PART II
Random Sampling & Random Assignment

A Stratified Sample
- Divide population into groups.
- Randomly sample members from each group (proportional to the size of the group).
- A great way to create a representative sample.
  Ex: pick members from each state in a study of U.S. citizens.

Random Sampling
- Every population member has the same chance of being selected.
- Works well if all population members are equally accessible.
  Ex: Data on students at a college.

Population

Goal in Sampling:
A Representative Sample.

Cluster Sample
- Divide population into groups.
- Randomly select some (not all) groups to sample from.
- Ex: Census workers walk randomly selected streets in rural suburbs.

Systematic Sample
- Pick every n-th population member from a line-up.
- Can work quite well.
  Ex: Pick every 50th person that enters a stadium.

What if our sample does not represent its population well?
Then consider a subgroup of the population that the sample does represent—the sampling frame.

Side Note: In a simple random sample, each sample of that size had the same chance of being selected. The theory of statistics assumes this.