Cybersecurity Integrated into a Christian Life

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Introduction

For almost every person in first world countries, technology is incorporated into just about every aspect of their lives. Over the past 50 years, the digital realm has sprung into being in such a short time compared to the rest of history. There was nothing similar to a cell phone, a laptop, an internet, or an Alexa to turn off your lights at the beginning of time or even 50 years ago. Along with the recent coming of the digital age and the internet, the term cybersecurity is quickly becoming extremely prevalent. According to the Oxford English Dictionary, cybersecurity is defined as the state of being protected against the criminal or unauthorized use of electronic data, or the measures taken to achieve this. The principle of cybersecurity is an extremely recent introduction to the world. It's only been needed as a result of the also recent invention and widespread use of the internet and digital software, where cybercrime now occurs. "In 2019, the United States' Federal Bureau of Investigation (FBI) received more than 467,000 cybercrime complaints that caused an estimated US$3.5 billion in losses" (Cybercrime losses). Cybersecurity is what's needed as a result to prevent and address the issue. The concept of cybersecurity is nothing new however, with it ultimately being a defense, and defenses against anything are nothing new to society. "Cybersecurity professionals have and use many of the same skills as cybercriminals, but instead use these skills to secure systems and protect data, instead of committing crimes" (Arts and Sciences). With as recent as the development and implementation of cybersecurity has been, there's been very little analysis, observation, and research done to understand how cybersecurity can be integrated into one's faith in the Lord. That is exactly what this paper will look to explore.

The Situation at Hand

Cybersecurity, and all of computer science for that matter, is an extremely complex and complicated field. It is nothing like learning how to read or memorizing terms for a simpler field of study, not to knock the importance of that. All of what cybersecurity entails, from the side of the user and their desktop to the bits and bytes with the development of an operating system, is larger than one could learn in their lifetime. In realizing how composite such a field is, it makes it quite difficult to incorporate it into a Christian Worldview. Applying what the Bible says to a major such as education is much easier than applying it to computer science or cybersecurity. With this being said however, a Christian must still be able to efficiently incorporate a passion for cybersecurity along with their lifestyle of faith.

A Biblical View of Cybersecurity

With as complex as any computer related field is, there are still many valid reasons to study and live a Christian lifestyle revolving around it. These reasons are specifically based on how a man or woman of the Lord, who has a passion for cybersecurity, can grow closer to Him and glorify Him. The reasons follow:

1) To obey God's command in order to subdue (the computational aspects of) His creation.

2) Because God will accept our lives (as computer scientists) as worship.

3) Out of a godly, heartfelt, motivation, such as

- To acquire (computational) skills by which we can serve others in today's world

- For the joy that comes from (computationally) imitating God's creativity

- To better know and understand our Creator (by discovering the limits He has

    placed on computation)

    4) What we do (as computer scientists) can have eternal significance.

(Why Christians Should Study, pg 6)

An argument might be made that computers, or anything similar, are never mentioned in

the Bible. This specific statement may be true, but what one needs to realize is that according to

Genesis 1:26-28, computers are a part of God's creation. God calls His people to rule over His

creation in these verses, and a computer scientist who "rules over" a computer is doing just that.

According to these verses, Christians also create because they are made in the image of their

Creator. Therefore, by creating and living out the purpose of the Lord in the field of

cybersecurity, one will strengthen their relationship with God and their understanding of Him.

Another argument against cybersecurity, or again any similar field, is that cybersecurity

is not as spiritual of a career compared to a career in ministry or a missionary. This argument

states that the value of one's work is directly related to the salvation of others (Why Christians

Should Study, pg 2). This is one way to view worshipping the Lord. However, is doing what God

has called one to do (their vocation) not another form of worship? Who is to say that one form of

worship is "better" than another? By living out a career in cybersecurity, where one believes

that's what God has called them to do, they are worshipping just as much as a minister or a

missionary might be.

The goal of this section was not to find every single argument against cybersecurity and

disprove it's validity, but rather to help one see how the Bible and the Lord support a career in

cybersecurity and how such a career is a form of worship. With a career in cybersecurity one is

able to find pleasure in imitating God as a creator and create themselves. They are able to serve others with a distinct and knowledgeable skillset. Lastly, in such a discipline, one is able to push themselves to very profound measures, discovering limits God has placed in a technological area, if any.

Cybersecurity and Sin

In terms of internet and computers, a very simple definition of hacking is "an attempt to exploit a computer system or a private network inside a computer (Hacking Meaning)." For the purpose of this paper, there are two different types of hackers, white hats, and black hats. White hats hack with the intention of protecting and serving others. They use their creativity and knowledge to benefit others', or their own, security by hacking to find places where defenses could be improved. Black hats attack with selfish and dishonest purposes. They cause their victims to suffer at the expense of their own criminal gain. Because computers did not exist during the times when the Bible was written, one must be curious as to how hacking is interpreted by God during this day and age.

"Hacking is a digital form of breaking and entering. Instead of invading a home or business, hackers invade computer systems (GotQuestions)." In the sermon on the mount, Jesus provides His people with a principle that is still quite relevant today. Matthew 7:12 says, "So in everything, do to others what you would have them do to you, for this sums up the Law and the Prophets." Being a black hat hacker violates that principle completely and it does not stop there. Often black hats will steal data and private information which God loathes. In fact, in the 10 commandments God orders His people not to steal. Hacking at the expense of harming others' in any way, stealing information, or in any criminal way is a sin.

All hope is not lost however. A white hat is a hacker God admires. They use their talents and abilities to keep anyone who uses technology safer from the acts of evil of the world that take place online. This is the type of hacker any Christian who works in cybersecurity should aspire to be. A Christian who wears a white hat honors, glorifies, and represents God in a very unique way, of which God would be proud.

Cybersecurity at its Roots

Although it's obvious that there was no such thing as cybersecurity when the Bible was written, there is still a direct connection between the two. At its root, cybersecurity protects against the wrongdoings of people in the technological realm. God's nature entails this exact attribute as well! Through the Bible, God reassures His followers numerous times that He will always be there to protect them.The Lord Himself is a shelter and refuge. Take the story of Daniel in the Bible for example. In Daniel 6:16-22 Daniel was thrown into a den of lions and a massive stone was put in place to seal him in the den. The entire night passed and the king who threw him in, came back in the morning to mock him and see if he was dead. Daniel was able to happily respond that the Lord shut the mouths of the lions and kept him safe. The Lord provides this level of protection and safety to all of His creation.

The practice of cybersecurity imitates God's protection over His people, the only difference being that cybersecurity and the defenses it offers will never be perfect because it's developed and implemented by humans. With this knowledge, a career in cybersecurity can further be seen as a career that allows one to grow in their relationship with God because cybersecurity offers protection just as God offers it Himself. What better way to incorporate a

career in cybersecurity into one's faith than to imitate the nature of God Himself through one's

own practices?

Cybersecurity, Ethics, and the Workplace

Human error is something that will never be avoided until the end of time. Humans are

flawed and will always, inevitably make mistakes. Depending on the career where one works,

those mistakes can be miniscule or quite devastating. In a cybersecurity job, the mistakes one

makes can cost people their livelihood and potentially their lives depending on what the software

is written for. A cybersecurity specialist will most likely write countless lines of code during

their lifetime. On average, in all industries, every 1,000 lines of code typed has between 15-50

errors (Coding Errors). This easily creates potential vulnerabilities for black hat hackers to

exploit. Any of these specialists, or all programmers for the matter, do not have any extrinsic

motivation for developing well written code. In no way does this help reduce the amount of

errors made, rather it only makes for more.

>One key reason why software quality ranks so low is that there is little chance the
>
>software industry will be held accountable for damages. With program code
>
>embedded in cars, planes, trains and hospital equipment, software developers can
>
>hide behind third-party status. They don't make the products that use the software,
>
>so if failure or injury occurs, the software maker hides in the background (Can
>
>Software Kill).

Due to such low standards set for cybersecurity professionals and computer scientists

when it comes to writing code, it becomes extremely critical to note the ethics behind each

individual a company decides to hire. The ethics of a person and their intrinsic motivations

become the primary reasons behind how much effort and time they decide to put into their work. Assuming a Christan has Christian-based ethics, the code they write is not solely for themselves and others, but also for the Lord. In a cybersecurity career, a Christian normally provides more than exceptional work to their employer because of the standards Christ asks them to live by. In no means does this diminish a non-Christian's work. Simply put, companies should look to hire individuals who are intrinsically motivated and hold themselves to high standards.

Final Words

The Lord strongly supports anyone who integrates their passion for the area of cybersecurity into their faith. There are plenty of ways one is able to worship, glorify, and represent God in the field. God takes delight in His cybersecurity professionals, knowing that they will be a light and inspiration in an area that's very new to the world. God calls all of His people to worship and glorify Him no matter what area of work they reside in. "Work becomes worship when you dedicate it to God and perform it with an awareness of His presence (Rick Warren)." Cybersecurity is simply another area of work, with the only differences being the complexity of it, and how recent of an invention it is. And from what was made clear earlier in this paper, those differences do absolutely nothing to diminish the ability to worship God through a career in cybersecurity.

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