Chapter 1

Experimental Design

* Preface
  + Experiment
    - 1.
    - 2.
    - 3.
* Variables in experimental research
  + IVs
  + Types of IVs
    - Qualitative / categorical IVs
    - Quantitative / continuous IVs
    - Classification variables / subject / organismic / individual differences IVs
      * Quasi-experimental / nonrandomized experiments
  + The DV
    - Univariate procedures
    - Multivariate
    - Floor effects
    - Ceiling effects
  + Nuisance variables
    - Confounding variables
    - Ways to deal
* Control in Experimentation
  + The ultimate goal:
    - Can you really do that?
  + Control by design
    - Deal with it:
    - Subjects:
      * Blocking
  + Control by randomization
* Populations and generalization
  + Goal:
  + Sample
  + Population
    - Random sample – we all have an equal chance of being picked for the study
    - Convenience sampling – samples that are easy to get
  + Generalization
    - Statistical generalization
    - Nonstatistical generalization
* Basic experimental designs
  + Between subjects designs
  + Within subjects designs (also called repeated measures)
  + Factorial designs