**IST 511 Assignment 3**

**What is a disciplinary perspective?**

A disciplinary perspective is the view that each discipline has its own unique view of reality. These disciplinary perspectives are how we can distinguish different disciplines (Repko, 2017). Many times these disciplines can be defined by what they are studying. For instance, a Nuclear Physicist most likely would not study the public health benefits effects of vaccines but a Public Health professor or Biologist most likely would. The real world overlaps in many ways which makes Interdisciplinary Research sometimes useful in better exploring some issues in a way that takes into account the existing theory, research and history of these scientific disciplines.

**What are the different elements of a disciplinary perspective?**

According to the reading the different elements of a disciplinary perspective are the following:

1. The phenomena being studied
2. The rules about what constitutes evidence
3. Assumptions made about the natural and human world
4. The disciplines underlying concepts and vocabulary
5. Its theories about the causes and behaviors of certain phenomena
6. The methods it uses

A discipline is generally an intellectual community devoted to a particular branch of science. They usually will have sub-disciplines too. An example would be Artificial Intelligence in Computer Science.

**Describe the different elements of the perspectives of the three disciplines you are studying.**

Statistics

Having looked at some of the research in Statistics it seems like much of the research tackles problems from other disciplines. The phenomena can be broad for instance Professor Yanming does a lot of cellular biology research related to topics like RNA Sequencing. Many times statistics is a foundational area for most other disciplines and how they answer research questions following the scientific process.

Computer Science

Computer Science is a rather new discipline that actually struggled in its infancy to be recognized as a legitimate scientific discipline. Now it has firmly established itself and looks at many elements including areas such as Artificial Intelligence, Robotics and Computational Theory.

Oceanography

Oceanography is an interesting research area because it actually is somewhat interdisciplinary. For instance the CEOAS Department here has Biological Oceanography, Physical Oceanography and Marine Resource Management. These disciplines draw heavy from their associated disciplines for instance a biological oceanographer might look at phytoplankton but a physical oceanography may look at tidal eddies or wave energy. The MRM discipline draws heavily from business, public policy and economics.

**Other points that strike you as interesting**

I found the tables on overall perspective, assumptions, phenomena and methods on different disciplines useful and helpful. The reading also discusses the concept of epistemology which is how you validate truth. Epistemology is thus a theory of knowledge (Marsh and Furlong, 2008). These concepts of truth can help researchers operate within their discipline building upon theory and staying within the boundaries established. These boundaries can be over turned given sufficient evidence but it is hard to overturn an existing theory. One example would be how Quantum Physics expanded upon and upheaved our ideas of Classical Physics.