

# Sampling People, Records, & Networks

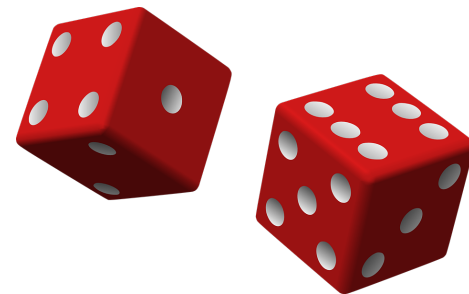
Jim Lepkowski, PhD

Professor & Research Professor *Emeritus*

Institute for Social Research, University of Michigan

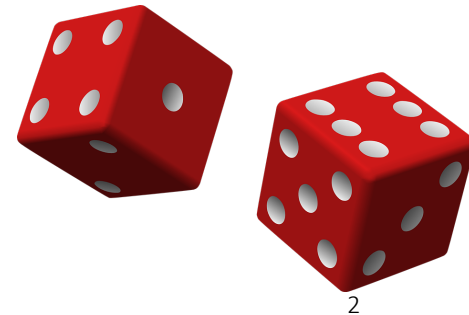
Research Professor,

Joint Program in Survey Methodology, University of Maryland



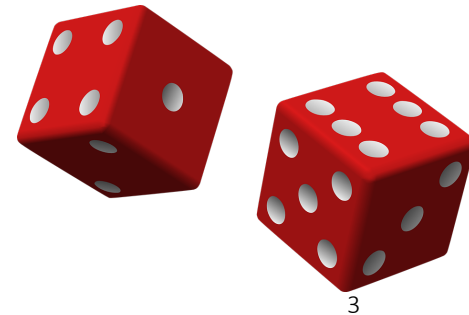
## Unit 2

- 1 Simple random sampling
  - 2 History
  - 3 Sampling distribution
  - 4 Sample size
  - 5 Margin of error
  - 6 Sample & population size
- **Unit 1: Sampling as a research tool**
  - **Unit 2: Mere randomization**
    - Lecture 1: Simple Random Sampling (SRS)
    - Lecture 2: A short history
    - Lecture 3: The SRS sampling distribution
    - Lecture 4: Sample size
    - Lecture 5: Margin of error
    - Lecture 6: Sample size & population size
  - **Unit 3: Saving money**
  - **Unit 4: Being more efficient**
  - **Unit 5: Simplifying sampling**
  - **Unit 6: Some extensions & applications**

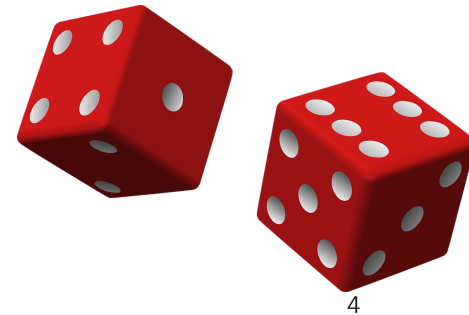


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- Practice v. theory
  - Representative method
  - Randomization
  - Comparison
  - Principles
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- Sampling **practice**
  - Result of attempts to solve practical problems
- Function of **theory**
  - Formalize implicit assumptions, and confirm, correct, or extend practice
- Origins
  - Data gathering
    - health and social problems
    - social physics
  - Census
  - Monography

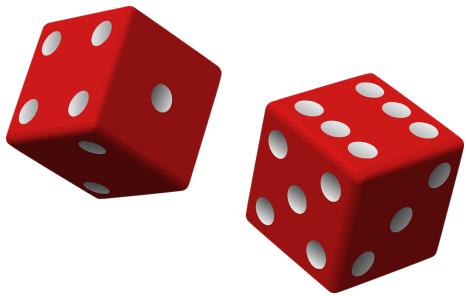


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- Kaier: **Representative method**
  - Miniature of country
  - Large number of units
  - Use prior information in selection
- Von Mayr and others: **Census**
  - No calculation where observation is possible
- Cheysson and others: **Monography**
  - Detailed examination of typical cases



- Practice v. theory
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- **Representative**
    - Purposive sampling
    - Expert choice
    - Balanced sampling
  - **Objective**
    - **Randomized selection**
    - Bowley, 1906 (colleague of R.A. Fisher)



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- **Neyman, 1934**

- **The sampling distribution**

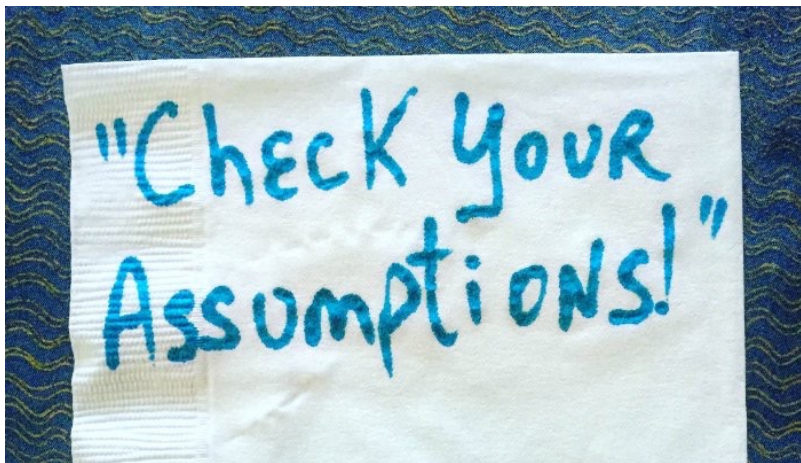
- Properties of sample under repeated sampling
  - All possible samples and their associated probabilities of occurrence
- The sampling distribution of an estimator





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- Conditions under which different procedures will produce valid estimates
  - Probability sampling
    - “**Unbiased**” irrespective of population structure
  - Purposive/balanced/quota sampling
    - Tough **assumptions** about population structure, unlikely to be achieved in practice



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1. **Probability sampling** for objectivity
2. Stratification for precision (**representativeness**)
3. **Variance estimation** from the sample
4. Complete and comprehensible **description** of the sampling procedure



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    - Lecture 1: Simple Random Sampling (SRS)
    - Lecture 2: Sampling distribution
    - **Lecture 3: Example**
    - Lecture 4: Sample size
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