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Modern Technology in Mr. Robot and Silicon Valley

Along with the development of human society, technology becomes an indispensable part in our life. Not just a tool to make the world better or ruin it, which depends on who and which purpose technology is used, technology also affects entertainment and media. Nowadays, technology is regularly presented as a plot device in many movies, tv shows or even modern fictional novels. However, in most cases, these movies or novels used technology and devices that beyond our current development even though they were based on the current technology. There are also some tv shows use real technology that readers can easily recognize. Instead of focusing on the advancement of technology, these pieces of entertainment rather focus on realistic aspects such as ethical decision in modern world or how employment is influenced by technology. Two tv series Mr. Robot and Silicon Valley are great examples about how technology has shaped our world. While Mr. Robot depicted the dark side of technology by which the economy and even people's privacy are manipulated by some people, Silicon Valley focused on the life of people who work in tech industry and difficulties that a start-up has to struggle. Although two tv series presented technology in two different directions, they both have some common perspectives about the world that we are living in.

Instead of showing audiences the advancement of technology, Mr. Robot focuses on the negative side of modern world where technology is abused in order to manipulate the economy or even harm other people. The tv show follows Elliot, a young programmer working as a cyber-security engineer by day, and a vigilante hacker by night [Mr. Robot (2015-) Plot]. After discovering the existence of a group of hacktivists called "fsociety", Elliot joined the group and worked as a core member in order to destroy all debt records by encrypting all the financial data of the largest corporation in the world, E Corp. In terms of technology, Mr. Robot mainly emphasizes on information privacy, or from a regular point of view, this tv show is about hackers and hacking techniques. However, the factor which makes the show successful is those hacking techniques. Unlike other movies in which their directors made hacking sacred by using unrealistic techniques such as controlling traffic light by a cell phone, hacking into prisons, hospitals just by siting in front of a bunch of monitors or finding location of a nuclear bomb by measuring density of radiation on a map (which is done by a hacked satellite), the techniques used in Mr. Robot are practical and explained step by step such that anyone who studied about security can understand these techniques. In fact, there is a website (<u>null-</u>

byte.wonderhowto.com) that collected these hacking techniques and created detailed tutorials about how to perform them, which proved that the hacking techniques in Mr. Robot are not just realistic but easy to perform even for people who are not experts because the tools that Elliot used in Mr. Robot are available online and some of them are even free such as Kali Linux. In addition, the tv series also uses many social engineering techniques. One of the most famous and controversial techniques in social engineering was used in Mr. Robot - baiting. In the sixth episode of season 1, Elliot dropped several USB keys in a prison's parking lot with the hope that a staff will pick it up so he can gain access into the prison's system [Chris Hayner]. The scene is so famous that it becomes a standard example about baiting in social engineering. Mr. Robot depicted a world which is really similar to our world where technology dominates almost every aspect of life and people's personal information becomes unsecured.

In contrast, Silicon Valley is a comedy series which focuses on the lives in Silicon Valley in comic way. Silicon Valley follows the struggle of Richard Hendricks, a Silicon Valley engineer who created a compress algorithm and try to build his own company called Pied Piper [Silicon Valley]. In my opinion, this tv series is worth to watch because unlike Mr. Robot, this is a comedy series whose audiences are everyone, which makes technical complexity hidden (therefore for audiences who are non-experts, these characters are nerds who talk a language that not everyone can understand and do magic on their computer). The main reason that makes this tv series so successful is it mentions different issues with technology in our society, and many of them are topics that was discussed in class CS 280. For example, trademark was mentioned in an episode when Richard found out the name of his company Pied Piper was owned by someone else so he had to buy it from the owner. There is another episode which had the same situation but addressed a different issue - patent - when Richard and his team had to deal with a man who hold a patent about his algorithm. This episode, in my opinion, is a great example to learn about patent especially "patent troll". One issue which was discussed in class recently was also mentioned in Silicon Valley season 4 episode 3 - Intellectual Property. This is probably one of several episodes didn't use humour to address the main issue. In this episode, Richard had to deal with a lawsuit against him from the company he worked for because he used workplace's computer to develop his compress algorithm which is the core of Pied Piper. Therefore he had to decide whether to hand over his algorithm to that company according to the law or destroy it. Besides the surprising and somehow humorous plot twist at the end, this episode is a realistic example by which anyone can gain some understanding about intellectual property - one of the most tricky and complicated issues in information technology. For those who work or study in information technology or anyone who wants to open a startup, Silicon Valley is a valuable tv show that needs to be watched because as the name suggested, it is about the lives of people who live and work in Silicon Valley. The show addresses the difficulties a startup has to tackle

because beside a good idea and talented team, a startup company in order to survive has to deal with many different aspects such as competition from others, copyright infringement, making good financial plans, choosing right investors and considering appropriate offers, addressing right market, finding a good application which suits both the idea and market and even hiring a good lawyer to deal with any lawsuit from bigger companies. Despite of over exaggeration and humours, Silicon Valley conveys its main theme about how technology changes the world and the way our society develops.

Although the two tv shows have different plots and use different methods to convey their ideas, there are some common themes in both shows. One of them is how people make ethical decision in a society where technology dominates almost everything. At the end of season 1 in Mr. Robot, Elliot achieved his goal - encrypting all financial data in E Corp. The purpose of this action was clearing everyone's debt records. However, along with the crisis in E Corp was chaos in the society. Audiences can realize that Elliot's actions were illegal and even though the intention was good but its consequences made the situations worse. Elliot himself realized his mistake and made an ethical decision which was undo everything he did (this is one of the main themes in the newest season). In the other hand, Silicon Valley doesn't have to deal with events that can destroy the economy, which makes situations requires ethical decisions more practical to audiences. The tv show let Richard as well as us audiences consider options when his team ran into situations which require illegal actions. Although most of the time, Richard and his team chose those illegal actions - because that is the main plot of the episode, these situations are realistic and can be seen anywhere. Another topic which two shows have in common is how technology can be abused. Albeit Silicon Valley mainly focuses on humorous sides of the story, its hacking techniques are real. There is an episode which mentions a technique named "man-in-the-middle attack". This technique wasn't explained detailedly in the episode but it is real and was used before to steal information. Mr. Robot and Silicon Valley depict a world which is really close to the reality where technology is used for the development of our society and at the same time can be abused to destroy other people or gain personal profits.

In conclusion, for those who are interested in how technology can influence the world, Mr. Robot and Silicon Valley are worth to watch. Although Mr. Robot's plot is dark and serious, the show raises concerns about how safe our personal information is protected and how big corporation and organization are manipulating us. In contrast, Silicon Valley uses humorous to address difficulties that millennials have to tackle in the modern world where ethical standards are decided by money and all advanced equipments and devices can be used not just for making the world a better place but harming others to make personal profits. Technology is presented in

those two tv series as two sides of a coin. It's up to us who decide whether we should use good sides to develop our society or abuse the bad side to hurt others.

Work Cited

Hayner, Chris. "What Mr. Robot gets right and wrong about hacking". TechRepublic. 10 Nov
      2017. Web. 2 Apr 2018. Url: https://www.techrepublic.com/pictures/what-mr-robot-gets
      -right-and-wrong-about-hacking/2/

"Mr. Robot (2015-) Plot". IMDb. 2015. Web. 2 Apr 2018. Url: http://www.imdb.com/title
      /tt4158110/plotsummary#synopsis

"Silicon Valley". IMDb. 2014. Web. 2 Apr 2018. Url: http://www.imdb.com/title/tt2575988/