

# Sampling People, Records, & Networks

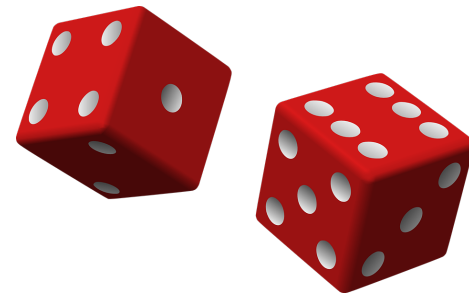
Jim Lepkowski, PhD

Professor & Research Professor *Emeritus*

Institute for Social Research, University of Michigan

Research Professor,

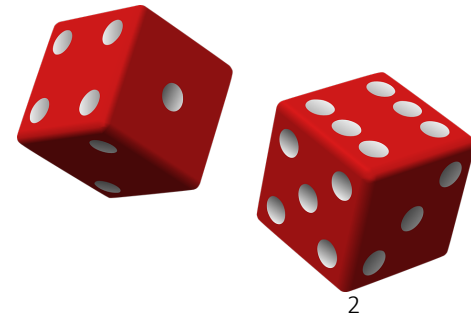
Joint Program in Survey Methodology, University of Maryland



## Unit I

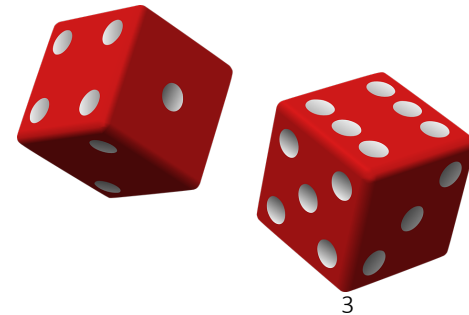
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- 2 Surveys
- 3 Why sample?
- 4 Why randomize?
- 5 Types of sampling
- 6 Evaluating samples
- 7 Units sampled

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- **Unit 2: Mere randomization**
- **Unit 3: Saving money**
- **Unit 4: Being more efficient**
- **Unit 5: Simplifying sampling**
- **Unit 6: Some extensions & applications**



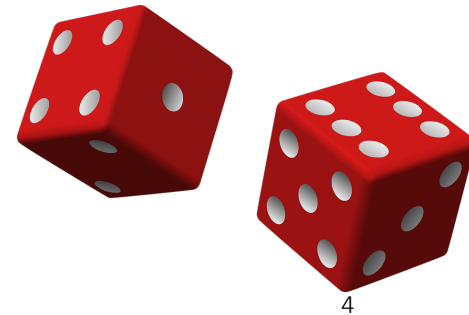
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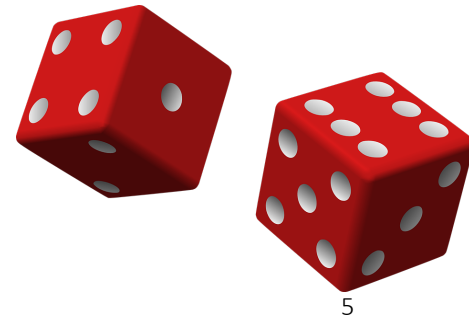
- Research design
- 3 R's

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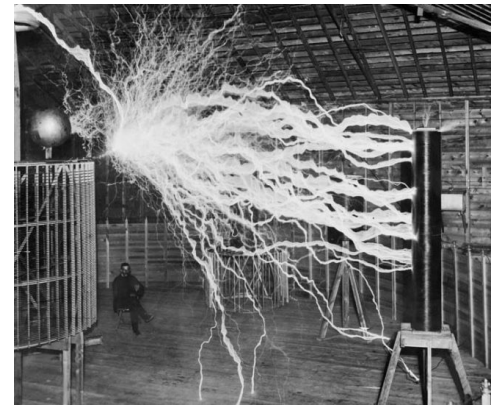


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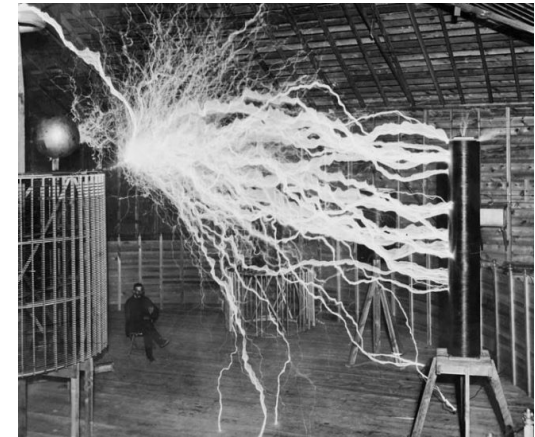
## Research designs & surveys?



- Research design
- 3 R's
- Experiments



- Research design
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- **Experiments**
  - Dependent variable
  - Factors
  - Control or randomization of disturbing variables



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- Two study designs: Observed control & Double blind randomized control experiment



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- 1954 Field Trial of the Salk Poliomyelitis Vaccine
- Two study designs: Observed control & Double blind randomized control experiment
- 220,000 vaccinated 2<sup>nd</sup> graders & 725,000 unvaccinated 1<sup>st</sup> & 3<sup>rd</sup> graders



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- 200,000 vaccinated 2<sup>nd</sup> graders & 200,00 controls



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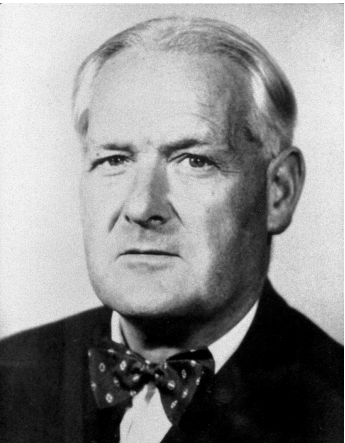
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- 200,000 vaccinated 2<sup>nd</sup> graders & 200,00 controls
- Conclusion from randomized study: vaccine effective, safe



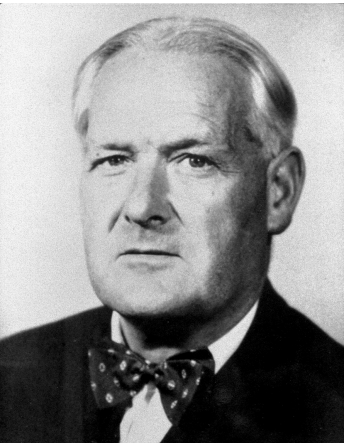
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- **Doll & Hill 1951-4 British Doctors Study**
- **All registered physicians in UK**



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  - Doll & Hill 1951-4 British Doctors Study
  - Survey of all registered physicians in UK
  - 40,000 (2/3) responded, & followed





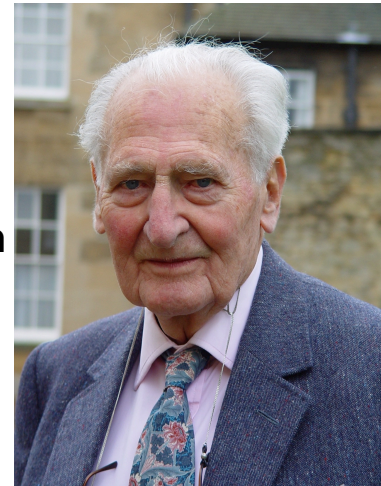
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- Doll & Hill 1951 British Doctors Study
- Survey of all registered physicians in UK
- 40,000 (2/3) responded, & followed – no randomization
- Link between smoking & lung cancer, heart disease





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  - Survey samples: observational



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  - Quasi-experimental: observational
  - Survey samples: observational
    - Nationally representative sample



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- Levels & trends on fertility, infant & child mortality, family planning, maternal & child health



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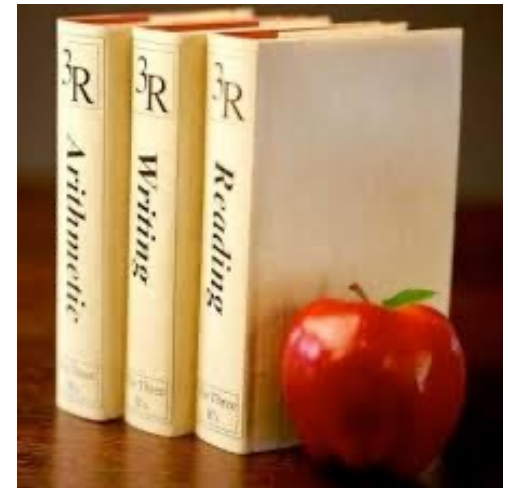
- Randomized selection of 11,974 households & 9,746 women 15-49 years of age



- Research design

- 3 R's

- The 3 R's



- Research design

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- Realism



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- Realism

- Randomization

### The 3 R's: FDR's approach

- Relief: to provide jobs for the unemployed and to protect farmers from foreclosure
- Recovery: to get the economy back into high gear, "priming the pump"
- Reform: To regulate banks, to abolish child labor, and to conserve farm lands

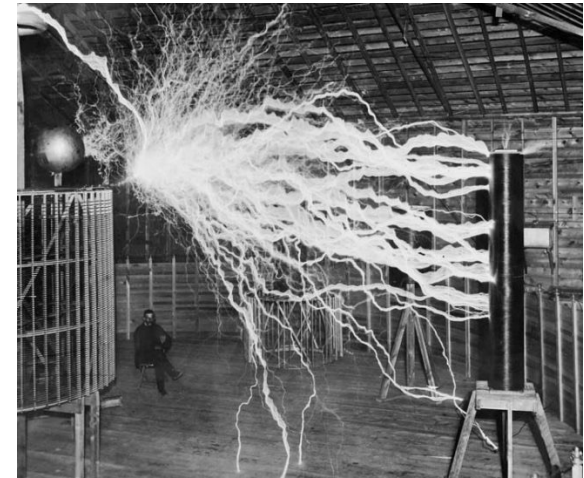


- Research design

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- The 3 R's

- Realism
- Randomization
- Representation





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