solution to a problem causes more problems. For example, most prescription drugs have unpleasant or even harmful side effects. If you've ever seen a commercial for a prescription drug, you've sat through a long list of potential side effects read aloud for legal reasons. It's comical because the list is so scary, but they'll play scenes of happy, healthy people to distract you.

There are times when the side effects are worth it and times when they aren't. Some drugs make people feel sick or tired all the time.

Chemotherapy is a treatment for cancer that kills cancerous cells in the body, but that also damages other, healthy cells. It causes hair loss, loss of appetite, and fatigue. However, it can save or prolong a person's life, which for many people is worth the suffering.

5. Can you think of something else in life that helps with one problem but may cause other problems or "side effects"? Explain.

Modern technology can also cause health problems. Smartphone overuse can cause eye damage, trouble sleeping, trouble remembering things and stress on the neck and spine.

Internet Addiction

Some of the people suffering the most because of new technology are those who have developed internet addictions. The most affected populations are teenage boys in China and South Korea who are addicted to online games. In some cities, there are 24-hour internet cafés where some of these boys may play video games up to 20 hours a day. In some multiplayer games, even taking a short break could give their competition an advantage, so some boys even wear diapers so they don't have to get up to go to the bathroom.



Their worried families can check them into treatment centers after other attempts to help have failed. Parents often have to be secretive about where they are going. One mother said she had to drug her son with sleeping pills to get him to the boot camp. Other kids are awakened in the middle of the night. They are checked in against their will, sometimes kicking and screaming.



Some treatment centers offer more gentle programs than others. China has a military boot camp where addicted youth have to do intense physical activity and are completely disconnected from the internet. South Korea has the "Internet Dream Village" where addicted boys go for a month to detoxify. Children participate in art therapy, learn guitar, go hiking and talk to an older mentor. They socialize with each other face-to-face and do confidence building activities like rock climbing.

Programs are also slowly appearing in the US to help kids with internet addiction. The programs are very expensive and are not covered by health insurance since The American Psychological Association does

not classify gaming as an addiction. However, in 2018, The World Health Organization officially declared “Gaming Disorder” to be a mental health condition.

6. **What might drive a child to spend a lot of time on the internet? Explain.**
7. **What do you think is the best way to help kids recover from internet addiction? Explain.**
8. **Write a letter to a child who is in an internet addiction treatment facility. You can pretend to be a family member, friend or teacher.**

Privacy

Some people joke that the government is watching our every move through our computers and phones. See the following humorous excerpt from an article published in *The Onion* titled “NSA Scrambling to Reestablish Whereabouts of Man Who Covered Laptop Camera with Tape”:

“Dammit, we’ve lost him,” senior intelligence analyst Edward Greenwood said moments after the man’s hands were seen moving toward the camera while holding a small, black, rectangular object presumed to be a strip of tape. “It’s like he just vanished into thin air. He could be absolutely anywhere! C’mon, people—I want status reports every 30 minutes until we track this bastard down! We can’t let him fall completely off the grid. The only thing we have to go on now is all the data from his smartphone and every email he’s ever sent or received.” At press time, sources inside the agency confirmed they had already sent a memo to the House Intelligence Committee demanding stricter controls on sales of opaque adhesives to civilians.

In reality, the government does not have enough resources to do this and it would be a waste of time. However, there are still privacy concerns involving computers. People can hack into a laptop camera while it’s not even being used and take pictures which they can hold for ransom. Many people cover their cameras with a piece of tape or a sticker to protect themselves. The only time most people use their laptop cameras is for video chat, and in this case owners can peel off the tape. (Video chat is like talking on the phone but coworkers and friends can see each other as they talk.)

9. **Write a poem about privacy. You might choose to write about privacy in relationships, in the government, in prison, on the internet or for celebrities. These are just ideas—feel free to use them or think of your own!**

Another important way to protect one’s privacy online is to pick strong passwords for online accounts, like email and social media. It’s a bad idea to pick a common or easy password, like your own name or the word “password.” Other common passwords in 2017 were “123456”, “football”, “starwars”, and “hello”. Experts recommend including numbers, special characters (e.g. !, #, @, \$, &, *) and a mix of capital and lowercase letters.

10. **Give 3 more examples of passwords that are probably too common.**
11. **Give 3 examples of passwords that are not as obvious.**

Dependence

We have become so used to having electricity that the loss of it becomes more and more difficult. Power outages can lead to chaos in workplaces, stores and hospitals. Even College Guild depends on computers for communicating with readers and keeping track of donations. Hurricane Maria, which hit Puerto Rico in 2017, disastrously wiped out 95% of the island’s electric grid. 3 months later, 45% of the island was still

without power. This power outage caused many deaths, as people needed medical devices that didn't work without electricity and there was neither air conditioning nor clean water.

As people anticipated the arrival of "Y2K" (the year 2000), they worried that computers would be confused by the change in millennium and would shut down. Around the world, companies and organizations checked and updated their computer systems. People feared that, for example, hospital computer systems would stop working, causing loss of life. Very few computer failures actually happened.

12. Have you ever experienced a power outage? If so, how did it affect you?
13. Write a fictional story set in January of 2000, imagining that Y2K actually did cause chaos like this *Weekly World News* Tabloid predicted.



Environment

Humanity uses more energy now than ever before. We have a limited supply of natural resources like coal and oil.

Besides, their use produces greenhouse gases which trap heat inside the Earth's atmosphere and cause global warming. Therefore, to continue living as we do now, we need to find replacements for these finite resources. Solar panels and wind turbines have been invented to harness energy from the sun and wind.



The Ecocapsule pictured here is a self-sustaining home that has a solar panel and small wind turbine on top. It collects rainwater and filters it for bathing and drinking.

Solar cells

Wind turbine

Rainwater collection



14. The Ecocapsule can go anywhere, so long as there is sun, wind and rain. If you had an Ecocapsule, where would you take it?
15. Design another home that uses renewable energy. Write a description of this home and feel free to include a sketch.

Hacking

Hacking is defined as using a computer to gain unauthorized access to data in a system. During the 2016 presidential election, Russians hacked the Democratic National Committee's server so that they could leak confidential information to help Donald Trump win. Hackers have held hospital records for ransom, demanding thousands of dollars for their safe return. It's hard to know where a hacking attack like this is

coming from—it could be from anywhere in the world. Therefore, hacking is one of the biggest concerns of the modern era. One defense against hacking is hiring “good hackers” to find weaknesses in security systems so that these systems can be improved in response.

- 16. In your opinion, for which target would a hacking attack be the most dangerous? Explain. Examples include but are not limited to: the electrical grid, the White House, transportation systems, hospitals, the stock market and the military.**
- 17. What is another skill that could do harm but could also be used for good? Explain your reasoning.**

Ethics

New inventions come with heaps of ethical concerns. Below is only a short list of some new inventions that are creating controversy.

Sentencing Algorithms: People have created artificial intelligence that allows a computer to act as a judge and give out sentences. Some say that computer judges would be more fair than human judges, but the creators of these computer programs are secretive about how they actually work.

Designer Babies: New technology allows us to get all the genetic information about a future human from the moment an egg is fertilized and even edit this information, which could allow parents to choose their child’s sex and physical characteristics as well as lower their risk of health problems. Parents could make their children more athletic, smart or kind.

Google Clips: Google Clips is a small camera that can be set up anywhere or even attached to your body. It constantly searches for the faces of people and pets that it sees the most, and when it detects a moment that it thinks might make a good picture, it starts taking photos. Users can look through the photos later and save them to their computers. This invention could capture special moments that would otherwise be lost, but some people find it creepy.

Social Credit Systems: China is currently developing a social credit system which would score each person and business in the country on their trustworthiness, honesty and integrity. It would use data about their online activity, the scores of their close friends and family, and more to come up with these scores. Scores would affect people’s ability to get jobs, loans, housing and admission into schools.

The Friendbot: After the death of her best friend, a woman built a chatbot using a collection of his old text messages so that she and others could simulate talking to him again. People say that this technology might help people get closure and help with grief therapy, but others think it might keep them from moving on with their lives.

- 18. Choose one of the inventions listed above and write a persuasive essay in which you argue for or against its development. Be sure to anticipate what someone on the other side might say and respond to them in your piece.**

Remember: First names only & please let us know if your address changes

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