

## **Journal Entry #2**

### **Principles of Science and Cybersecurity**

Robert Bierstadt believed that the principles of science could be applied and adhered to all kinds of sciences. The principles are relativism, objectivity, parsimony, empiricism, ethical neutrality, and determinism. Relativism means that all things are related from a perspective of systems that cannot be changed. Objectivity refers to the way that scientists study topics without having an existing point of view or opinion, This helps scientists get an understanding of what they're studying because they are the ones finding out the new information on the topics they are studying. Parsimony refers to the explanation of sciences. This principle makes more sense for natural sciences, but it's saying that the explanation for things should be as simple as possible. Empiricism means studying things that we can feel so basically the five senses, the scientific knowledge that is gained from this is from experience. At the current neutrality is self-explanatory, and refers to the fact that scientists must have ethical standards whenever they conduct research. Determinism means that certain behaviors and causes are influenced by proceeding events, and everything that you do has a cause due to an established reason from before.

all of these principles should have a presence in both Social and natural sciences because they uphold standards for research. The principles of empiricism and objectivity, ensure that 1) the data and evidence that is being gathered about cyber security is concrete and leaves no room for mistakes, 2) objectivity, makes sure that assessments of vulnerabilities are not influenced by personal bias, and ensures professionalism. ethical neutrality focuses on protecting digital assets and values and upholding, moral judgments and security for the people in charge of cyber

security, and the people who are dependent on it. relativism in the realm of cyber security, makes sure that there is an acknowledgment of the steps that it took to get cyberspace to where it is now, and determinism sets boundaries or helps find an understanding as to why there are vulnerabilities or malicious intent for certain decisions that are made. When cyber security, or the Internet in general is a weaponizes, determinism helps people look in and understand why those choices are being made.