

# Social Networks and the Repression-Dissent Puzzle

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# Two Stylized Facts

## 1. Inconsistent Relationships Between Protest and Repression

- Repression decreases protest.
- Repression increases protest.
- Repression has no effect on protest.

# Two Stylized Facts

## 2. Skew Protest Size

- Most protests are very small. Some are very big.
- The big one accounts for most of protesters.

# Synthesis

- Empirical results are inconsistent because of the skew inherent in protest data, and the skew arises because mobilization occurs on social networks.

# Implications

## Networks

- 1 Skew of interpersonal connections, not amount of mutual friendships, matters.
- 2 Skew + repression is the key.
- 3 How participation thresholds are distributed matters.
- 4 Less skew, fewer protests; more clustering, fewer protests.

## Empirical

- 1 More data may alleviate SF1.
- 2 Importance of initial protest size.

# SF1: Inconsistent Results

## Repression decreases protest

- Iran 1978 -1979, fewer protests in the short-term in response to repression (Rasler 1996).
- Peru and Sri Lanka over 36 years, repression lowers number of dissent actions (Moore 2000).
- Anti-apartheid protests after state accomodation (Olzak et al. 2003).
- “New Social Movements” (Koopmans 1993).
- Non-democracies when protesters do not have access to media or “politically-oriented social networks” (Osa and Corduneanu-Huci 2003).
- Globally, institutional repression at low levels (Muller 1985).

# SF1: Inconsistent Results

## Repression increases protest

- Iran 1978-1979, more protests six weeks later (Rasler 1996).
- Massacres increase non-confrontational mobilization (Francisco 2004).
- West Germany and GDR 1982-1992, Northern Ireland 1982-1992 (Francisco 1996).
- Globally, institutional repression of significant strength (Muller 1985).
- Non-democracies when repression declines (Osa and Corduneanu-Huci 2003).
- Repression onset in 200 countries from 1990-2004 (Ritter 2013).

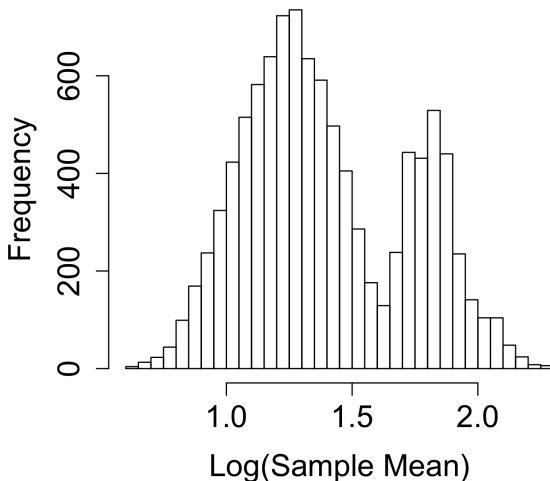
# SF1: Inconsistent Results

## Repression does not affect protest

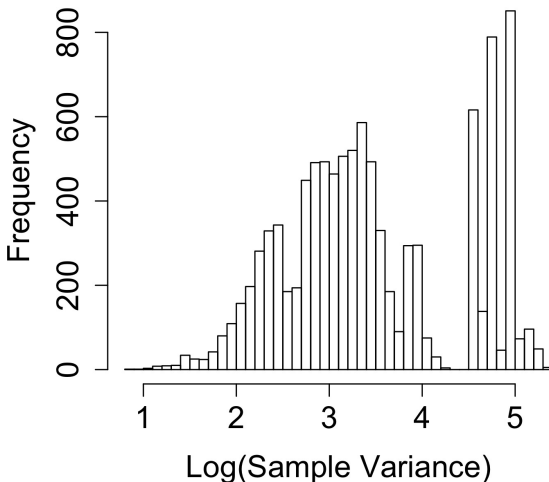
- Across 202 ethnopolitical groups, repression does not change mobilization (Gurr and Moore 1997).
- Repression against terrorism protests in West Germany, 1982-1992 (Francisco 1996).
- Northern Ireland, 1982-1992; depending on model (Francisco 1996)..
- Once repression occurs, more severe repression has no effect (Ritter 2013).



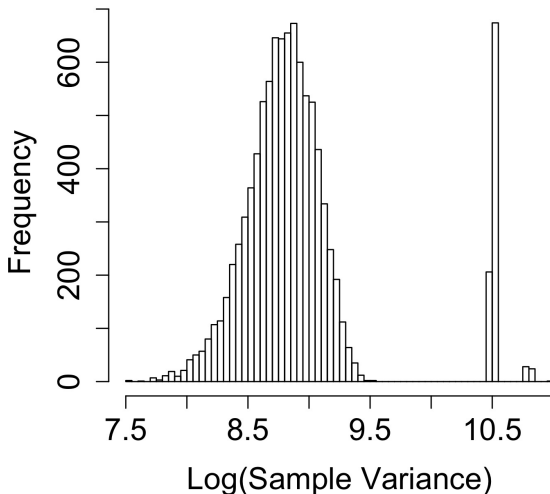
# SF2: Bootstrapped Log(Mean), 2017 US Women's March



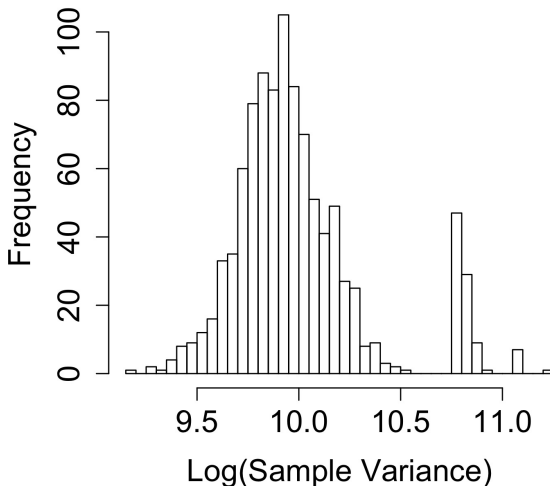
# SF2: Bootstrapped Variance, 2017 US Women's March



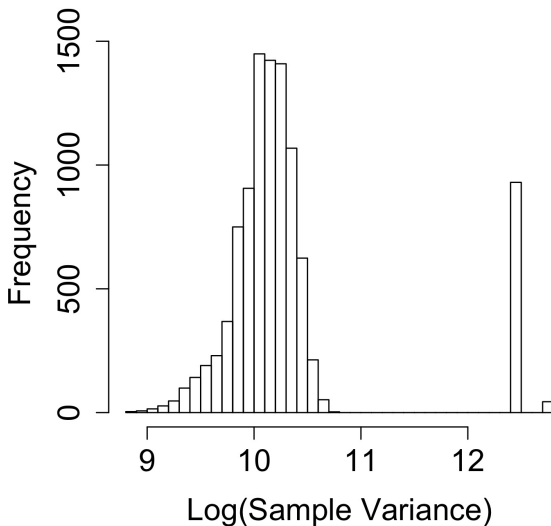
# SF2: Bootstrapped Variance, US Collective Action



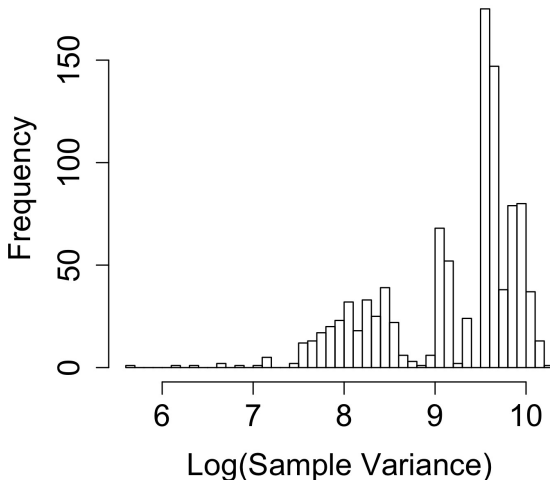
# SF2: Bootstrapped Variance, Mass Mobilization



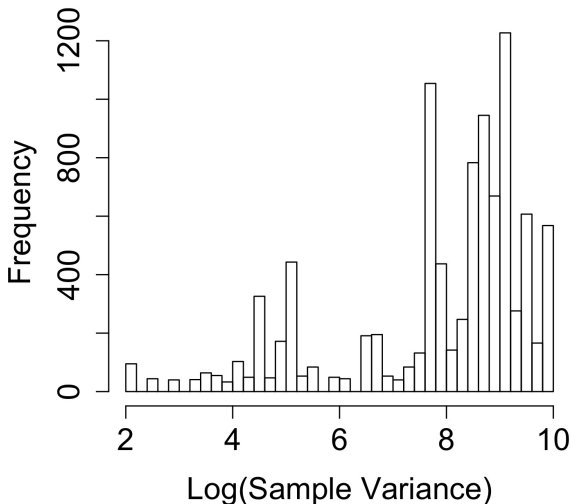
## SF2: Bootstrapped Variance, Social Movements



# SF2: Bootstrapped Variance, Tahrir Square 2011-2013



# SF2: Bootstrapped Variance, GDR 1989 Protest Size



# What is a social network?

## Three Features

- Local clustering (mutual friends)
- Short average path length (six degrees of separation)
- Skewed degree distribution (some very popular people)



# Features and Models

Table: No Model Varies all Features

Feature	Small-world	Scale-free	Holme-Kim
Local clustering	✓	No	✓
Short paths	✓	✓	✓
Skewed degree	No	✓	✓-

# Features and Models

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Skewed degree	No	✓	✓-

# The Model: Scale-free

Table: Model Parameters

Parameter	Values	Purpose
Size	1,000	–
Threshold	$t \sim U([0, 1])$	Willingness to protest
Network skew	$\alpha[2, 3]$	Variation in influence
Repression rate	Node removal $\propto$ degree	Variation in cost
Trials	1,000	Variation

# Measuring Network Skew

## Power Law Exponent

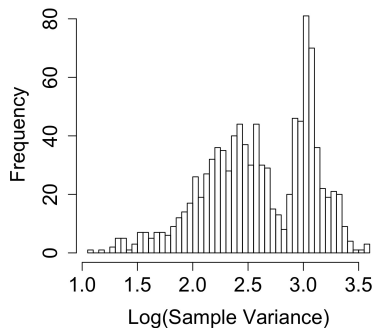
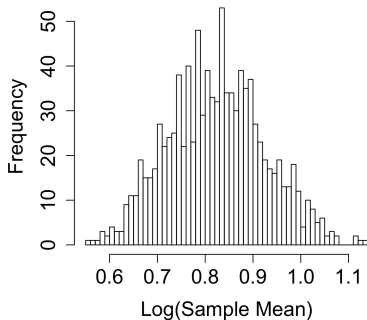
- An idealization: see the Twitter fight between Aaron Clauset, Albert-Laszlo Barabasi, and Alex Vespignani.
- Approximately right preferred to precisely wrong.

# Notes

- First protesters are the activated individual and its connections.
- These protesters never cease protesting; threshold as though it is 0.
- Repression removes nodes in proportion to their degree within protesters.

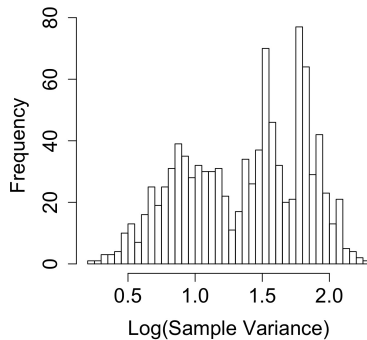
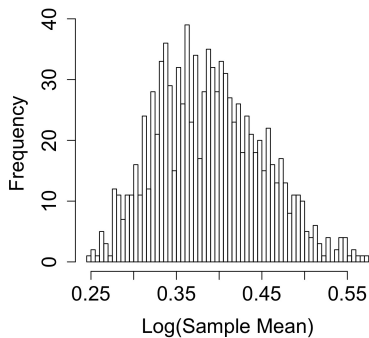
# Network Result 1: Skew, not Clustering

Figure: Skew Recreates Variance of Stylized Fact Two



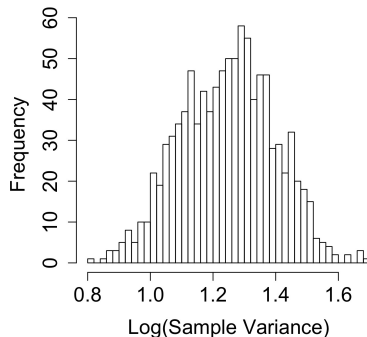
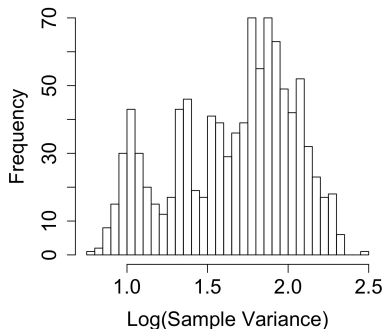
# Network Result 1: Skew, not Clustering

Figure: Holme-Kim Does Too



# Network Result 1: Skew, not Clustering

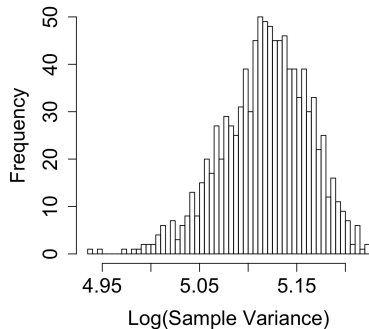
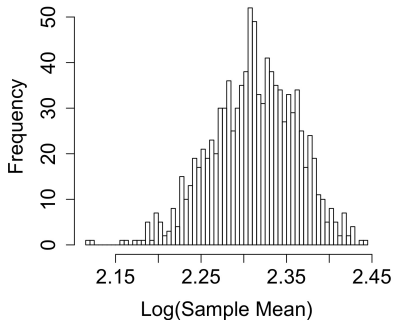
Figure: Holme-Kim Clustering not Required





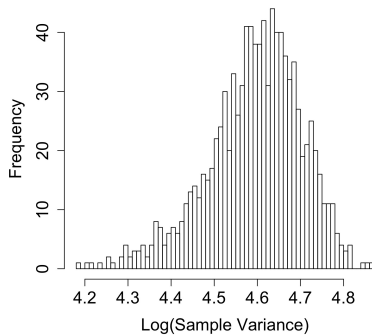
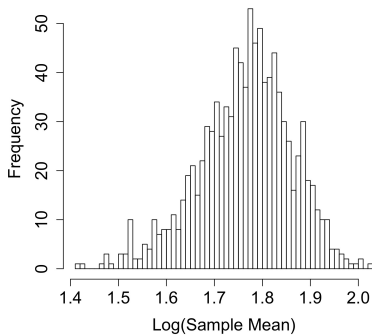
# Network Result 2: Skew + Repression

Figure: No SF2 w/o Repression



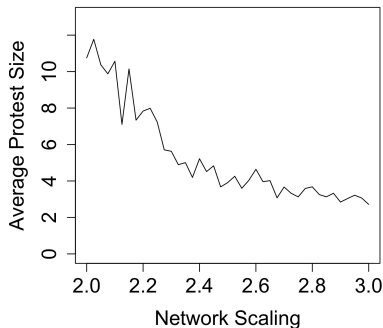
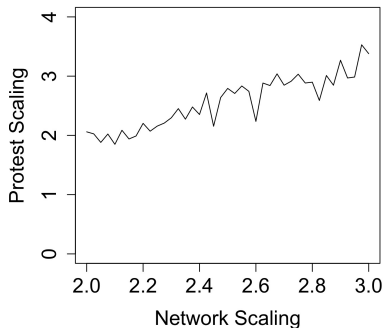
# Network Result 3: Threshold Distribution

Figure: No SF2 w/o Strong Loyalists



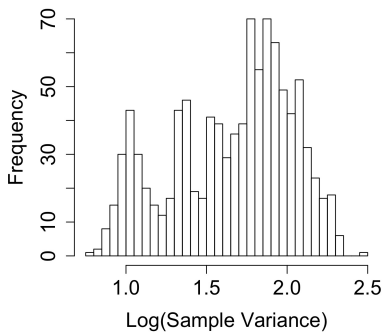
# NR 4: Skew $\downarrow$ OR Clustering $\uparrow \Rightarrow$ Protest Size $\downarrow$

Figure: Less Skew, Smaller Protests

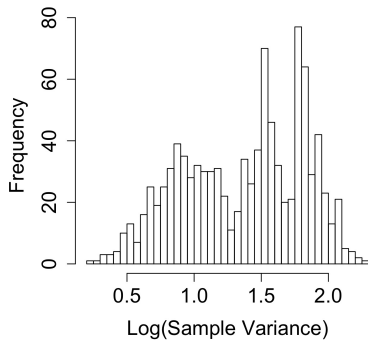


# NR 4: Skew $\downarrow$ OR Clustering $\uparrow \Rightarrow$ Protest Size $\downarrow$

Figure: More Clustering, Smaller Protests



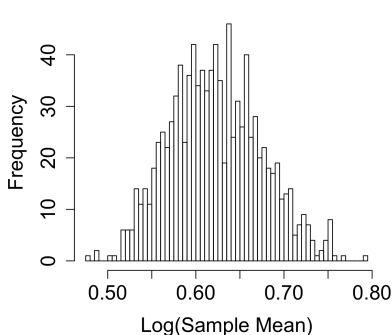
(a) Scale-free



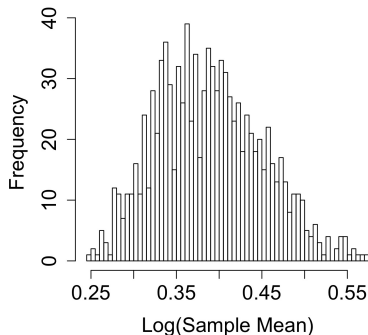
(b) Holme-Kim

# NR 4: Skew $\downarrow$ OR Clustering $\uparrow \Rightarrow$ Protest Size $\downarrow$

Figure: Less Skew, Smaller Protests



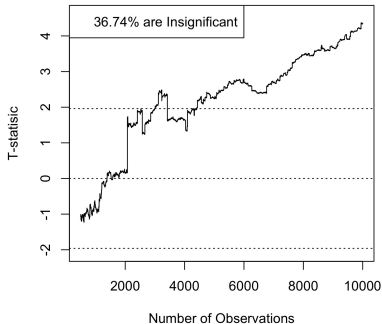
(a) Scale-free



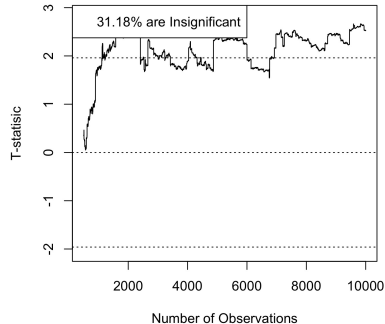
(b) Holme-Kim

# Empirical Result 1: More Data

Figure: Inferences Change Across History: Scale-Free Network



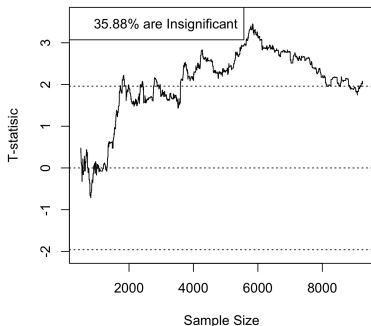
(a) Protesters' Clustering



(b) Network Clustering

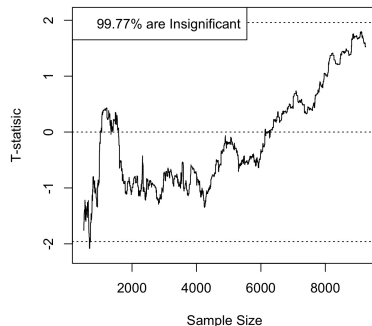
# Empirical Result 1: More Data

**Figure:** Inferences Change Across History: Mass Mobilization in Autocracies



(a) Participant Violence

Steinert-Threlkeld and Steinert-Threlkeld

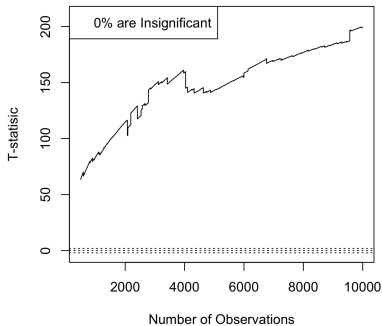


(b) Security Forces' Engagement

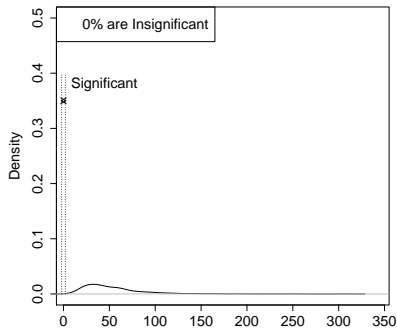
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# Empirical Result 2: Initial Protest Size

Figure: Initial Protest Size Matters



(a) Initial Protest Size



(b) Initial Protest Size



# Network Interpretation of Repression

- Limit public gatherings (initial size of protests)
- Restrict civil society (increase local clustering, remove weak ties)
- Control media (decrease network skew)
- Arrest, exile, or kill opposition figures (decrease network skew)

# Structural Variables

- Structural variables: if social network explanations explain protest variation, then structural variables work through changing thresholds or network structure.

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- Youth bulge → lower average thresholds.
- Economic inequality → lower average thresholds.
- Tertiary education → greater network skew.

# Social Media

- May affect network skew (more).
- May affect protest size (smaller, social media increasing thresholds).

# Prediction and Postdiction

- Postdiction, and conspiracies, will persist because of the accumulation of grievances, and repressive “mistakes”, over the long term. Those explanations are about exogenous shocks.
- Prediction very difficult.

# Other Political Outcomes

- Civil war (Lacina 2006)
- Terrorist attacks (Clauset et al. 2007)
- Interstate wars (Cederman et al. 2003)

# Next Steps

- Get more data.
- Explore effect of average threshold.
- Explore other skewed distributions (lognormal, exponential) of influence.
- Richer model: how network structure interacts with other parts of the repression and dissent process.

Thank you

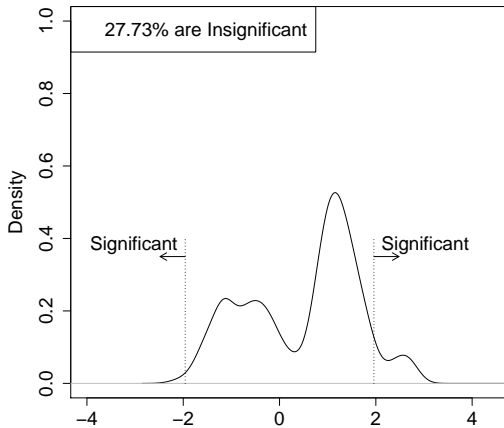


# APPENDIX

STYLISTIC FACT 2:  
GROWING SAMPLE

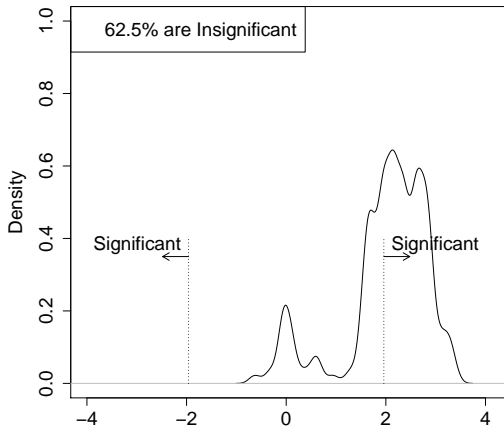
# Mass Mobilization Autocracies

## Intercept



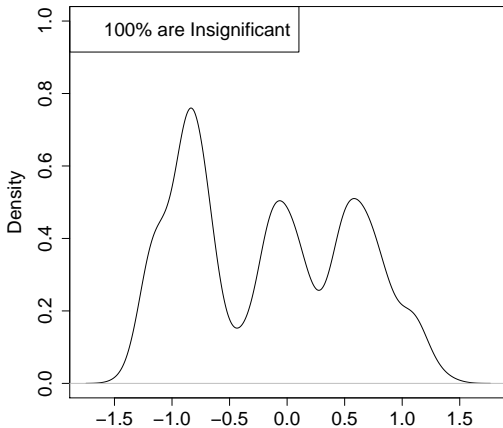
# Mass Mobilization Autocracies

## Participant Violence



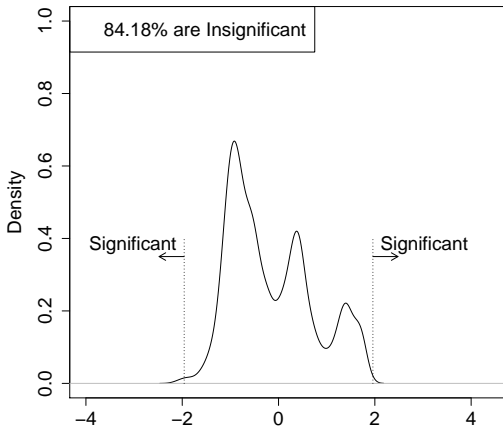
# Mass Mobilization Autocracies

## Participant Scope



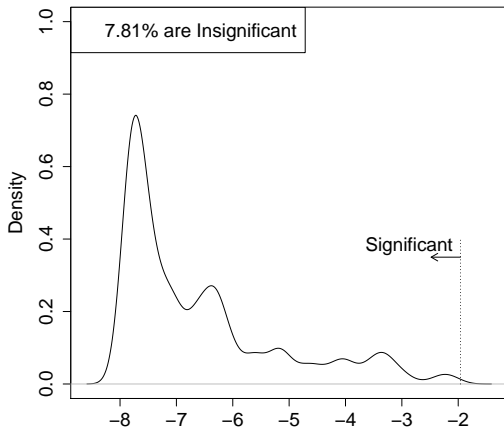
# Mass Mobilization Autocracies

## Security Engagement



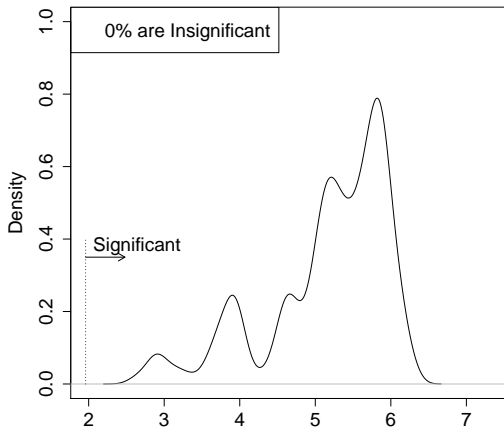
# Mass Mobilization Binghamptom

## Protester Violence



# Mass Mobilization Binghamptom

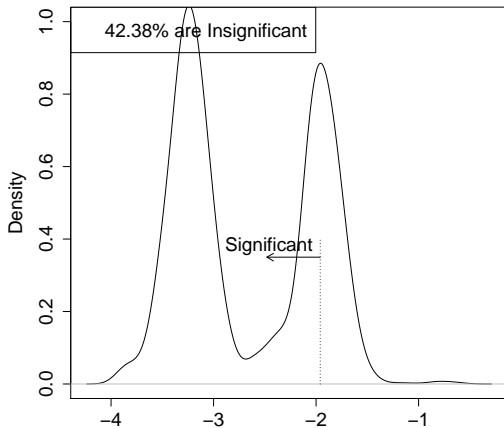
## State Accommodation





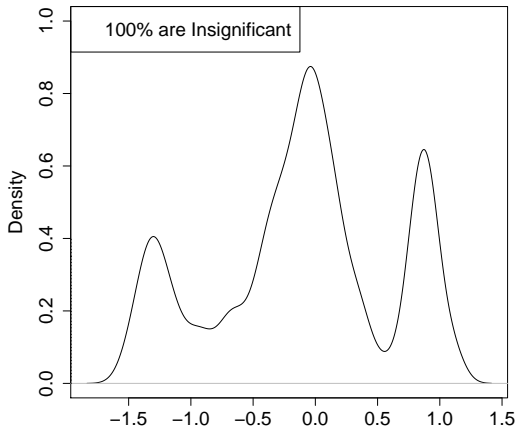
# Mass Mobilization Binghamptom

## State Arrest



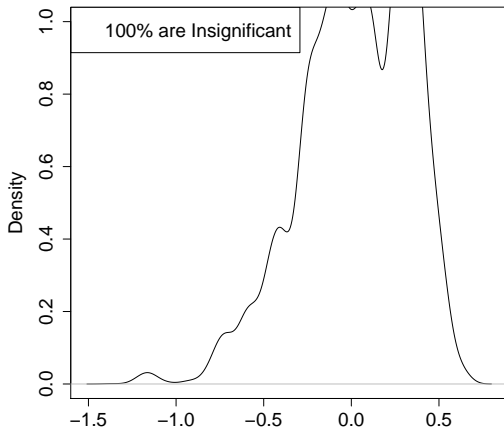
# Mass Mobilization Binghamptom

## State Beating



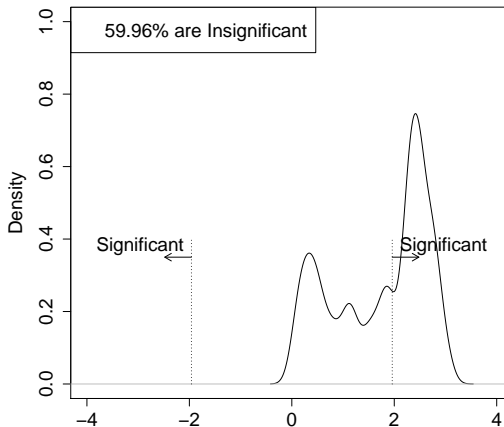
# Mass Mobilization Binghamptom

## State Kill



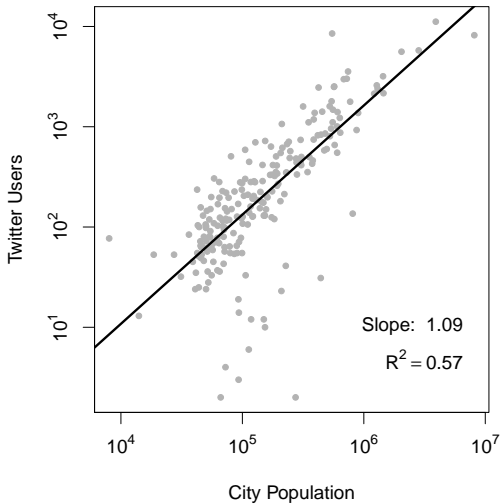
# Mass Mobilization Binghamptom

## State Shoot

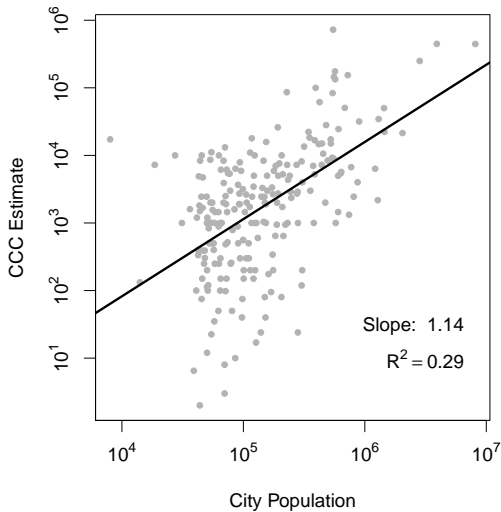


# SUPERLINEAR SCALING

# Superlinear Scaling with City Size



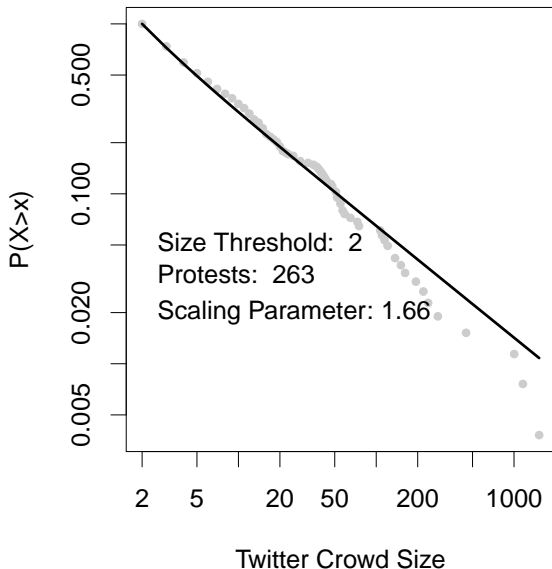
# Superlinear Scaling with City Size



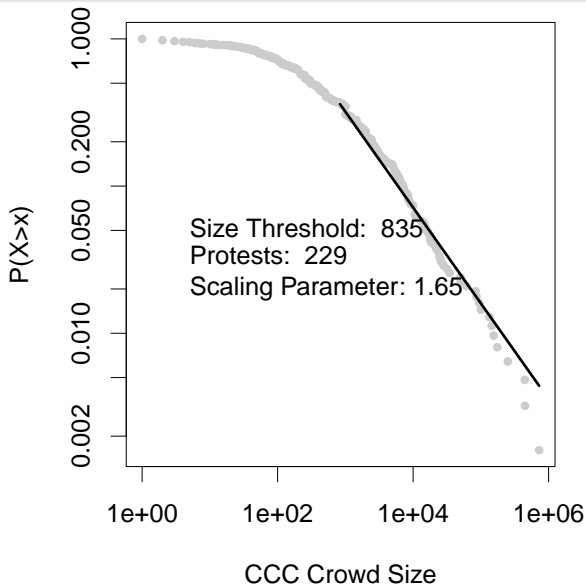
# POWER LAWS



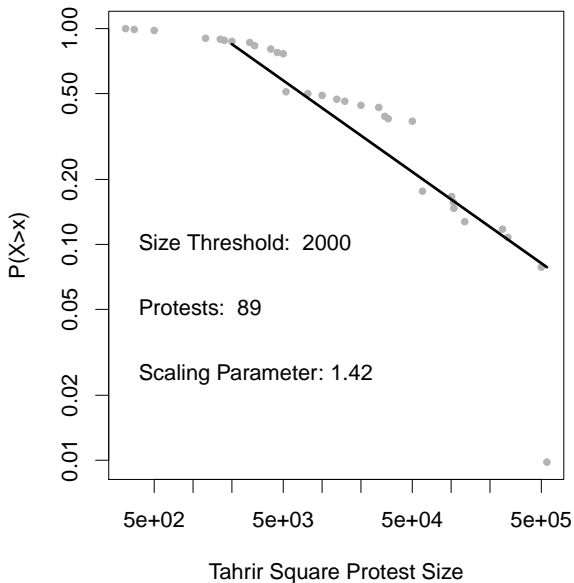
# Protest Size, United States 2017 Women's March



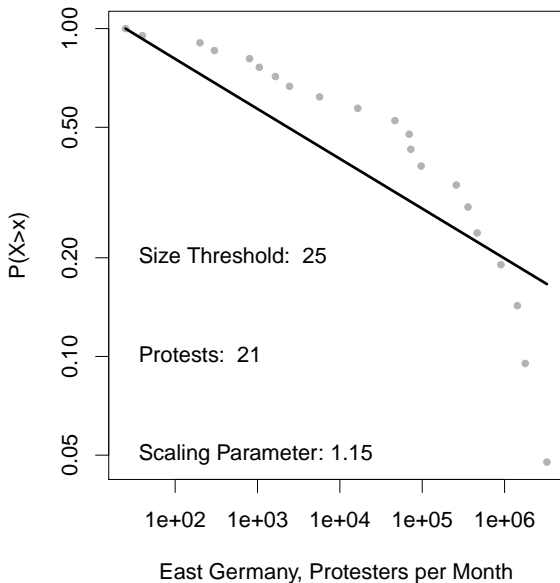
# Protest Size, United States 2017 Women's March



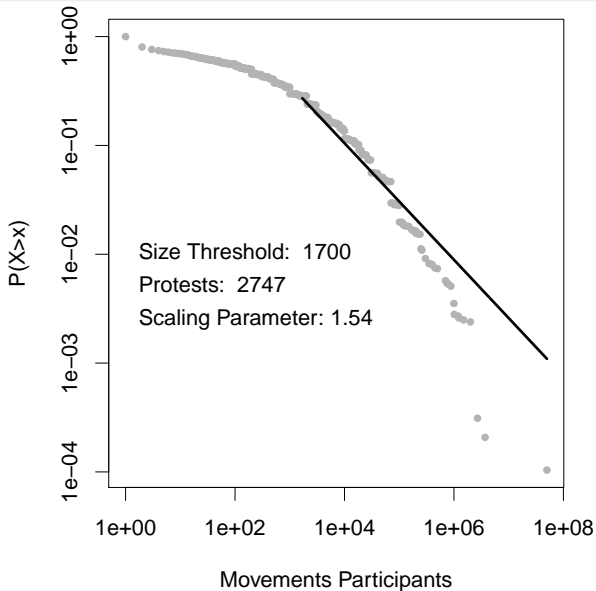
# Protest Size, Tahrir Square, 2011-2013



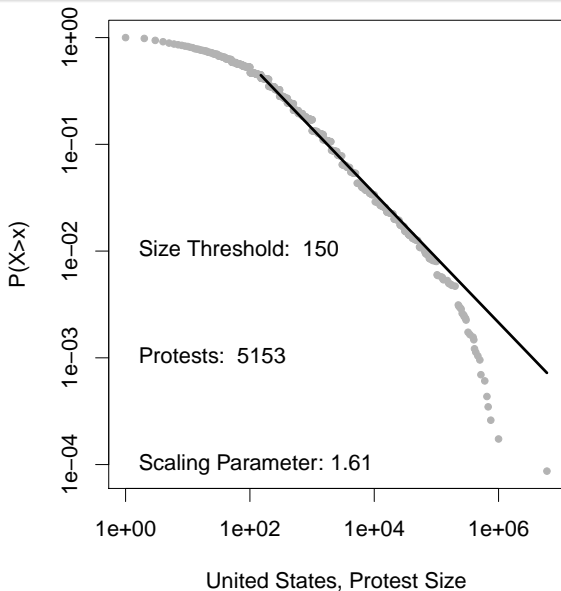
# East Germany, 1989-1991



# Social Movements, 1900-2011

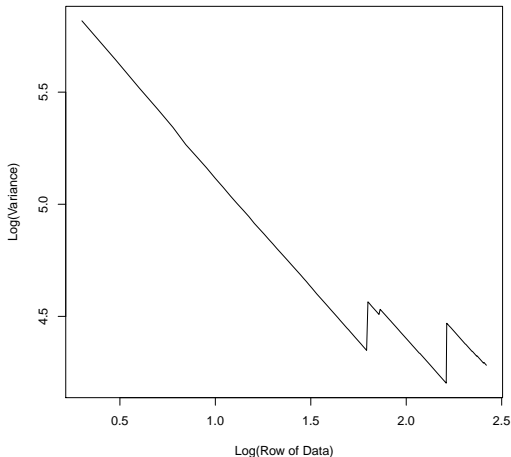


# US Collective Action, 1955-1995



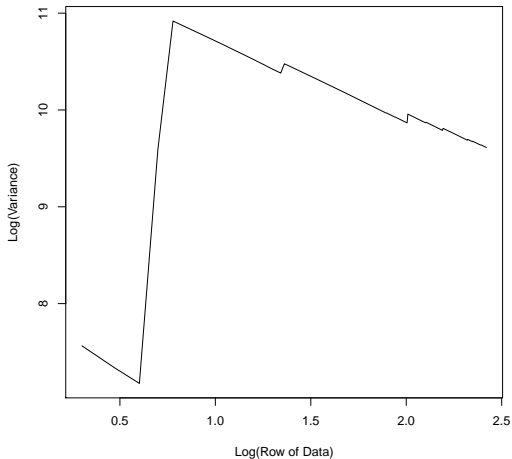
# Scale-free, $\alpha < 2$ ?

## US Women's March, Twitter



# Scale-free, $\alpha < 2$ ?

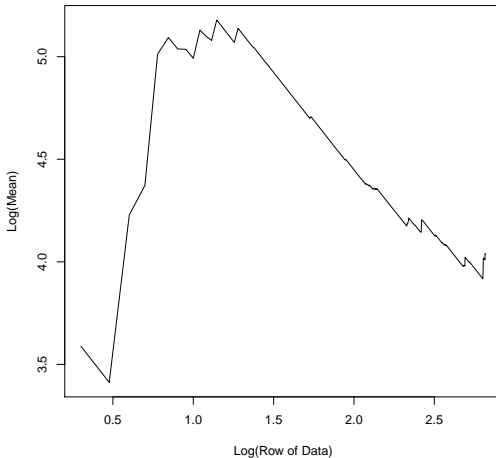
## US Women's March, Newspapers





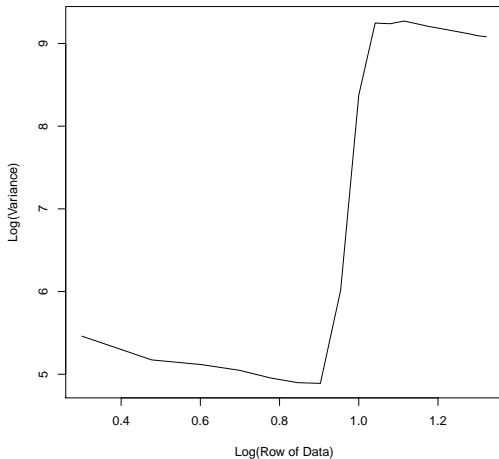
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## Tahrir Square



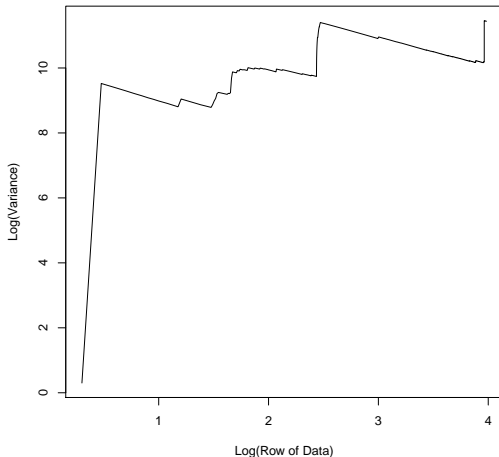
# Scale-free, $\alpha < 2$ ?

## East Germany



# Scale-free, $\alpha < 2$ ?

## Social Movements



# Scale-free, $\alpha < 2$ ?

## US Collective Action

