Sampling

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Introduction

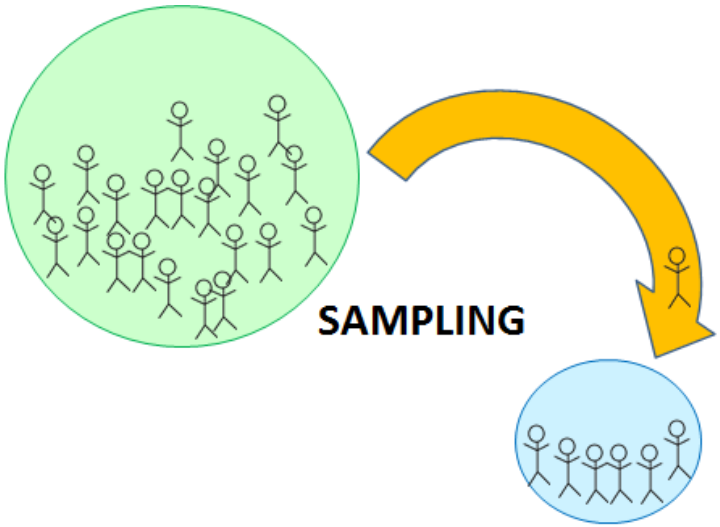
- In our research, we are trying to draw causal inferences about a population of interest.
- But that population is oftentimes too large to study as a whole.
- As such, we use sampling methods to draw reasonable inferences about these populations of interest.

The sampling frame

- In order to take samples, we first need to identify which units are "sampleable."
- Put differently, if I were to take a sample of this class, I need to put together a list of every student such that I could choose from among you who is sampled–like drawing names out of a hat.
- What goes in the hat is what can get drawn, and that's the "sampling frame"—the pool of eligible units.

Sampling methods

- Probability sampling
- Non-probability sampling
- Payoffs for validity?

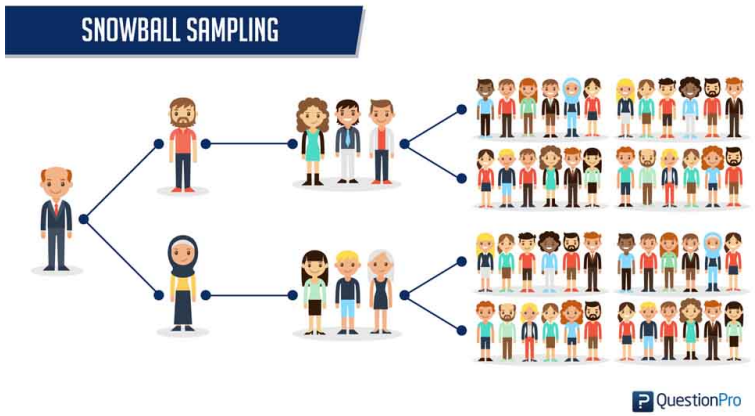


Probability samples

- Simple random sample
- Interval sampling
- Stratified sampling
- Cluster sampling

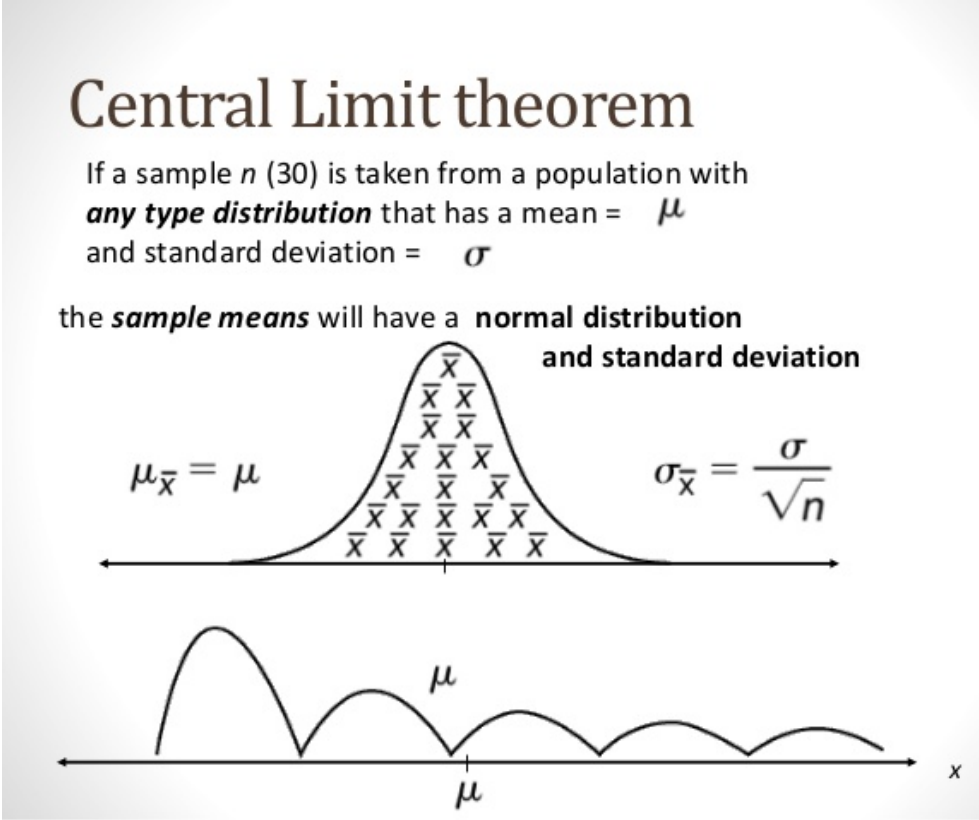
Non-probability samples

- Quotas
- Snowballing
- Convenience sampling



Sampling: How much is enough?

- Well, more is always better.
- Why? The Central Limit Theorem is why.
- So how much is enough? That depends entirely upon our tolerance for risk.



Conclusion

- We cannot draw accurate causal inferences if our sampling procedure is systematically biased.
- We mitigate bias when we use randomness to select our observations.
- Randomness isn't a cure-all, but it's the best we've got.