

# Peculiar visualizations for RDS

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# Plan

1. define:RDS; motivation
2. Simulations setup and process – visualization
3. Simulations findings – visualization
4. Conclusion/Motivating the Anchor process

# RDS

- Respondent-driven sampling to sample from hard-to-reach populations

# RDS features

- Number of coupons
- Probability that a respondent won't use all coupons
- Different network topologies (as a function of quantity surveyed)
- Different preferences for recruitment

# VH estimator

- Current state of the art estimator, Volz-Heckathorn (2008):

$$\hat{\theta} = \frac{1}{\sum D_i^{-1}} \sum D_i^{-1} X_i$$

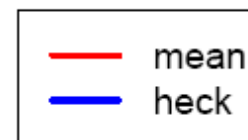
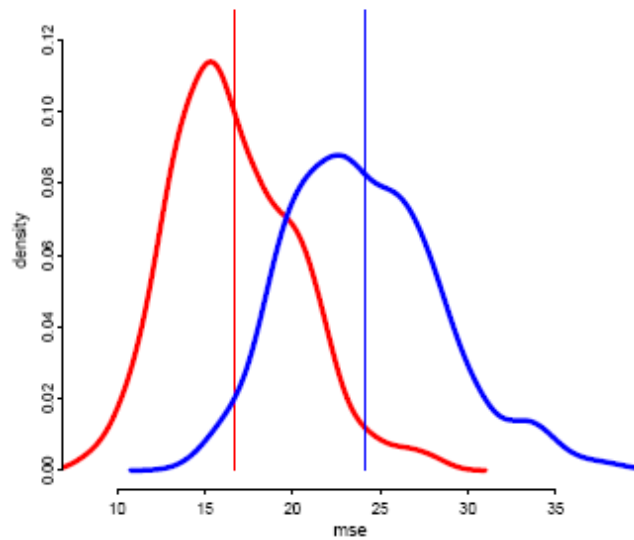
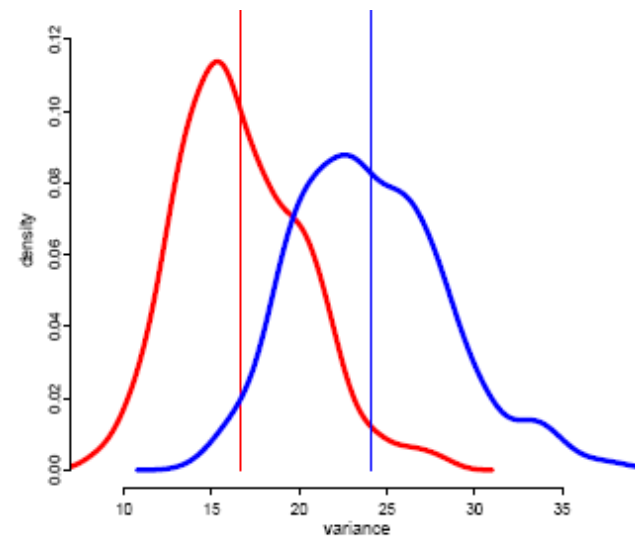
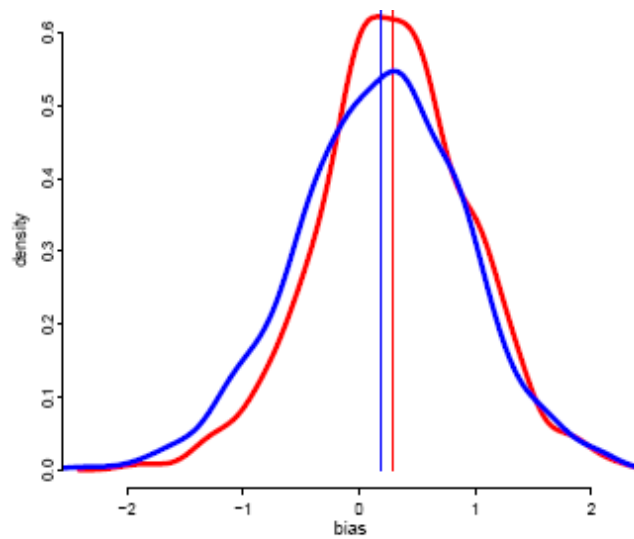
switch to RDS process visualization...

URL: <http://incontemplation.com/blog/?p=263>

# Simulations details

- 500 networks, 100 RDS processes on each
- for all feature combinations
- 432 possible feature combinations

# Traditional performance comparison





switch to relative performance visualization...

URL: <http://incontemplation.com/blog/?p=180>

# Conclusion

- For homophily networks in our simulations, VH estimator is at best as good as the plain mean estimator *as a point estimator*
- Compromise point estimators
- Determining RDS regime from structural information collected about a particular RDS process
- RDS as a viral process on networks
- Visualizations are often key in generating ideas

# Thank you

- **Joe!**
- Audience

