

# Household Survey Nonresponse: Research Relevant to Statistical Policies

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“Increasingly, [people] are refusing to participate in consumer surveys.”

“A truly representative survey may be unattainable...”

The New York Times,  
June 15

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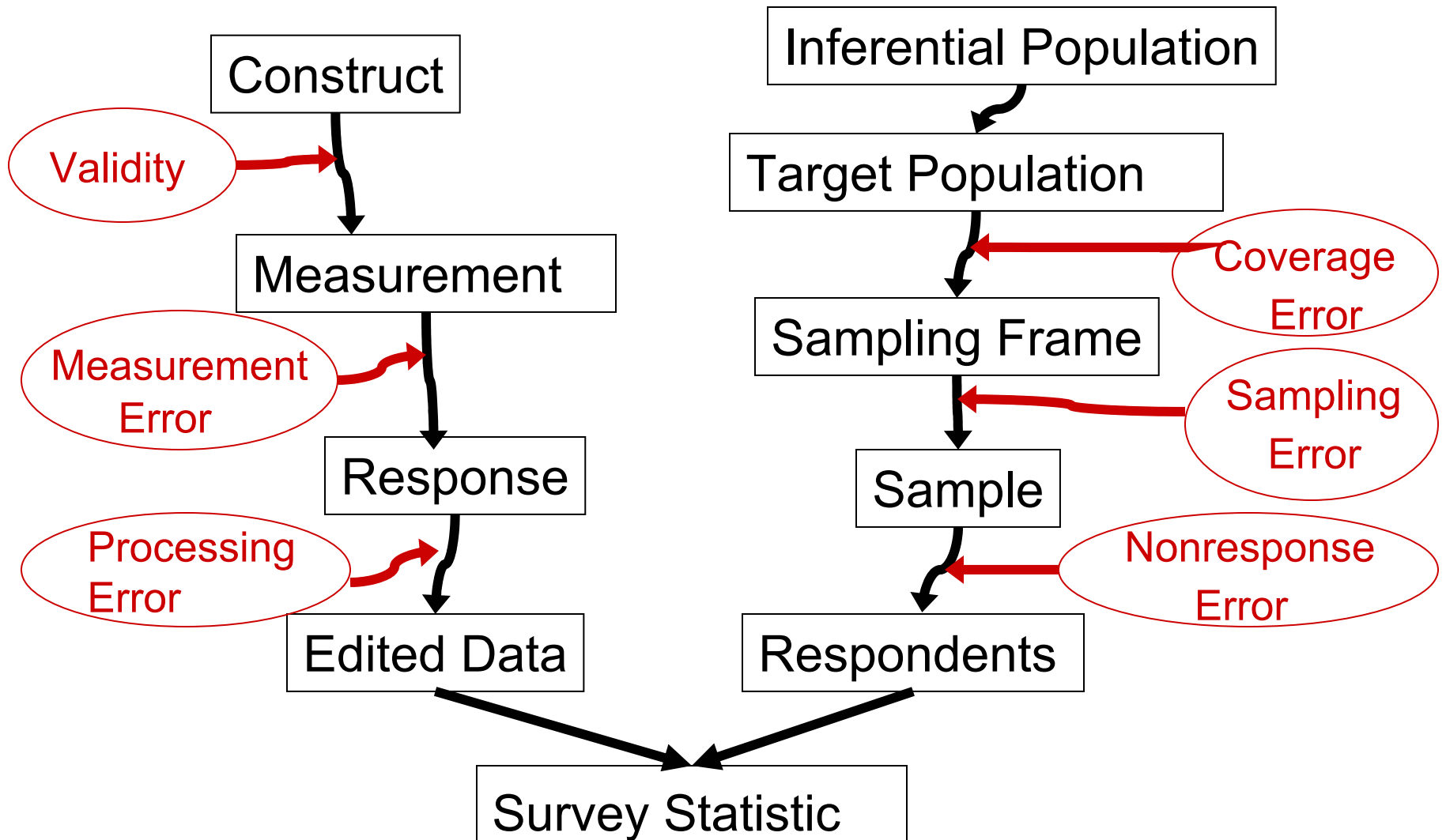
“A truly representative survey may be unattainable...”

The New York Times,  
June 15, **1986**

# Nonresponse Viewed in the Total Survey Error Perspective

Measurement

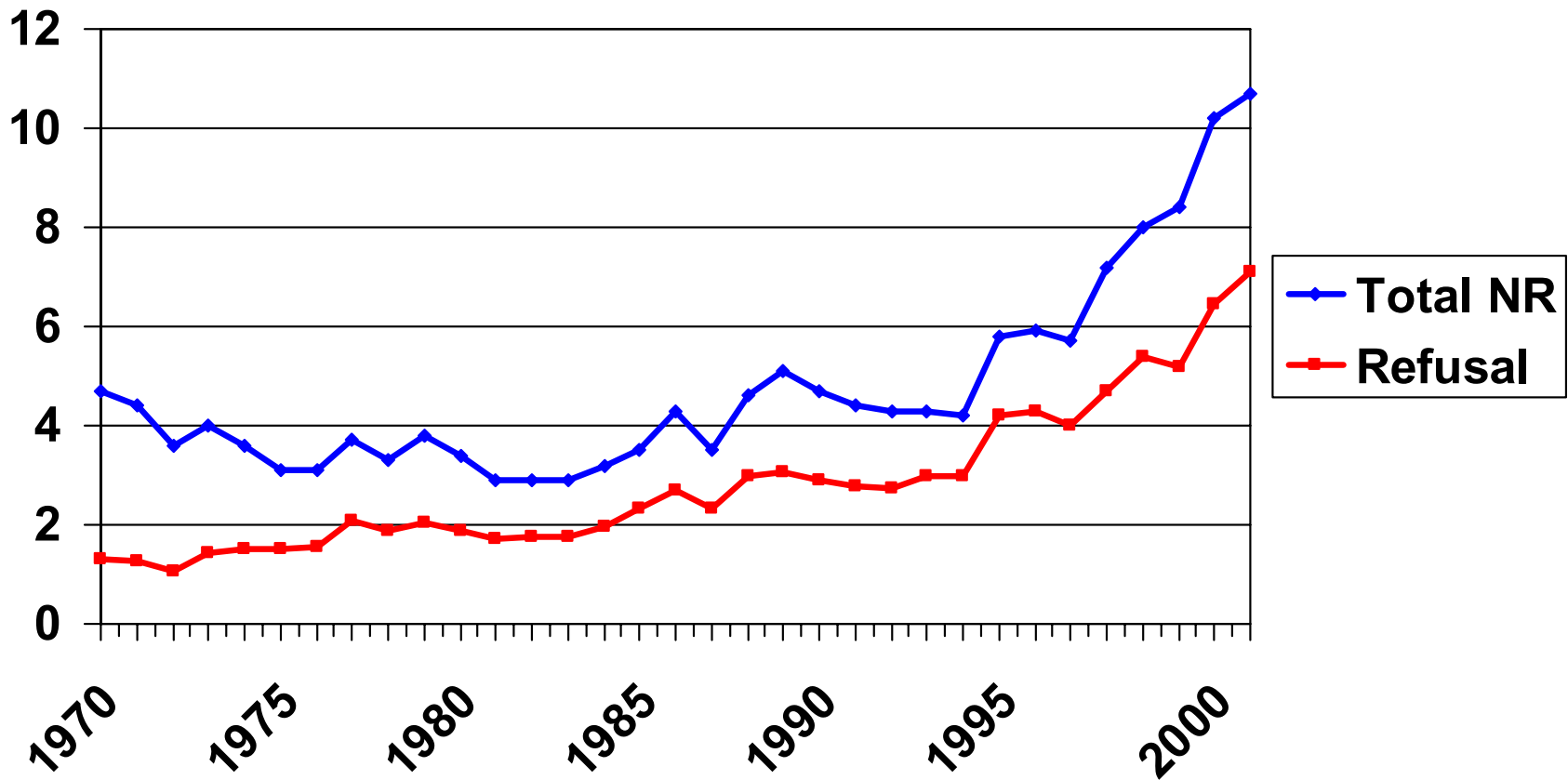
Representation

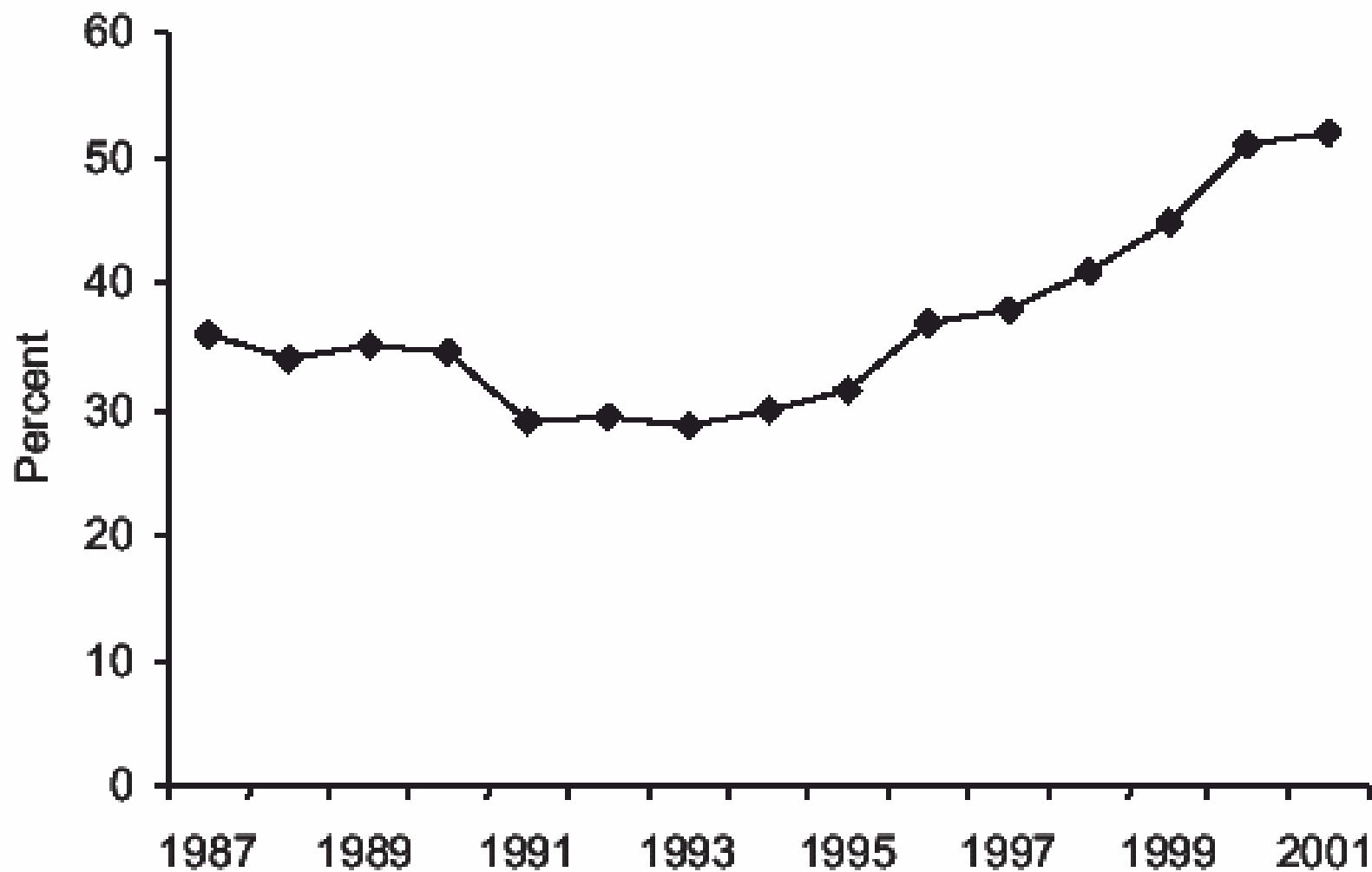


# Status of Household Survey Nonresponse

- Falling cooperation rates in the developed world (de Leeuw and de Heer, 2002)
- Greater decline in one-time surveys vs. longitudinal surveys (AAPOR, 2003)
- Greater decline in telephone than face to face surveys (increasing noncontacts)
- Greater decline in unit nonresponse than item nonresponse

# National Health Interview Survey Nonresponse Trends





**Figure 6.11 Median nonresponse rate across states, Behavioral Risk Factor Surveillance System, 1987–2001. (Source: BRFSS.)**

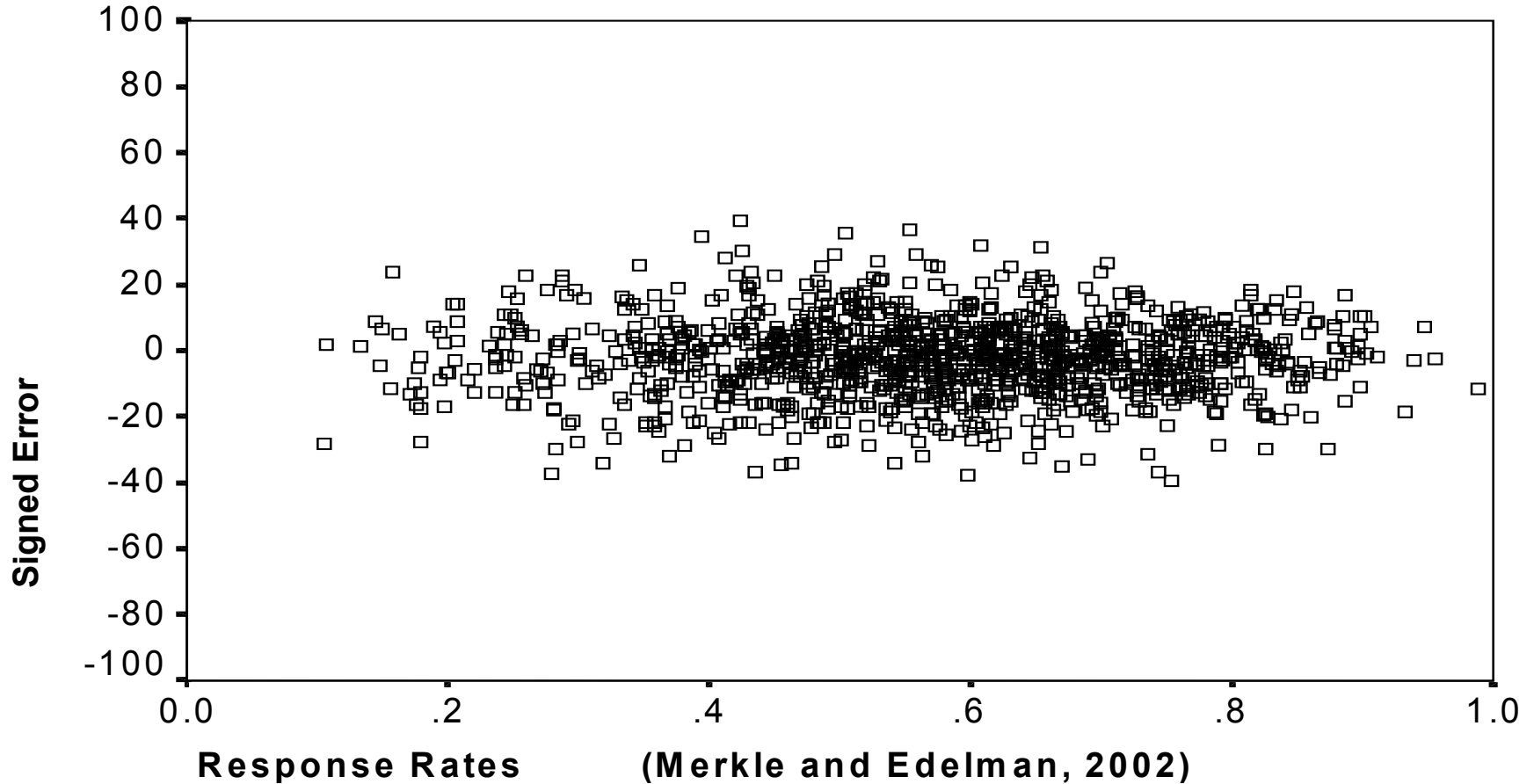
# FAQ's on the Scientific Findings re Survey Nonresponse

1. Do higher nonresponse rates *always* imply more biased population estimates?  
*clearly no (Keeter et al., 1999; Curtin et al., 2000; Merkle & Edelman, 2002)*

# Merkle and Edelman (2002): Exit Poll Response Rates and Bias

- Voter News Services exit polls, 1992, 1996
- Sample precinct response rates vary greatly, mostly between 45-75%
- Compare respondent vote to reported precinct vote
- No relationship between response rate and deviation

# Signed Error by Response Rate for Sample Voting Sites



# FAQ's on Survey Nonresponse

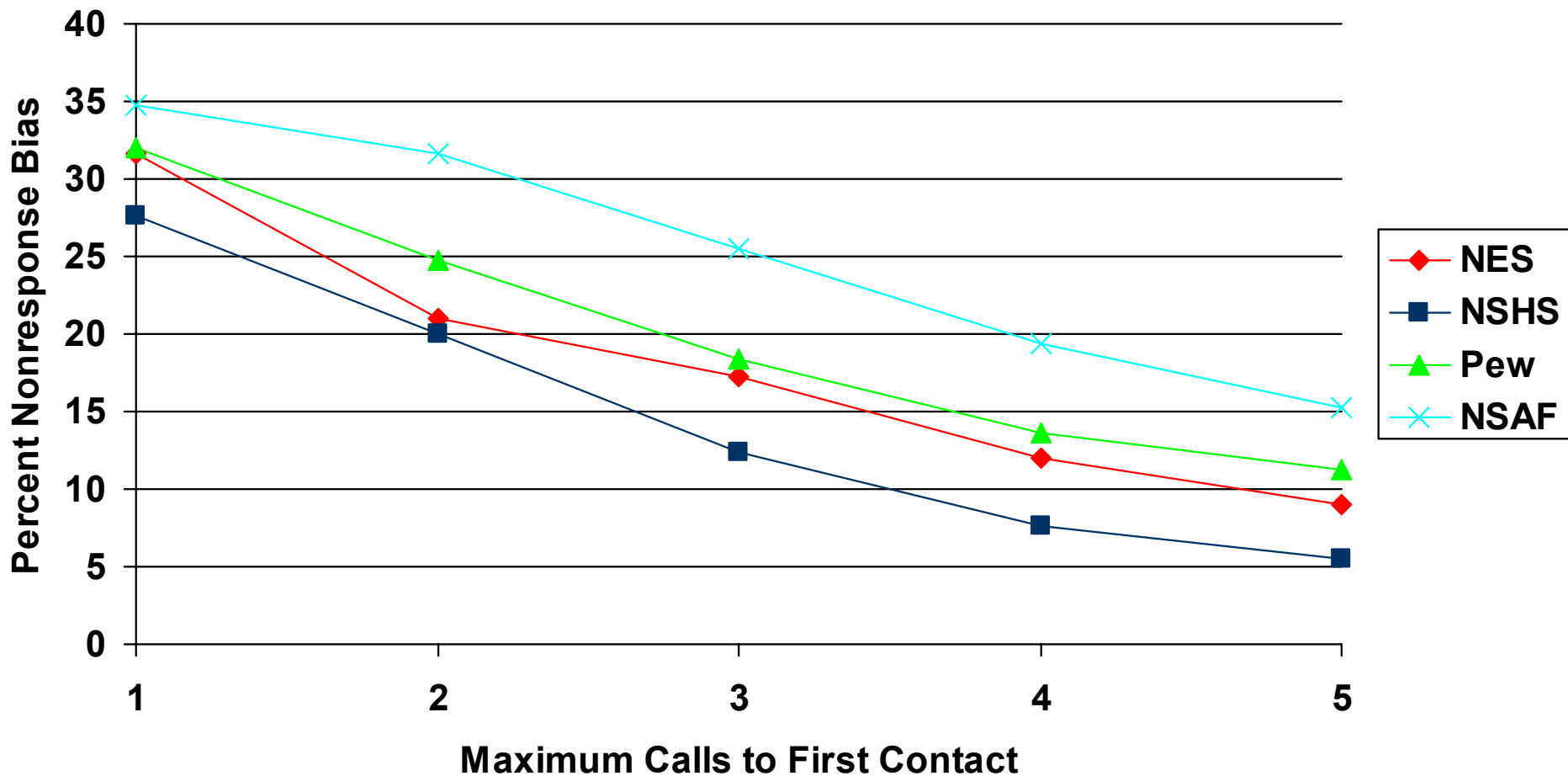
2. Does **reducing** the nonresponse rate ever produce more biased estimates?  
*clearly yes (Merkle et al., 1998)*

# FAQs on Survey Nonresponse

3. Do higher nonresponse rates *ever* imply more biased population estimates?

*clearly yes (Groves et al., 2000; Groves et al., 2004)*

# Nonresponse Bias in Estimated Percentage of Households with Single Member by Call Number Reached



# FAQs on Survey Nonresponse

4. Will all statistics from a low-response rate survey suffer the same relative biases?

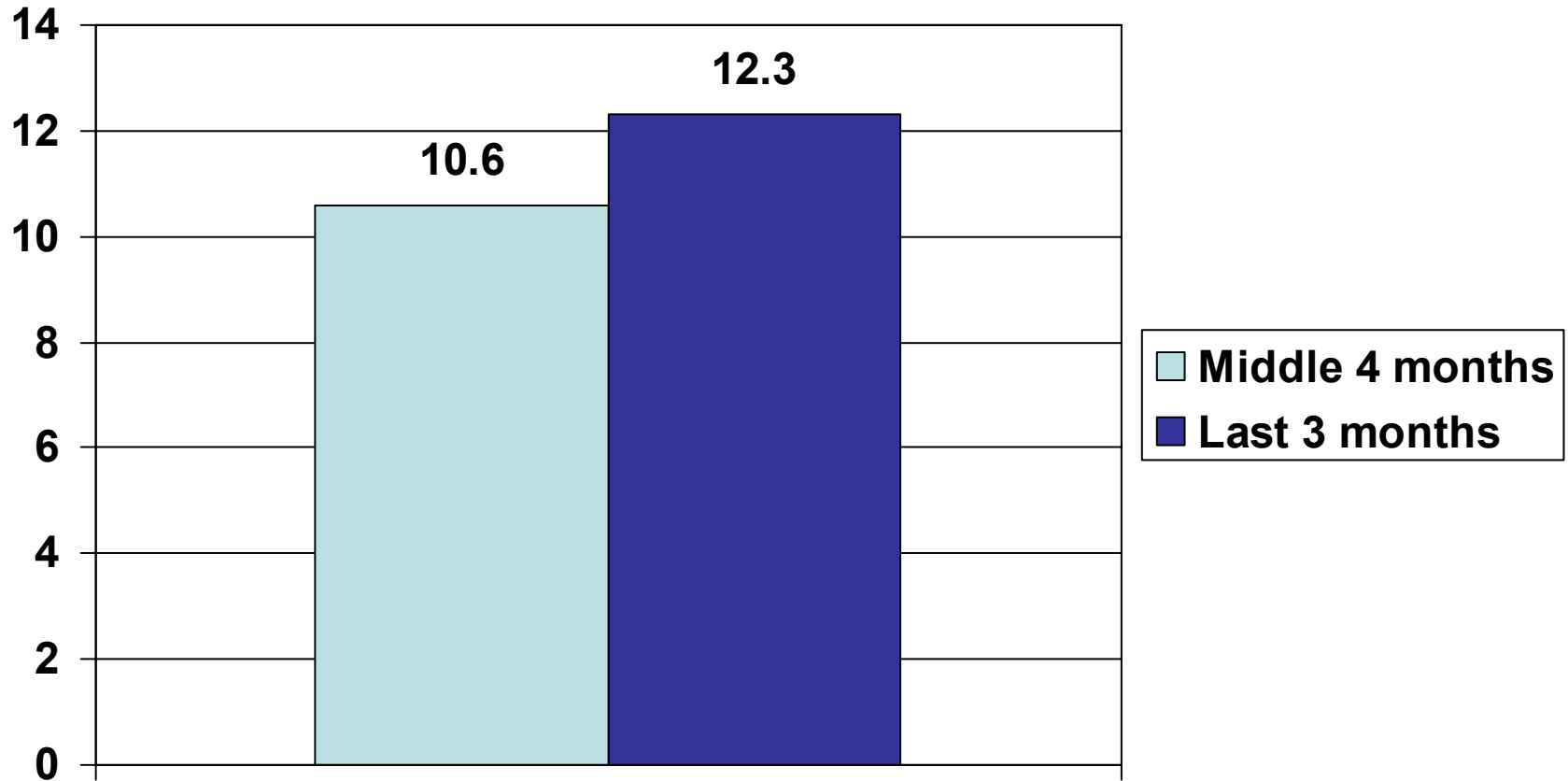
*Clearly no, error will vary as function of covariance between response propensity and item's value*

# FAQs on Survey Nonresponse

5. Do noncontact and refusal tendencies *always* increase standard error per unit costs?

*clearly yes (especially on surveys with high response rate targets)*

# Hours Per Interview of Middle Four Months versus Last Three Months of 11 Month Field Data Collection



# Summary of Nexus between Nonresponse Rates and Nonresponse Errors

- Empirical research results suggest linkage is more complex than practice acknowledges
- Statistics linked to causes of participation are clearly the most vulnerable

# Effective Nonresponse Rate Reduction Methods

- Incentives reduce nonresponse rates
  - higher effects with increasing incentives
  - prepaid incentives more powerful than promised
  - cash more powerful than in-kind
  - incentives can reduce total survey costs
- Callbacks/Followups/Long data collection period
  - more calls reduce noncontact rates
  - face to face calls more effective per call than telephone

# Effective Reduction Techniques

- Federal government sponsorship increases cooperation
  - higher response rates by Federal data collectors
  - higher response rates when Federal government sponsorship is made salient
- Postsurvey adjustments when informed by causes of response propensity can be useful

# Needed Research

- Science of response: Increasing focus on the conditions under which nonresponse produces error
  - topic interest, sponsorship, incentives
  - does increasing response rates harm measurement error properties of survey statistics?
  - what concepts of social and cognitive psychology inform these questions?
- Survey engineering: responsive design features
  - differential incentives
  - mixes of modes
  - two phase sampling of nonrespondents