The 2016 presidential election is a very controversial topic as it relates to technology. Many experts have studied it and the effects of social media on the public at large. Numerous moral problems can occur because of the connectivity and unclear ethics in the digital realm. Experts have been trying desperately to devise a strategy to combat these issues and create a safer online environment for users, but this has not materialized yet. Agents that seek to push their agenda seek to capitalize on these vulnerabilities and did so in the election. In this Case Analysis, I will argue that virtue ethics ethical tool shows us that Facebook did engage in information warfare because their algorithm pushed false articles of information that manipulated the public, and further that they were partly responsible for the election outcome because they indirectly and directly enabled the spread of misinformation, profited from the use of "dark" ads, and had no countermeasures in place.

Jarred Pier was a lieutenant colonel who performed research centered around the use of social media platforms to wage information warfare. He studied the propaganda, social networking, and news and information sharing. The use of bots propels the narrative and propaganda that a malicious agent wants, and this can have vast spanning results. Many countries and groups use these methods such as Russia and the Islamic state. More and more entities are using these techniques to build a strategy that capitalizes on the infrastructure of social media and networks. In the 2016 United States election, Russia wanted to sew the seeds of conflict between parties and people. Their goal was to diminish feelings of identity and social trust for the systems that we have in place. This can be accomplished via the trending page on sites like Twitter and Facebook where a large audience is following an event or piece of information, and if these people are manipulated, the malicious actors have captured the attention of a massive group. Digital marketing campaigns can be hijacked as well leading to the smearing of a brand or

causes whether it be morally right or wrong. Actors do not just use these methods on their enemies overseas, but they can and often do use them on their own citizens as well. This leads to a sense of control and security in the minds of the nation's leaders. Some manipulation can be done through fake news, and this leads to the public not trusting news sources, so legitimate news sources now have a smaller impact on their society. However, there are methods to combat this form of manipulation, such as performing reverse image searches with google or another external tools to see if the image used is authentic or not. When someone repeats false statements very frequently, it is like a Distributed Denial of Service attack where the listener is being bombarded with so many sentences that they don't have time to process them correctly. Countries that have a democracy-based government are less effective at creating and distributing propaganda because they normally showcase ideas of fairness, truth, and liberty. Social media sites could remove these bots accounts that are effectively trend drivers, but they will not because it would massively impact their revenue stream. Madrigal, an author for The Atlantic, reported about the role that Facebook played in the 2016 presidential election. It was shown that through using virtual ad campaigns on Facebook, certain parties were able to achieve vastly better poll results. The algorithm that Facebook uses to drive engagement leads to users being recommended views that they already agree with leading to an increase in voter polarization. This makes it extremely difficult to hold a beneficial public discourse. Facebook also began recommending news articles to people, which disproportionately represented the web traffic. The works of both Pier and Madrigal relate to the harms of information warfare in the modern age, and they support one another by addressing how Russia is one of the countries at the forefront of this epidemic. Given how they both condemn information warfare, they would also see Facebook's actions as morally wrong. The story contained within the virtue ethics tool would

show Facebook's actions to be at fault as well. In this story, a girl is speaking to her mentor about challenges she is facing. Her mentor, Melody, then explains to her that there was once a time where people were illiterate. The mentor combated this by practicing every day, but to no avail. She was able to make progress by a breakthrough in science, which allowed her to read and write properly for someone her age. Through this experience Alia, the mentee, learned that one does not always know what someone has gone through, and it is unfair to judge them because of this. This relates to Facebook in the sense that it is not entirely fair to judge people for their views, political or otherwise, because one does not know what they are being recommended regardless of the algorithm. Another core tenant of virtue ethics is to perform the right action for the right reasons and this was not what Facebook or Russia did. Maybe one day the problems that information warfare causes will be solved with a breakthrough of science as well.

Keith Scott studied the philosophy of French physicist Ampere who coined the term cybernetics. This term was used in describing the expansion of government into the information realm. This still deeply relates to the issues of control and observation. While the term has cyber within it, the word is more focused on the human aspects that are affected by such technology. Scott's main goal was to discuss the key concept of each users' ability to cause harm on a social network if they so choose. Modern technological infrastructure has brought on features like that of constant connectivity, which has led to massive issues in social and technological security. This causes a fundamental change in how we communicate with other and how we interact with our communities. Politicians have been using social media platforms to their advantage and spreading their message far and wide almost instantly. Besides countries that use these advantages, there are also those who intend to amass wealth through these means. This led to cryptominers becoming so prevalent on these sites. The use of these tools allows for actions to be

performed that could not be done previously. Therefore, propaganda, cyberbullying, and other negative techniques will continue to become more malicious. These tools can also be used for positive information distribution acts, like exposing a corrupt agency and/or government, showing a company's unfair treatment of employees, being an outlet for victims of crimes, and many other useful actions. A potential solution pondered by Scott was the licensing on internet access. When looking at other dangerous items that society licenses like auto mobiles and firearms and viewing the dangers that can result from improper internet use this makes a fair bit of sense. The problem with this idea is that the factors have not been defined as much as they have for cars or guns. Some also believe that the right to the internet is akin to that of the second amendment because citizens need to able to defend themselves against their tyrannical government. These factors are what caused Keith Scott to discuss the need for a code of ethics so that the moral consequences of the use of social media can be more concretely defined, which would result in better use and punishment for abuse on these platforms. This would apply to a current event because in the 2016 election there was a disproportionate spread of information from an extreme right news organization that went from mediocre engagement to have more interaction than most major news networks. Near the end of the election cycle, the fake news outlets were generating more hits than the legitimate large-scale press. This is due in part to Facebook's algorithm being shown to promote this fake news. The result of this is dangerous because it leads to a massive amount of misinformation being spread, which in turn causes the public to form their opinions around something that is fictitious. Russia is known for their misinformation campaigns, and they spread misinformation around the election. The US government and Facebook did not really respond to their actions and passively let them continue. Russia's dishonest information generated potentially billions of hits. A concrete code of ethics,

like the one that Scott is calling for, would be in place to prevent malicious incidents like this one. The virtue ethics philosophy and moral tool also showcase the issues of this event. Through this lens, one should seek to do the right thing for the right reasons, and it can't be justified by acting selfishly for one's political party. Also, Russia was a large driven force behind many of these ads and tactics and sought to only gain an advantage over the United States. If Russia used a role model with virtuous values for their perspective, then maybe they would not have gotten involved. Facebook's action throughout the election were irresponsible, against virtue ethics, and the warnings of those like Scott and Madrigal.

Facebook was instrumental in the results of the 2016 United States presidential election. This was because they acted with a disregard for responsibility and failed to do their due diligence relating to information validity. However, they did continue to take money from these malicious actors and promote false information more than that from legitimate sources. Many experts on the subject, such as Pier and Scott, would find their actions to be against the warnings of harm presented and a clear case why a code of ethics is needed. The virtue ethics view and story would also support the moral negativity of this because they did the wrong thing for the wrong reasons, which is against the core of the philosophy and what the characters of the story would do. In conclusion, many experts seek to find ways to hamper and warn of the negative effects of social media on society and philosophical views like the virtue of ethics showcase that the manipulators are morally incorrect.