

Thomas Roeseler

CYSE 201s

Professor Teresa Duvall

9 April 2023

Chief Information Security Officer

Cybersecurity has become a major aspect of the business world and the role of a Chief Information Security Officer (CISO) has become increasingly important. The CISO must ensure that sensitive information and data is safe and secure. A CISO is responsible for their company's information and data security. Social sciences help show how human factors can influence cybersecurity and CISOs can use social sciences to improve their cybersecurity strategies and processes. A CISO will have to use the social sciences to their advantage in order to properly protect their organization's sensitive information and data.

Social sciences is the science of people or groups of people and the study of their individual and collective behaviors. Social sciences can help CISOs know the attacker's motivations and behaviors and also the behaviors of their employees and how they would react to an attack or how they could make that organization or themselves vulnerable to certain attacks.

Understanding the human psychology aspect of the social sciences can help CISOs improve or create security protocols that are effective in preventing attacks.

With cybersecurity becoming an increasing aspect in the business world and in everyone's life, people need to use good cyber hygiene, gain knowledge about cybersecurity, so they can be careful on the internet and know what to do and not to do on the internet. "A study by the University of Maryland explains that computers are attacked an average of 2,244 times a day, and companies pay an average of \$3.9 million for every breach, according to IBM," (Gupta

2021). Because there are so many attacks every day, companies need to create cybersecurity rules and regulations for if something ever happens to them and the CISO of that company should take initiative and lead creating those rules and regulations. CISOs should make sure their company's networks have minimal vulnerabilities and make sure their employees have cybersecurity training, so they know how to spot something suspicious or know when something may be phishing.

The social sciences can help the CISO design whatever they will train their employees with to learn about cybersecurity and prevent phishing and social engineering attacks. Another area of social sciences that a CISO can use is sociology. Sociology can be used because of the cultural and social influences on behavior on groups or individuals. This can help CISOs use security protocols that their organization would follow because of how they know their employees and what would best help their employees follow those protocols.

The requirements to become a CISO are that you must have a bachelor's degree in a computer science related field, 7-12 years of experience with at least 5 of them in a management role, and lots of technical skills and knowledge, (Fruhlinger 2021). CISOs are very important to a company, so they must be very qualified and have experience that would help them succeed as a CISO. There are also certain certifications that CISOs should have and those are CISSP(Certified Information Systems Security Professional), CISM(Certified Information Security Manager), and CEH(Certified Ethical Hacker).

The roles for a CISO are to establish the right security protocols and practices and to enable a framework for risk-free and scalable business operations in a challenging business landscape, (Raza 2020). "The responsibilities of a CISO contain end-to-end security operations, compliance, HR management, stakeholder onboarding, documenting, and disaster recovery & business

continuity,” (Raza 2020). A CISO has many responsibilities and because of that there are many requirements to become a CISO. The responsibilities for a CISO are very important because it controls the security aspect of an organization and without a person in charge of cybersecurity at an organization, there could be major issues for that organization because they could be heading in the wrong direction without a good head of cybersecurity. Organizations need a CISO because they are in charge of protecting sensitive data and information of an organization. CISOs also manage cybersecurity risks, make sure the organization follows regulatory requirements, provides cybersecurity expertise to a company, and maintains a culture for cybersecurity at an organization, so that members of the organization are good with cybersecurity.

The challenges that CISOs will face are the evolving cybersecurity threats, employee awareness of cybersecurity attacks, balancing business and cybersecurity needs, third-party risks from other companies that they may have been in business with, and for some, they might not be given enough resources to reach full potential as a CISO and cybersecurity organization. The CISO needs to make sure that the cybersecurity needs aren’t interfering with the business needs of an organization, but the business needs to be protected from cyber threats. A CISO can do their best to train their employees with cybersecurity, but they can’t always control how aware an employee will be with a potential phishing or social engineering attack. With limited resources, a CISO will have to do their best to ensure safety of their organization’s data and information.

In conclusion, cybersecurity has become a major part of the business world and in order to protect an organization’s sensitive data and information, a CISO must create a cybersecurity culture at that organization, follow regulatory requirements, and manage cybersecurity risks.

With the help of social sciences, CISOs can help improve their protocols and practices that can be effective in preventing attacks and training for their employees.

References

Fruhlinger, J. (2021, April 1). What is a ciso? responsibilities and requirements for this vital role.

CSO Online. from

<https://www.csoonline.com/article/3332026/what-is-a-ciso-responsibilities-and-requirements-for-this-vital-leadership-role.html>

Gupta, D. (2021, August 17). Council post: The role of a Ciso in building a modern

cybersecurity culture. Forbes. from

<https://www.forbes.com/sites/forbestechcouncil/2021/08/17/the-role-of-a-ciso-in-building-a-modern-cybersecurity-culture/?sh=1674c4fd25e3>

Raza, M. (2020, July 7). *The chief information security officer (CISO) role explained*. BMC

Blogs. Retrieved April 13, 2023, from

<https://www.bmc.com/blogs/ciso-chief-information-security-officer/>