

Define each of the principals of science in your own words. Then, give an example of how each of the principals relates to cybersecurity.

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The 6 principals of Science, Relativism, Objectivity, Parsimony, Empiricism, Ethical Neutrality, and Determinism all relate to Cybersecurity. The principal of Relativism means all things are connected or affected by each other in one way or another. Objectivity deals with studying things in a manner void of personal opinion or biases, only in reality and facts and not in the world of feelings. Parsimony means being able to simplify your explanations of a subject. With Parsimony, the more you understand and master something, the easier you can explain and simplify something that is complex so others can better understand. Empiricism simply deals with what scientists can physically experience/sense through touch, sight, taste, hearing, and smell. Empiricism is not reliant on what we "think." Ethical neutrality means that scientists operate while maintaining universal ethical standards like not infringing on people's privacy, or treating others how they would want to be treated themselves. The principal of science Determinism means that human behavior is influenced or shaped by events experienced in the past and are predetermined because of the past events.

These 6 principals of science all relate to Cybersecurity. With Relativism, Healthcare, Infrastructure and other societal systems rely on technology, and with technology cybersecurity is needed /related to all of these systems. A more specific example of relativism as it pertains to healthcare is the need for patient's personal information/data needing to be secured on networks/databases. Objectivity as it relates to cybersecurity and cybercrime to find out how to lessen/protect against it effectively based on objective data and not personal opinions or ideas on what we think people will do or how people operate. Parsimony relates to cybersecurity in order to breakdown and simplify complex ideas and processes for people/employees to understand so they can take cybersecurity more seriously or aware be aware of social engineering, one way Parsimony is achieved is through computer-based trainings related to social engineering tactics. One example of Empiricism relating to cybersecurity is studying cybersecurity incidents that have occurred and the events that could have led up to it and can be studied to create bolstered cybersecurity behaviors/measures. An example of Ethical Neutrality as it pertains to cybersecurity would be cybersecurity experts not secretly monitoring/spying on people in case of illegal activity, upholding the intrinsic value of other human beings. An example of Determinism as it relates to Cybersecurity would be someone who is struggling financially, turning to cybercrime to scam people through social engineering like phishing, thus requiring cybersecurity to defend against these types of attacks.

