



# Discussion of Police Shooting Session

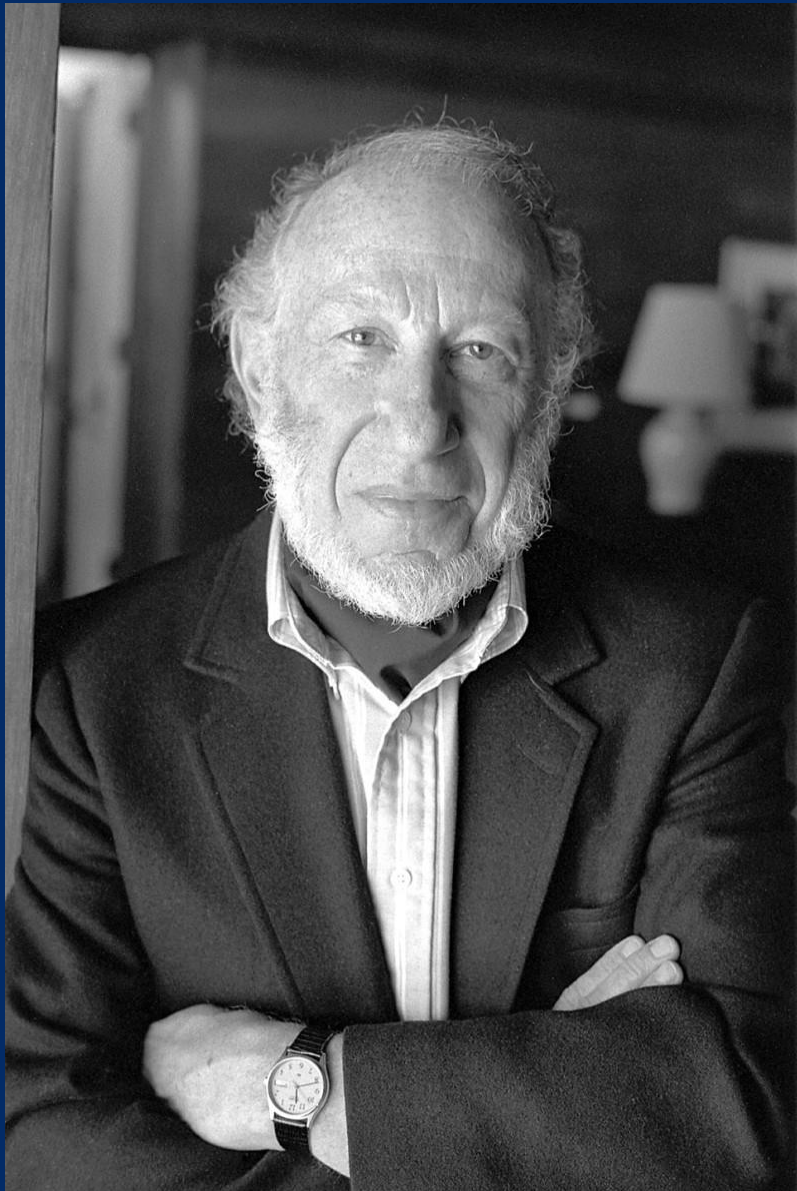
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*World Changers Shaped Here*



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## **Analyses of Wine-Tasting Data: A Tutorial\***

**Ingram Olkin<sup>a</sup>, Ying Lou<sup>b</sup>, Lynne Stokes<sup>c</sup> and Jing Cao<sup>d</sup>**

# Lots of interesting data analysis problems!

- Multiple sources of data that must be combined
  - Record linkage (David)
  - Multiple-recapture methods (David)
  - Probability (NCVS) + non-probability samples (incomplete reporting systems)
- Complex variance-covariance structures
  - Nesting of officers (victims) within incidents (Greg)
  - Spatial, temporal, and network relationships

# Lots of interesting data analysis problems (con't)!

- Observational data (both)
  - Causal modeling methods
- Imperfect and missing data
  - Measurement error models
  - Imputation methods

# Two papers

- Both papers attempted to identify covariates of officer involved shootings
  - Hemingway: environmental characteristics
    - What are features of the places that it happens?
  - Ridgeway: officer characteristics
    - What are features of the officers that do it?



# Hemenway

- Validation study for NVDRS data on police involved fatal shootings was convincing
  - Those data are high quality!
- Question: Is NVDRS as good for other categories?
  - Different approaches would be needed to validate since alternative sources are not available
  - Census Undercount estimation approach: Samples of police report data matched to NVDRS for some identifiable categories (e.g., firearm death of intimate partner)

# Hemenway (con't)

- Rural/urban and Race victimization rates
  - Denominator problem is a difficult one with all these studies, but especially hard for officer involved shootings (police/citizen encounters? arrests? arrests with resistance?)
  - Rates of police shootings/population arguably makes rural areas worse for police involved shootings if violent crime rate is lower there

# Ridgeway

- Tackled the confounding of police assignment problem in a clever way
  - Used a natural experiment
- Tradeoff is an already small sample is reduced further to get such a good comparison group (hold incident constant)
- An alternative approach would be to mimic a case/control study.
  - Larger sample size
  - Allow you to estimate odds ratio for officer characteristics