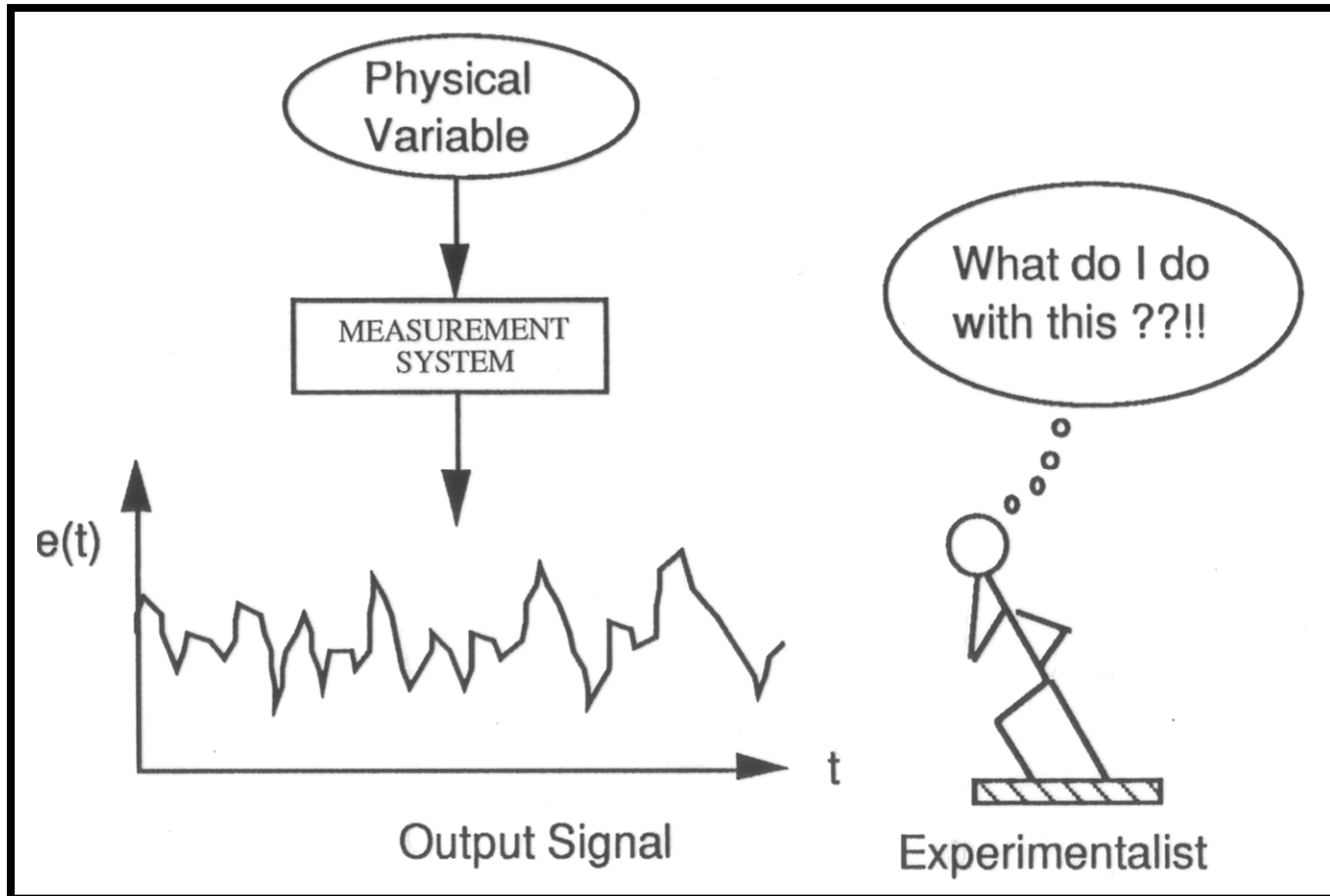
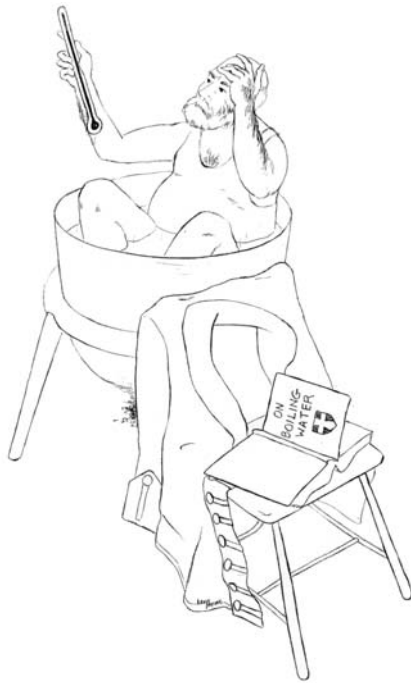


The Experiment



What is an Experiment ?

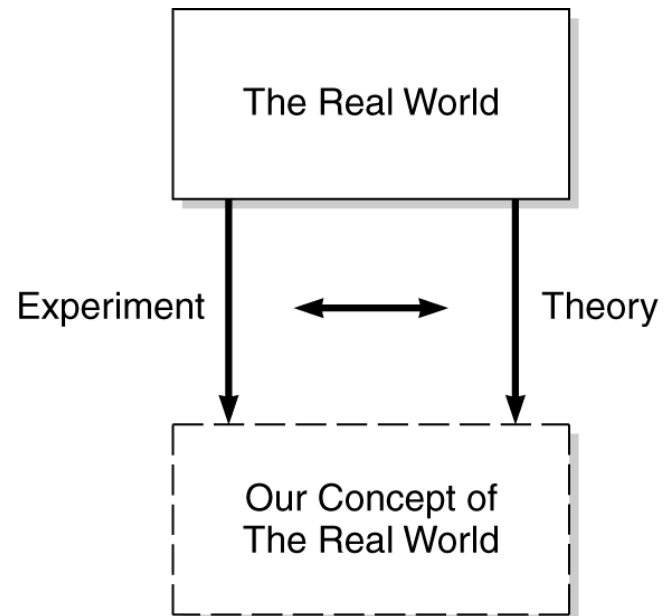


An Experiment ?

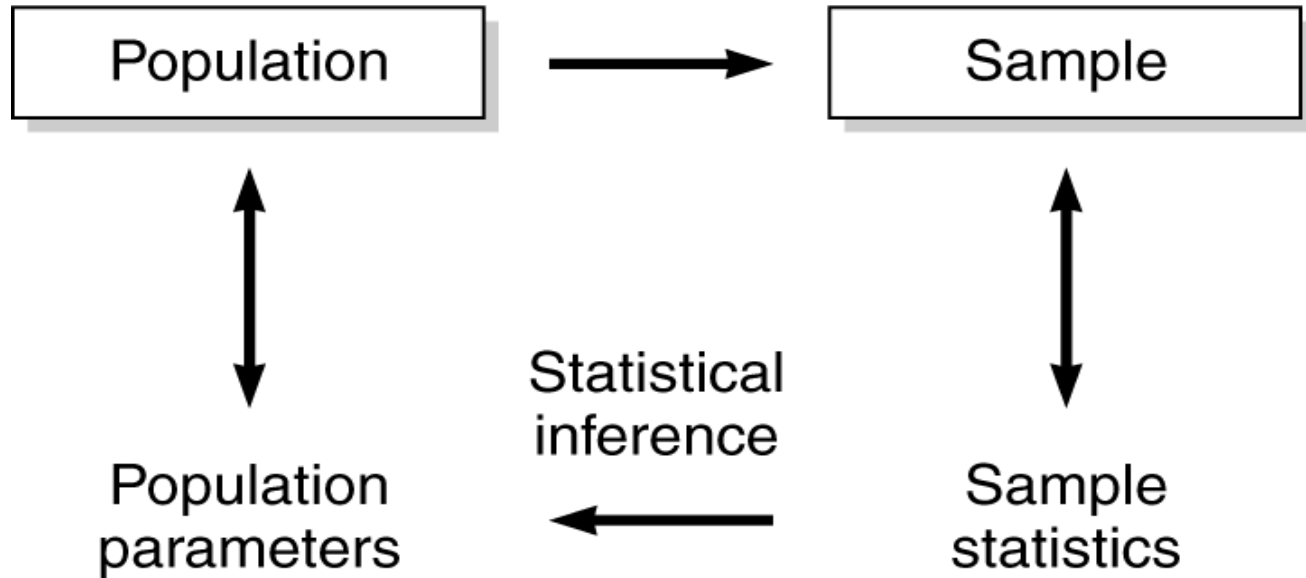
- Observing the number of students entering the NW doors of DeBartolo Hall at 9:25 AM on Tuesday
- Recording the number of students entering the NW doors of DeBartolo Hall at 9:25 AM on Tuesday
- Recording the number of students entering the NW doors of DeBartolo Hall at 9:25 AM on Tuesday, when you open, then close one of the doors every minute

The Role Of Experiments

Experiments serve to advance the understanding of our world. This understanding is advanced by both experiment and theory and the constant interplay between them. Experiments help us to:



Random selection
(experiment)



Classification of Experiments

Experiments can be classified according to their purpose as:

- variational
- validational
- pedagogical
- explorational

Experimental Variables

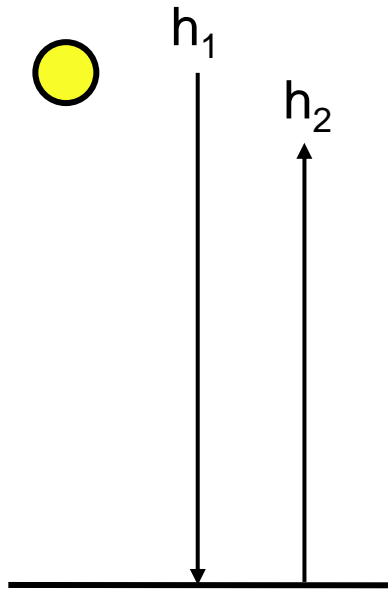
A *variable* is a physical quantity of a process that can affect the outcome of the experiment. Variables are classified as:

- Independent:
- Dependent:
- Parameter:
- Measureand:

Classify the Variables

Purpose: determine the coefficient of restitution, e , of a rubber ball over a range of impact velocities

Procedure: vary drop height, h_1 , measure return height, h_2



Classify the Variables

- Independent:
- Dependent:
- Parameter:
- Measureand: