

Section 1.4

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.

Population



Goal in Sampling: A Representative Sample.

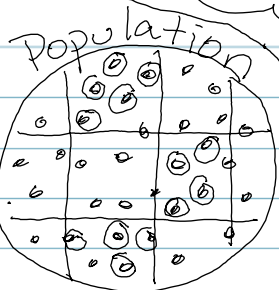
Random Sampling.

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.

Many populations have hard-to-find members.

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.



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.

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.