

Keren Elazari

Hackers: The Internet's Immune System

'For the past three decades, hackers have done a lot of things, but they have also impacted civil liberties, innovation and Internet freedom, so I think it's time we take a good look at how we choose to portray them, because if we keep expecting them to be the bad guys, how can they be the heroes too?'

The beauty of hackers, says cybersecurity expert Keren Elazari, is that they force us to evolve and improve. Yes, some hackers are bad guys, but many are working to fight government corruption and advocate for our rights. By exposing vulnerabilities, they push the Internet to become stronger and healthier, wielding their power to create a better world.

<u>Level</u>	<u>Goals</u>	<u>Themes</u>
<ul style="list-style-type: none">• Advanced	<ul style="list-style-type: none">• Cleft sentences & adding emphasis	<ul style="list-style-type: none">• Hacking & Hacktivism• Technology
Intro	<ul style="list-style-type: none">• What do you know about hacking, or hacker culture? Are people who hack computer systems criminals?• What about organizations like WikiLeaks that use hacking to promote the freedom of information? Are they good or bad?• Have you (or has someone you know) ever had personal or financial information stolen over the Internet or through some other 'hack'? What happened? How was it resolved?	
Comprehension	<ol style="list-style-type: none">1. What does Elazari mean by the term <i>full disclosure</i> in regard to hacker culture and I.T. security?2. How did a hacker named Khalil use full disclosure to improve Facebook's security practices? What happened afterwards?3. Why does Elazari think it is valuable for large, conservative organisations to embrace hacker culture?<ol style="list-style-type: none">a. What, according to her, would be the consequence of not doing so?4. What is Elazari's opinion on '<i>hacktivist</i>' groups like <i>Anonymous</i>? Does she support or condemn them?5. What did the group <i>Telecomix</i> do in Egypt? How did they do it?6. What happened when the Syrian Electronic Army posted a fake tweet from the Associated Press?7. Who is General Keith Alexander? What is the relationship between mass surveillance organizations like the NSA and the hacking community, according to Elazari?	

Vocabulary

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| 1. Fraud | A. To make something known, to tell people about something. |
| 2. Malware | B. Internet Service Provider. |
| 3. Flaw | C. To start something, often a social movement, protest or revolution. |
| 4. Vulnerability | D. Criminal deception for financial profit. |
| 5. To disclose | E. A way of fixing a problem in a computer program or system, sometimes temporarily. |
| 6. I.S.P. | F. A weakness in a system that makes it easy to attack. |
| 7. To spark | G. Software intended to damage or disable computer systems. |
| 8. Workaround | H. A problem or fault in something. |

Useful idioms:

- *To kill the switch*: To turn something off or disable a system in an emergency.

*"This took place in Egypt in January 2011, and as President Hosni Mubarak attempted a desperate move to quash the rising revolution on the streets of Cairo, he sent his personal troops down to Egypt's Internet service providers and had them physically **kill the switch** on the country's connection to the world overnight."*

- *Big guns*: Powerful people or things.

*"It was high season for low tech, which the government couldn't block, but when the Net went completely down, Telecomix brought in **the big guns**. They found European service providers that still had 20-year-old analog dial-up access infrastructure. They opened up 300 of those lines for Egyptians to use, serving slow but sweet Internet connection for Egyptians."*

Discussion:

Complete the questions with the vocabulary above and then discuss them with your group/partner.

1. What do you think motivates some people to create harmful computer programs like _____ and viruses?
2. Do you think that digital activism, or 'hacktivism,' could _____ a serious revolution or political movement, or it just contributes to existing ones?
3. Should hackers be given more freedom? Would this increase the risk of people committing _____ or identity theft?

4. Do you know of any famous _____ or _____ in computer systems or other technology? How were the problems solved?
5. What kind of responsibilities do _____ and other large digital communications companies have to their customers in regard to security? Is it actually the customer's responsibility?
6. Do you think that it is responsible for hackers to _____ security flaws and vulnerabilities to the general public, as Kyle Lovett did? Should they not do so until there is a _____ for people to use?

Grammar

Cleft sentences for emphasis

We can add certain words or phrases to the beginning of a sentence in order to focus attention or to emphasize something. This is sometimes called a 'cleft sentence.'

Examples

- Pay attention to the *italicized* words or phrases and try to imitate the sentence stress.
- What kind of *intonation* or *rhythm* do you think is appropriate for each example?
- Think about the way you might use these structures to convince or persuade somebody.

With *what* or *all*

We need better security.

What we need is better security.

I don't like that people have such freedom online.

What I don't like is that people have such freedom online.

I just want to feel safe connected to the Internet.

All I want is to feel *safe* connected to the internet.

I only bought something on the Internet.

All I did was buy something on the Internet.

What happens is or *what happened was*

They connect to your computer and can access your documents.

What happens is (that) they connect to your computer and can access your documents.

Telecomix set up internet connections for the public in Egypt.

What happened was (that) Telecomix set up internet connections for the public in Egypt.

Beginning with *it*

Telecomix used the internet to support people in Egypt and Syria.

It was *Telecomix that* used the internet to support people in Egypt and Syria.

There was a protest last Friday.

It was *last Friday* when there was a protest.

The hackers were prosecuted for accessing the system.

It was *accessing the system* that the hackers were prosecuted for.

Other examples

The NSA spy on us for our own safety.

The *reason* the NSA spy on us **is that** it's for our own safety.

I spoke to the security consultant.

The *person* (who/that) I spoke to **was** the *security consultant*.

Practice

Choose the correct word to fill the gaps in these sentences using the examples above as a guide.

For example: What I really don't like about hackers is that they don't care about people's rights.

1. _____ hackers want is for people to have freedom online.
2. _____ we need is better legislation that protects hackers rights.
3. The _____ I don't believe what people like Elazari say is that so many people hack computer systems for their own personal gain – to steal money or personal information.
4. _____ was groups like Anonymous that gave hackers a bad name.
5. All _____ did was try to help people

Rewrite the following sentences using some of the structures in the grammar section above in order to add emphasis. There may be multiple correct answers.

1. There was a press conference last month.
2. The government just want to control data relevant to national security.
3. I don't like the idea that people can just access private computer systems.
4. The NSA abused their power by spying on the general population.
5. I spoke to an expert about IT security last week.

Writing & Speaking Problems!

1. Students are given a set of problems (below) related to technology, hacking, hacktivism and hacker culture.
2. With their partner or group, they must come up with what they think is the perfect solution to each problem. Students are encouraged to use the grammar above to add emphasis to their writing and speaking.
3. Groups/partners then return to the class and discuss everybody's solutions and try to decide which is the best.

NB: Students may require a primer on organizations and people like WikiLeaks, Edward Snowden and/or the N.S.A. if they are not familiar with the current controversy.

List:

1. It is extremely dangerous for people like Edward Snowden to disclose information. They do so at great risk to their personal safety.
2. Organizations like WikiLeaks are important, but they endanger people's lives (for example, by revealing military information).
3. Technologies like Google Glass will give hackers the opportunity to invade our privacy like never before. Not just our personal data will be at risk, but also our homes, jobs and lives.
4. Groups like *Anonymous* and *Telecomix* have no political legitimacy and so they will never be taken seriously by the general public.
5. It is important for companies and governments to have freedom as well. Hacker groups limit or destroy that freedom when they attack corporate or government websites.

Debate

- What we need are tougher laws on hacking and more severe punishments. Even though some hackers have good intentions, most of them are criminals and need to be stopped. Those who want to help should go through the correct process of joining I.T. security firms, not just breaking into whatever systems they want.
- Today we need hackers more than ever – Huge, government surveillance organizations like the NSA are openly invading our privacy, and 'hacktivist' groups are the people best able to stop them. More people should be encouraged to join these movements.
- 'Hacktivist' groups like anonymous are a joke. They are just groups of teenagers sitting behind their keyboards not really doing anything. If these groups want to be anything more than irritating, then they need to actually start contributing to people's lives in some way.

Review

Game

- *Taboo* card game available in activities download.
- Students must guess the word on the card, but their partner can only give clues *without* using the other key words listed below.