

Domains of Inquiry (An Instrumental Model) and the Theory of Evolution

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American Scientific Affiliation, 21 July, 2012

Why?

- What is science?
- How certain can we be of scientific theories?
- Why do so many academic areas claim to use the scientific method?
- Can life be studied strictly scientifically?
- Is a person more defined by mass than metaphysics?

Objectives

- ① Introduce an Instrumental Model, **Domains of Inquiry**, a tool to understand how we come to our beliefs
- ② Explain some similarities and differences among the **Domains of Inquiry**
- ③ Argue that the **Theories of Evolution** and of **Climate Change** are not primarily scientific theories but historical theories
- ③ Assist in understanding personal beliefs

Domains of Inquiry

Definitions for Manipulating Activities

Technology -- Attempts to manipulate the natural (that which has mass)

Religion -- Attempts to manipulate the non-natural (that which does not have mass)

Politics -- Attempts to manipulate “what happens”

Domains of Inquiry

Definitions of Understanding Activities

Science -- Attempts to know and understand the natural (that which has mass)

Metaphysics -- Attempts to know and understand the non-natural (that which does not have mass)

History – Attempts to know and understand “what happened”

Summary on Domains of Inquiry

Technology – the attempt to manipulate the Natural	Religion – the attempt to manipulate the non-natural / Supernatural	Politics – the attempt to manipulate what happens
Manipulation Activities (above) are related to Understanding Activities (below)		
Science – the attempt to know and understand the Natural	Metaphysics – the attempt to know and understand the non-natural / Supernatural	History – the attempt to know and understand what happened

Inquiry Process

Common to all of the Domains of Inquiry

- **Personal Objectives /
Domain Objectives**
- **Data Generation and Collection**
- **Analysis**
- **Prognostication**

Data Acquisition

Technology and Science

- Full-disclosure experiment (experimental data)
- Observation (forensic data)
- Replicable by someone who has the wherewithal and the expertise

Data Acquisition

Metaphysics, Religion, and Politics

- **Revered texts**
- **Tradition**
- **Experience**

Data Acquisition

History

- Primary Sources: Relics and documents from the time
- Secondary Sources: Identified (writer and date) reporting or analysis
- Tertiary Sources: Unidentified (writer and/or date) relic, reporting or analysis

Data Acquisition

Summary

- Technology and Science data are preferably collected by the replicable controlled experiment
- Religious, Metaphysical, and Political data are collected by personal experience (forensic data)
- History data are from personal experience or artifacts (forensic data)

We respect Technology and Science data more because they can be repeated and are less influenced by the inquirer's objectives, and we can much more often predict what will happen

Analysis

Abduction – Infers the assumed from the observation
Infers *a* (*assumption*), as an explanation of *b* (*observed*)

Deduction – Derives the conclusion from the
accepted -- Derives *b* (*result*) from *a* (*accepted definition*)

Induction – Infers the conclusion from multiple
observations -- Infers *a* (*result*), as an explanation of
multiple *b*'s (*observed*)

Statistics -- Infers or discounts the assumed from
multiple empirical observations analyzed with tested
mathematical models

Analysis Summary

All Domains of Inquiry use all of the analytical tools

Induction is not the exclusive domain of science/technology

Classical Inductive Logic was the act of moving from particulars to universals. **Deductive logic** was the act of moving from universals to particulars. **This did not change with the scientific revolution.**

Prediction

Science / Technology

- From established laws/observations – prediction has been quite effective
- From Hypotheses / Theories, prediction as a testing mechanism has been useful

Prediction is **usually** not part of metaphysics and history except on a superficial level

Prediction

Summary

Science: Often predictable – the data is usually consistent, the systems are simpler

Metaphysics: Unpredictable because data varies, the systems are complicated

History: Rarely predictable because the systems are complicated – too many variables, the individual players are not predictable, and the data is in question

Domains of Inquiry and the Disciplines

- Astronomy, Chemistry, and Physics
- Meteorology
- Biology
- Social Studies
- Music, Philosophy and Theology
- Anthropology

Chemistry, Physics, Astronomy

- Repeatable experiments
- Relatively simple systems
- Good record of prediction

Some historical data in astronomy

Meteorology

- Developed methods for predicting the tides
- Weather prediction is a somewhat successful

Climate Change is a different matter

- The evidence is forensic – there are no replicable experiments
- The reality is more complex than the model -- unpredictable events affect the outcome
- Issues have become politicized

Climate Change Theory is primarily historical, and predicting Climate Change is prophesying

Evolution

Complexity

- Complex because it encompasses many ideas
- Different people select different sets of the ideas of Evolution
- The data supporting the Theories of Evolution are forensic
- The Theories of Evolution are not primarily Scientific theories, they are **Historical theories**

Biology

Originally, biology was focused upon the discovery, classification, and structure of living things

- The discovery and description of organisms provided us with an enormous catalogue of forensic data
- The development of systems for classification is both metaphysical and scientific
- Cell Biology has become more scientific as replicable experimentation expands
- Behavioral biology – the data is not replicable

Social Studies

With sociology and psychology we discover problems that arise when we study people

- People have different tendencies that derive from both inheritance and environment
- People have histories – both the person(s) collecting the data and the collectee

Music, Philosophy and Theology

The metaphysical domain dominates:

- All of these disciplines are primarily abstract, they deal with ideas (e.g. Theory of Forms) or abstract expressions (e.g. Beethoven's Fifth)
- Those who participate in these abstractions come away with different responses
- Lots of data, but multiple and competing perceptions

Anthropology

- Anthropology encompasses all the domains
- How does one analyze and understand a 2000 year old culture?
- How to understand an ancient civilization from our 21st Century perspective?

So what are we?

- Are we made in the image of God?
- What does that mean?
- We, too are creators -- the history and metaphysics are ours
- Yes we have mass, we do get energy from chemical reactions
- But our ideas and metaphysical constructs are powerful.