

## Intro

This case study has a series of cyberattacks upon multiple different systems. These systems include the Iron Dome defense system, the Israel government and banking websites, a red alert missile alert system, and an electricity industry independent system operator. These cyber attacks were done by different international hacking organizations. Boylan wrote an article about how the traditional paradigm of warfare needs to change because of cyber warfare. Taddeo wrote an article to help navigate the meaning of a just cyber war by considering both Just War Theory and Information Ethics. In this Case Analysis, I will argue that contractarianism shows us that these actions could not be a part of a just war. This is because the actions taken do not conform with contractarianism's ideas that a society should afford the maximum benefits to those born with the least privilege. The actions of a contractarian in this case study would be more considerate of those already in a disadvantaged position.

### I

#### a.)

Boylan makes several assertions that the traditional paradigm of warfare is not currently suitable or needs to change for a world with cyber warfare. One point he makes on the difference between cyber warfare and traditional warfare is that cyberwarfare has significantly less physical damage and loss of life. Since wars have historically been measured and determined by loss of life, there needs to be new definitions for a war that could be potentially completely bloodless. Boylan says that a declaration of war from a cyberattack needs to have its costs weighed and that the difference between an attack being considered sabotage and a declaration of war depends on the circumstances of the attack. Due to the lack of physical attacks in cyberwarfare, Boylan says that the conceptualization of an attack and response needs new clarification. Boylan says that the

traditional just war theory still holds up in regards to launching a counter cyber attack, but it is less reliable when it comes to launching a physical attack in response to a cyber attack. This is because the country launching the physical attack would need to compare and justify the loss of money from the cyber attack with the potential loss of life from a physical attack.

b.)

Using Boylan's ideas of the changing nature of war, the cyber attacks in this case study can be analyzed to determine if these attacks could be a part of a just war. Whether or not these attacks can be a part of a just war depends on the circumstances of these attacks. But this case analysis requires these attacks to be isolated from any existing conflicts and histories. Boylan asserts that usually, the perpetrators of an attack in times of peace are not justified in attacking and are considered immoral for causing a war. So considering these attacks in isolation with no historical basis, these attacks would not be a part of a just war. But if these attacks were a part of an ongoing war, then there would be more arguments for these attacks being potentially a part of a just war. The cyber attacks have less potential for a loss of life, making it an action that is less costly when comparing it to a physical attack.

c.)

Analyzing this case study through the lens of contractarianism, we can determine whether or not the cyber attacks in the case study were ethical. One of the principles of contractarianism is that the least privileged positions in society should have the maximum benefits that they could possibly have. In this case, the least privileged people would be the bystanders impacted by the cyber attacks. Since the perpetrators did not attempt to lessen the burden of being a bystander of

a cyber attack, they would not be considered ethical under contractarianism. According to a contractarian, the right thing to do would be to either not perpetrate the cyber attack or target something else that would not further hurt the bystanders as to not add to the hardships of being in this disadvantaged position in society.

II.)

a.)

Taddeo points out that only using Just War Theory is not sufficient after the information revolution. Most of the issues that arise from using Just War Theory in cyber warfare without considering information ethics stems from the non-physical nature of information technology. Taddeo describes cyber warfare as having a transverse nature where many different domains overlap. For example, a cyber attack on a GPS system could disrupt both commercial airplanes and a military air base. One aspect of just war theory that is mentioned that can still be used in justifying a cyber war by Taddeo is the concept of doing more good than harm in a war. To help determine how just a cyber war is, Taddeo considers information ethics. In this case, information ethics is used to evaluate actions based on the action's effects on informational entities and the infosphere as a whole. Taddeo asserts that by default all informational entities have a right to exist and flourish in the infosphere. But these basic rights are rendered null once an informational entity interferes with another's right to exist and flourish, and the interfering entity should be removed from the infosphere.

b.)

Using Taddeo's arguments to analyze the cyber attacks in this case study, the justification of the attacks in a war can be evaluated. Using the transverse nature of cyberwarfare that Taddeo described, combined with the base assumption that a just war should do more good than harm,

the cyber attacks could be considered unjust. The cyber attacks in this case study led to the disruption of assets that both the military and citizens rely upon. When examining these attacks while excluding the basis of the existing conflicts, it is clear that more harm than good is being done. By disrupting these critical infrastructures, civilians are being endangered and inconvenienced. It is not very clear what kind of good the attackers are adding to the world with these attacks, especially when the attacks are isolated from existing circumstances. Taddeo's arguments about a just cyberwar considering informational ethics also point towards these actions being considered unjust. These cyber attacks undeniably disrupt informational entities' right to exist and flourish. By targeting the sources of money and electricity, the attackers are targeting two of the most essential things required for an informational entity to exist and flourish. Without electricity, information systems cannot function, and without money they cannot afford to function. Because of this, the attackers should be removed from the infosphere because of their interference with informational entities' rights.'

c.)

A famous thought experiment related to contractarianism is a hypothetical scenario where one imagines themselves placed into a new society where they do not know what their position in society is. This ignorance to one's position in society is referred to as the veil of ignorance. Because of the chance that they are born into a lower echelon of society, one would want to build a society where the least privileged person has the most benefits possible. Applying this thought experiment to this scenario with Taddeo's arguments about informational entities rights, it can be concluded that a contractarian would see the actions in this case study as unjust. With a veil of ignorance applied, a contractarian would want to exist in a society where an informational entity with less power has the right to exist and flourish unimpeded, as well as be protected from

malicious informational entities. Because of this, a contractarian would consider the perpetrators of the cyber attackers to be unethical because they do not contribute to a society that maximizes the benefits for the people with the lowest standing in society. What a contractarian would do differently in this scenario would be to not perpetrate the cyber attack at all because of its interference with other informational entities and the attacks effects on those in less privileged positions.

### Conclusion

In conclusion, contractarianism shows us that these attacks would not be considered part of a just war because they do not contribute to a society that gives more benefits to those in a disadvantaged position. A contractarian would have done things differently by first considering those who would be impacted by their actions, then adjusting their behavior to not further disadvantage the people that are considered lower in society. I think that it could be argued that without being able to consider the ongoing conflict and its basis that it is considerably more difficult to determine how just an attack is. But I think that even though an attack may be considered just, it could still be considered unethical especially when considering contractarianism. Any wartime action will negatively affect the entirety of a nation, which would inevitably affect everyone in a way that would not be to the benefit of disadvantaged people.