



Plausibility
and the
Plausibility Ranking Task

Plausibility: A Refresher

How do scientists change their plausibility judgments?

Plausibility is a judgment we make about the potential truthfulness of one model compared to another. The judgment may be tentative (not certain). You do not have to be committed to that decision.

Scientists may change their plausibility judgments about scientific ideas.



Analysis of Evidence

Strongly supports

Has nothing to do with/unrelated

Supports

Contradicts

Falsifiability

Scientific ideas must be *falsifiable*. In other words, scientific ideas can never be proven. But, ideas can be disproven by opposing evidence. When this happens, scientists must revise the idea or come up with another explanation. *Falsifiability* is a very important principle when evaluating scientific knowledge.

The True/False Strategy



Falsifiability Examples:

White Swans



Black Swans

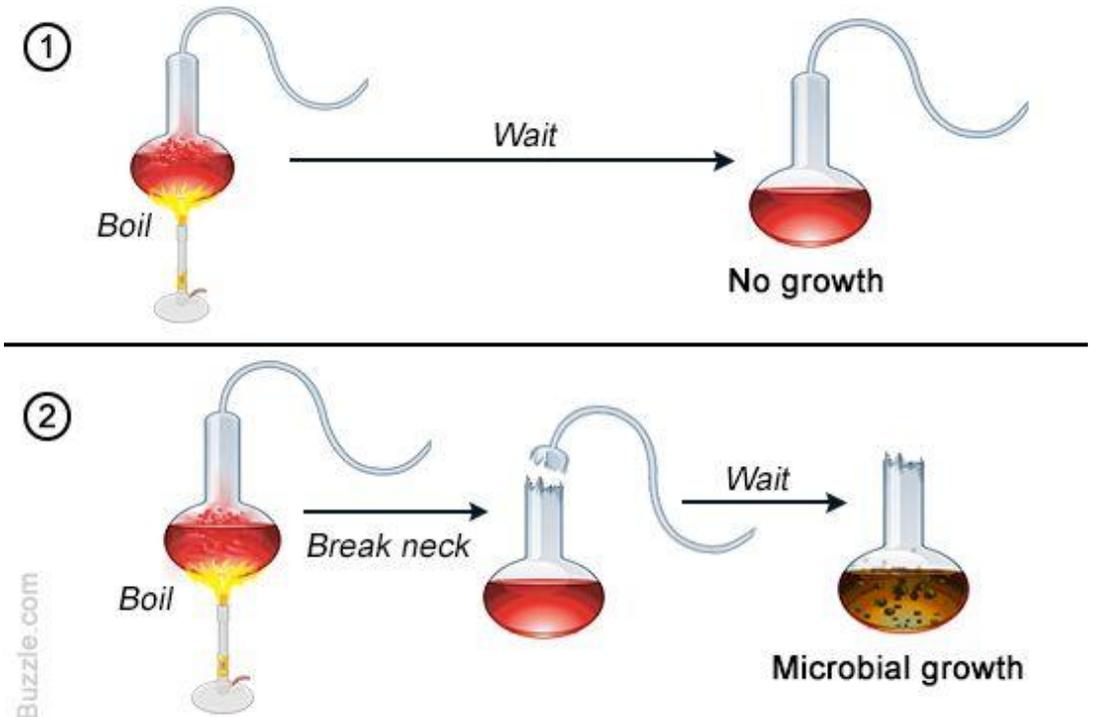


Falsifiability Examples:

Spontaneous Generation

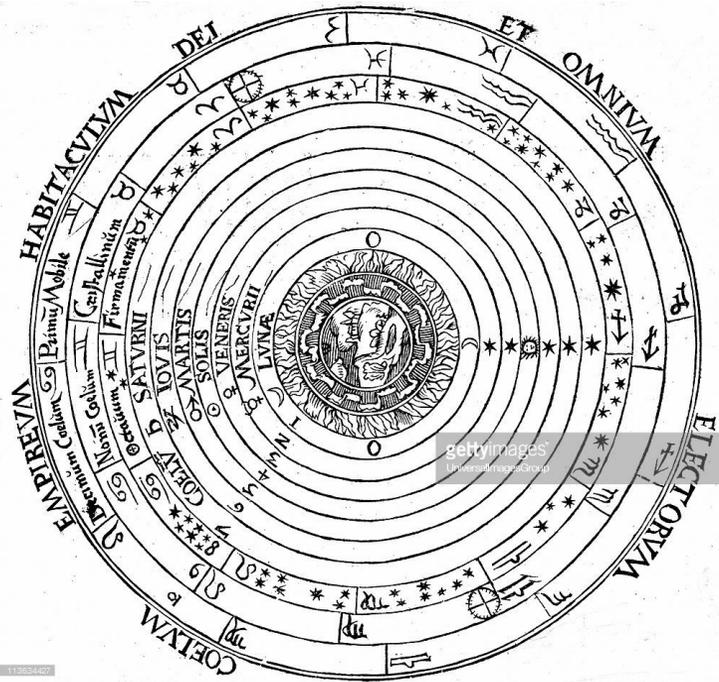


Univocal Generation

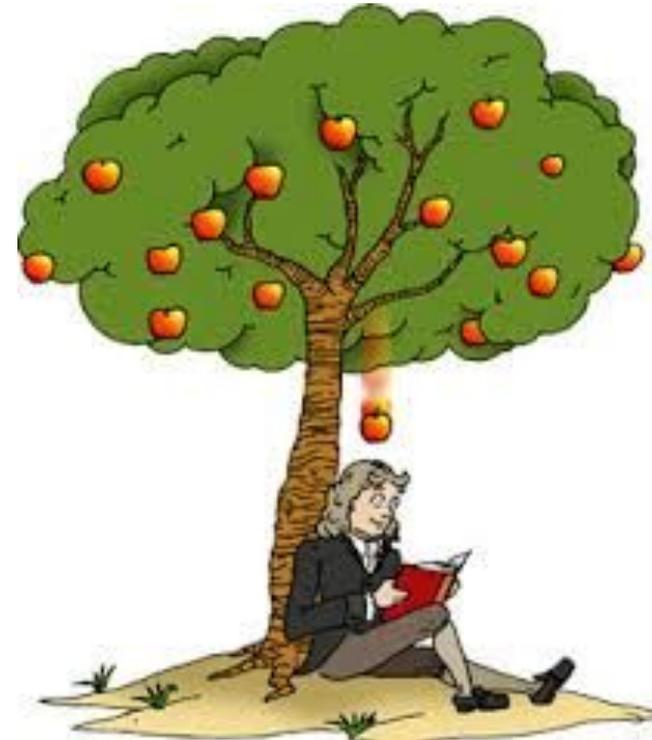


Falsifiability Examples:

Aristotelian Physics



Newtonian Physics



Plausibility

Non-Examples:

Avoid things like

- Miraculous
- Magical
- Supernatural

Realistic scientific choices

Falsifiability Examples:

What examples do you have?

What do students do?

Goals:

- Recognize that plausible competing models exist
- Evidence influences plausibility
- Falsifiability is an important scientific concept

ACKNOWLEDGEMENTS

