

Why People Respond to Surveys: Notes toward a Cost-Benefit Theory of Survey Participation

Eleanor Singer

*Survey Research Center
Institute for Social Research
University of Michigan*

March 12, 2010

Acknowledgments

- I would like to thank the JPSM Committee for inviting me to give this lecture. It's an honor and a pleasure.
- Special thanks to Mick Couper and Stanley Presser for their indispensable support, and to Roger Tourangeau for his vision of a golden age.

Why Do People Participate in Surveys?

- Little information exists about people' reasons for deciding to participate in a survey
- Responses to open-ended questions added to hypothetical descriptions of surveys (“How willing would you be to participate in the survey described? Why (or Why not?”) suggest 3 broad categories of reasons for participation, with roughly equal numbers offering responses in each group (also see Porst and von Briel, 1995):
 - **Altruistic**
 - **Egoistic**
 - **Survey-related**
- Caveat: Responses are from survey respondents; don't know how representative they are of reasons for population as a whole

Why Don't They Participate?

- And four broad categories of reasons for nonparticipation, with varying distributions of responses among the categories:
 - **General reasons: Not interested, no time**
 - **Survey-related: Topic, sponsor, purpose, etc.**
 - **Privacy-Related**
 - **Not enough benefit**
- Note that “survey-related” reasons are given for participation as well as nonparticipation
- Have repeated this question on several surveys, in various modes, with similar results

Why Do People Make Medical Decisions?

- National study of medical decision-making
- People defined as having made decision if they took action within last two years or discussed doing so with a HCP
- 9 medical conditions, in 3 broad areas: medication initiation, surgery, cancer screening
- Asked how important specific reasons for and against had been in their decision to act
- Importance of specific reasons varied across decisions, but net balance of benefits over costs consistently predicted action/inaction across all 3 decision types
- The same is likely to be true of the decision to take part in surveys

So What's New?

- Naïve version of “utility theory”
- Closely related to “leverage-saliency theory” (Groves, Singer, and Corning, 2000)
- L-S theory asserts that respondents have different reasons for and against participating in a survey, each with a potentially different weight
- It emphasizes interviewer’s role in making benefits and costs salient to respondent as well as the possible interaction of different incentives in stimulating response
- My emphasis today is rather on the need to achieve a favorable balance of perceived benefits relative to perceived costs, and on the need to better understand intrinsic motives for participating in surveys

Outline of Talk

- Argument
- Extended Example:
 - Research on confidentiality assurances, risk perception, and survey participation, organized from perspective of a theory of action based on respondents' calculus of both benefits and costs
- Implications, Limitations, Next Steps

The Argument

- Much current research focuses on meeting potential respondents' objections to participation by reducing their perceived costs
 - Research on tailoring, e.g. Groves and McGonagle (2001)
 - Research on doorstep interactions, e.g. Bates et al. (2009)
 - Research on confidentiality assurances and disclosure limitation, e.g. Couper et al. (2008)
- Simply reducing costs isn't enough; unless respondents perceive benefit they won't participate
- People choose to act when, in their subjective calculus, the benefits of doing so outweigh the costs

Extended Example 1: Does Confidentiality Assurance Improve Response?

- Singer (1978) found it did not
- Purpose of study: Assess impact of information about confidentiality, content, and request for signature on response rate and quality
- Design:
 - Attitude survey plus experiment
 - National sample (N=2084)
 - Field work: NORC; personal interviews
 - Response rate: 67%
- Experiment:
 - 2 (content) x 3 (confidentiality) x 3 (signature) factorial design
 - Each interviewer administered all

Effects of Confidentiality Assurance

| | |
|---|-----|
| Qualified assurance (“except as required by law”) | 66% |
| No Mention | 68% |
| Absolute assurance | 67% |

- But, those with absolute assurance had significantly less missing data on the most sensitive items
- In subsequent experiments by others, support for beneficial effect of confidentiality assurances was sometimes negative; cf. Frey (1986), Reamer (1979)

Do Confidentiality Assurances Improve Response When Data Are Not Sensitive?

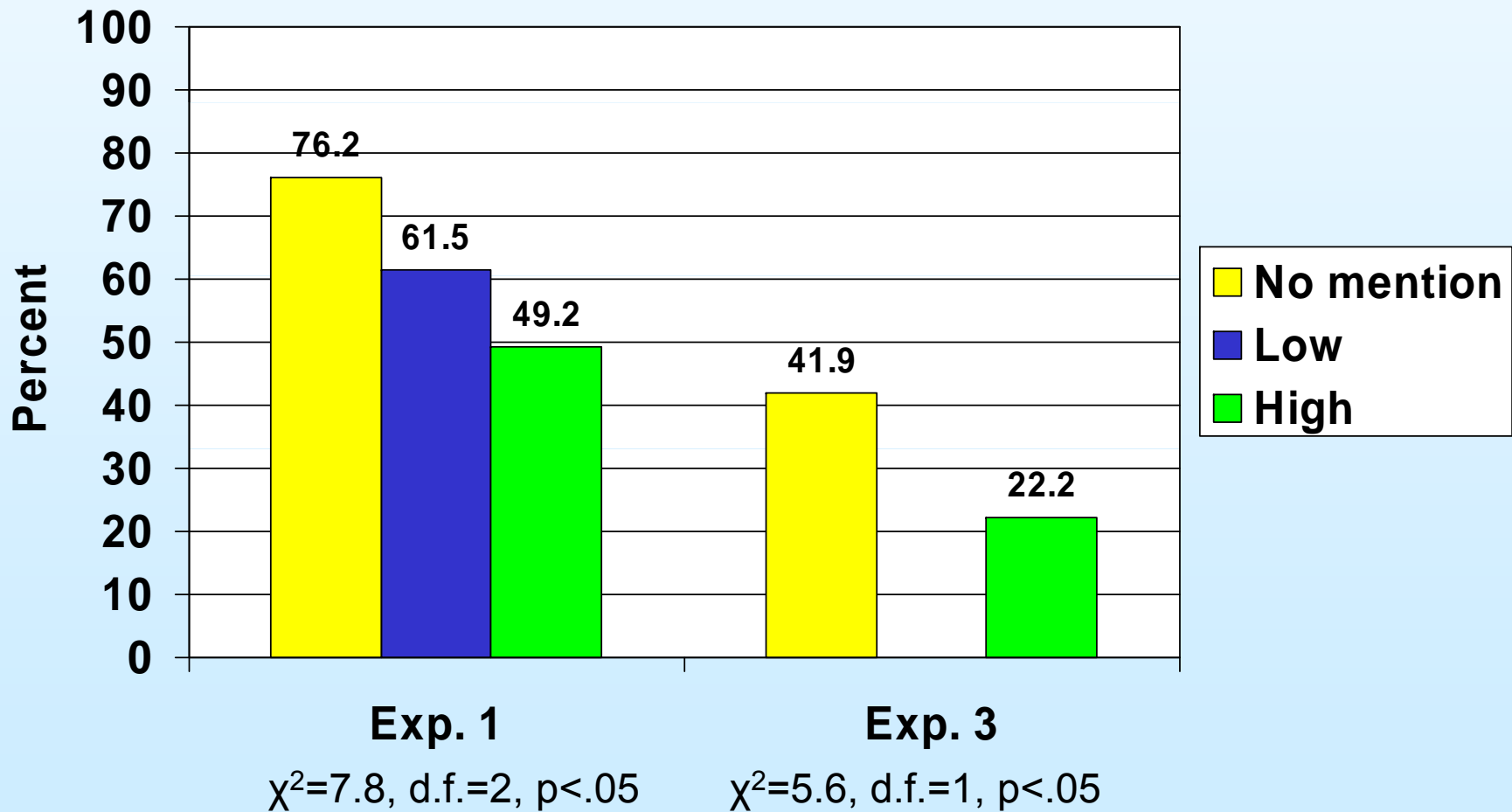
- Singer, Hippler and Schwarz (1992) hypothesized boomerang effect: more elaborate assurance, especially with non-sensitive content, would lead to lower response rates because survey would be seen as riskier
- 3 experiments in Mannheim, Germany—two with students, one with general population

Singer, Hippler and Schwarz (1992)

Experiments

- Experiment 1: “Survey of Student Life” (self-administered, paper and pencil)
 - Three conditions: No mention; one-sentence assurance; several sentences + one-page description of German Data Protection Law (N=159)
 - One-page questionnaire
 - Dependent variable: Expressed willingness to participate
- Experiment 2: “Survey of Student Life”
 - Same three conditions as in Experiment 1 (N=159)
 - Dependent variables: Willingness to participate and perceptions of riskiness of questions (N=48)
- Experiment 3: “Citizens’ Survey, 1988” (general population, mail survey)
 - Two conditions: No mention; elaborate assurance plus copy of Data Protection Law (N=123)
 - Dependent variable: Willingness to participate (on return postcard)

Willingness to Participate by Confidentiality Assurance (%)



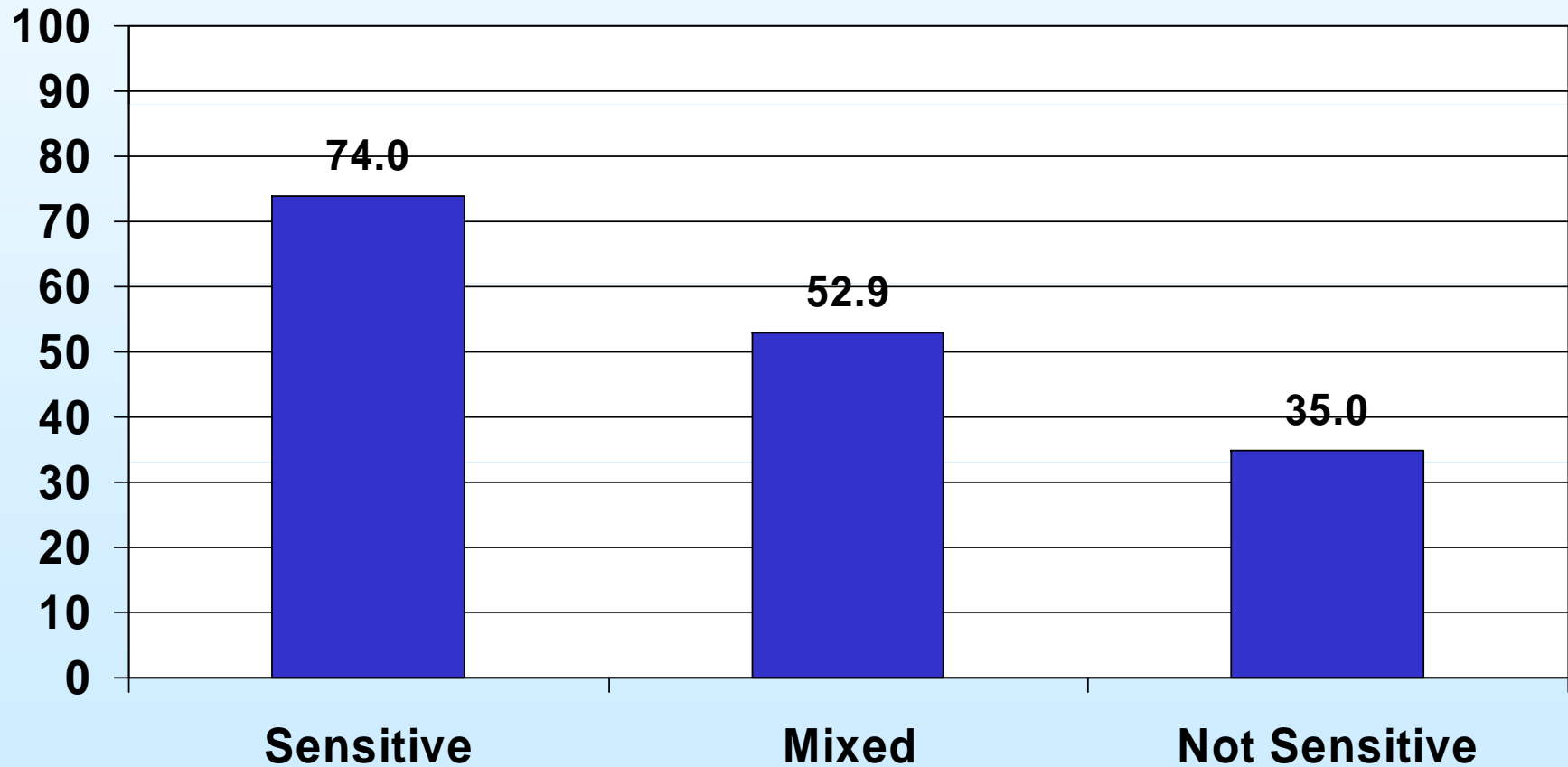
Experiment 2: Expectations about the Questionnaire

- Hypothesis: Greater confidentiality assurances lead to higher refusals because they increase respondents' perceptions of interview threat
- Results: Students in condition 3 vs. 1 & 2
 - Were more likely to refuse
 - Expected questionnaire to contain more questions they would not like to answer
 - Expected more personal questions
 - Expected more threatening questions
 - Thought it more likely that data would fall into wrong hands
 - No differences between Conditions 1 & 2

Do Stronger Confidentiality Assurances Improve Response When Data Are Sensitive?

- Secondary analysis of 64 tests of hypothesis in 30 separate reports (Singer, Von Thurn & Miller, 1995)
- Experiments classified by whether data were sensitive or not sensitive and whether confidentiality assurance was stronger or weaker
- For each test, coded whether assurance of confidentiality improved rate or quality of response

Percent of Tests Supporting Hypothesis that Confidentiality Assurance Improves Response, by Data Sensitivity



$\chi^2=7.23$, d.f.=2, p=.027

Where Do We Stand?

- The hypothesis that a stronger assurance of confidentiality improves response rates or quality was supported by the meta analysis
- But the question posed earlier in this talk, whether confidentiality assurances reduce nonresponse by reducing the perceived costs of answering, or whether they increase response by increasing the perceived benefits of doing so, remains unanswered.
- The next line of research comes a little closer to addressing this question.

Participation in Research and Beliefs about Risks and Benefits

- Purpose of study: To explore people's understanding of confidentiality assurance and their perceptions of the risks/harms and benefits involved in participation.
- Sample: Respondents to April 2003 Survey of Consumers (N=519; response rate ~60%)
- Method: Vignettes describing two ongoing surveys at ISR—NSFG, HRS—presented to respondents near end of SCA survey.
 - Respondents asked how willing they would be to participate (WTP) in survey described
 - Then, asked about their perceptions of the risks and benefits of the survey described in the vignettes

Example Vignette (NSFG)

We are trying to learn how to better describe surveys to respondents. Imagine that the interviewer is talking with the respondent in person, in the respondent's home, and describes the first study as follows:

You have been chosen to participate in a special study called the National Survey of Family Growth being done by the University of Michigan for the National Center for Health Statistics. As a token of our appreciation, you will receive \$25 whether you decide to participate in the study or not. The goal of the study is to gather information from a national sample of households about schooling, work, marriage and divorce, family life, sexual experiences, pregnancy, and medical care. Because we would like to obtain a record of your medical care and most people cannot recall this information very well, we are asking permission to obtain this information from your medical provider. Your participation will help government agencies and health policy makers to plan better health services and educational programs for American men, women, and families.

Your answers to our questions are used for research purposes only. Any information you give us will be kept confidential to the fullest extent possible under state and federal law.

This interview is completely voluntary, and nothing will happen if you choose not to participate. If there are any questions you do not wish to answer for any reason, you can ask the interviewer to skip them.

Remember, we are NOT asking you to take part in this study. We just want to get your reactions to the description I've just read to you.

Key Variables

- Willingness to participate
 - “Please tell me how likely it is that you would take part in the survey I just described to you. Use a scale from zero to ten, where zero means you would definitely not take part and ten means you would definitely take part.”
- Perception of risk
 - “How likely do you think it is that each of the following people or groups would find out your answers to the survey questions, together with your name and address?” (Asked for family members, business firms trying to sell something, employers, law enforcement agencies)
- Perception of harm
 - “How much would you mind if each of the following people or groups would find out your answers to the survey questions, together with your name and address?” (Asked for the same four groups as above)
- Perception of social benefits
 - “How useful would each of the following groups find the information from the survey?” (Asked about sponsor of survey, businesses planning new products, other researchers, and law enforcement agencies)
- Perception of personal benefit
 - “Would you, yourself, get anything good out of the survey?”
- Perceived risk/benefit ratio
 - “Taking it all together, do you think the risks of this research outweigh the benefits, or do you think the benefits outweigh the risks?”

The Relationship of Risks and Benefits to WTP

| Variable | Parameter | Std. Error | Sig. |
|------------------|------------------|-------------------|-------------|
| Intercept | 5.457 | 1.050 | <.001 |
| Risk | -0.103 | 0.047 | <.05 |
| Risk/Benefit | -1.817 | 0.248 | <.001 |
| Harm | -0.163 | 0.045 | <.001 |
| Social Benefit | 0.162 | 0.055 | <.001 |
| Personal benefit | 1.439 | 0.260 | <.001 |

(Plus controls for age, gender, education, study, order, and confidentiality assurance)

Current Research on Risk, Benefit, and Survey Participation

- 5-Year program project to investigate statistical disclosure limitation and its impact on informed consent and survey participation, begun in 2004
- Our part (Singer, Couper, Conrad, Groves,) looked at the effect of risk communication and perception on participation
- Used qualitative interviews, 2 lab studies, 2 Web studies, and a mail survey

First Web-Based Experiment: Design

- Independent Variables:
 - 4 topics x 4 risk statements x 2 confidentiality assurances=32 conditions
- Questionnaire
 - 8 survey invitations (vignettes) + questions about WTP and reasons for Why/Why not
 - Questions about perceived risk and harm (after 1st or 8th vignette only)
 - Questions about privacy and confidentiality concerns, attitudes toward surveys, trust
 - Demographic questions
 - Approximately 12 minutes
- Sample: N=3671 completed questionnaires

First Web-Based Experiment: Example Vignette

“Imagine that in about a week a professional survey interviewer visits your home and asks you to take part in a survey on sexual behavior and sexually transmitted diseases, sponsored by the National Institutes of Health. The information you provide will help shape government policy on sexually transmitted diseases.

“The information you provide is confidential. Based on experience, we think there is a one in ten chance that someone will connect your name with your answers. The interview will take 20 minutes, and you will receive \$10 as a token of the researcher’s appreciation.”

Web Survey Findings (across Both Web Studies)

- Survey topic significantly affects WTP: sensitive topics decrease it
- Disclosure risk has no significant effect on WTP except:
 - If respondent is exposed to multiple vignettes
 - If description of harm is coupled with disclosure
- Subjective perceptions of risk DO significantly reduce WTP
- Largest share of variance in WTP is explained by perceived benefits to self or others, not by perceived risk or harm

Results for Mail Survey

■ Design:

- 4 Topic x 5 Risk-Harm=20 Conditions
- N=8000
- Return rate=28%

■ Results:

- Sensitivity significantly reduced return rate
- Mention of harm significantly reduced return rate
- Mention of risk did not affect returns

■ Implication:

- Vignettes are a robust technique for investigating these research questions

Responses to Open-Ended Questions, First Web Experiment

- Reasons for willingness to participate (N=1062):

| | |
|---|-------|
| Altruistic responses (e.g., Research is important; wants to be helpful to researchers) | 30.3% |
| Egoistic responses (e.g. I like surveys; I'd learn something; the money; want my opinion heard) | 33.6 |
| Likes aspects of surveys (e.g. Likes topic; likes organization; survey is short) | 26.6 |
| No objections | 5.2 |
| Uncodable/missing | 4.2 |

Responses to Open-Ended Questions (ctd)

- Reasons for unwillingness to participate (N=490)

| | |
|---|------|
| General objections to surveys (e.g. Don't like surveys; don't do surveys) | 3.2% |
| Objections to aspects of surveys (e.g. Too long; need to know more about questions; topic-related objections) | 40.0 |
| Privacy-related objections | 47.4 |
| Wants more money | 3.9 |
| Other/uncodable/missing | 5.6 |

Why Do People Respond to Surveys?

- **Not** because risk of participating has been reduced through disclosure limitation or confidentiality assurances:
 - In our study, only 3 people (0.75% of the sample) mentioned a confidentiality assurance or anonymity as their reason for participating in the survey described
 - Many more cite concerns about confidentiality/privacy as reasons for nonparticipation

It's the Benefits, Stupid!

- Why, then, do they respond?
- Because, **in their view**, there are benefits of doing so, either to themselves or to others important to them
- Since every survey involves some costs, decision probably represents a calculation that benefits of participating exceed costs
- Demonstrating that requires more research

Further Research: Does Participation Reflect a Benefit-Cost Balance?

- Web study
 - Vignettes—description of various studies
 - How likely to participate?
 - Ask everyone how important a (long) list of costs and benefits was in their decision
 - Prediction: For those who would participate, benefits will outweigh costs (and vice versa)
- Append questions to actual survey; question respondents and nonrespondents about costs and benefits
 - Harder
 - More informative
 - (I still have a 30-year-old rejected NSF application for this study in my drawer!)

Further Research, ctd.

- Does it matter if cooperation is increased by reducing costs or by increasing benefits?
 - For response rate?
 - For nonresponse error?
 - For measurement error?
 - For fieldwork costs?

Some Thoughts on Increasing Perceived Benefits

- Improve the survey experience for respondents:
 - Hire better qualified interviewers, give them better training, and pay them more
 - Use live interviewers, at least for recruitment
 - Ask questions that can actually be answered, in a way that makes answering easy
 - Design more user-friendly self-administered questionnaires
- Emphasize the survey's importance/benefits:
 - For society as a whole
 - For accurate knowledge about society/subgroups
 - For respondents--how will survey benefit them? What will they learn?
 - If other reasons aren't good enough, offer money
 - But don't rely on money alone

Some Thoughts on Reducing Perceived Costs

- Reduce the burden of responding:
 - Don't ask for more detail than most respondents can provide
 - Avoid intrusive questions and justify those you do ask
 - Consider alternative ways of getting answers to burdensome questions (e.g. medical/financial information), or else pay respondents a fair rate for consulting records and providing accurate information
- Protect respondents from harm:
 - Make surveys anonymous when possible
 - Assure respondents of confidentiality when anonymity isn't possible
 - Honor the promise through appropriate technical and legal means

Some General Implications for Survey Practice

- Think in terms of perceived cost-benefit balance rather than costs or benefits alone
 - For example, administrative record use potentially reduces respondent burden and improves accuracy but may increase privacy concerns. How do we create a favorable perceived benefit-cost ratio for respondents, or for a particular respondent?
- Think about the respondent's cost-benefit balance, not the researcher's
 - For example, a customer satisfaction survey consisting of 2 rating-scale questions may satisfy the client, but may not give people a chance to say what they really think and feel or provide a good reason for them to respond.
- Don't do a survey if you can get the information another way
 - More surveys may make for fewer respondents. Stanley Presser and Susan McCulloch, in an as yet unpublished paper, find that the number of respondents to government surveys alone increased from about 2.6 million in 1984 to about 10.2 million in 2004. The increase correlates with a drop in response rates.
- Do more research
 - On what benefits nonrespondents value, and why nonrespondents refuse.

But What If None of This Works?

Then, as my friend and colleague Trivellore Raghunathan would say, we can always impute their answers—or, as the cartoonist and dramatist Jules Feiffer said, we can always go back to making it up!

Thank you very much!

Feiffer : ON THE PROBLEM OF NONRESPONSE TO PUBLIC OPINION POLLS

WHO DO YOU PREFER FOR PRESIDENT?
FORD? REAGAN?
OTHERS?

NONE OF YOUR BUSINESS.



WHAT TROUBLES YOU MOST ABOUT AMERICA TODAY? INFLATION? UNEMPLOYMENT? BUSING?

NONE OF YOUR BUSINESS.



DO YOU THINK DETENTE FAVORS THE RUSSIANS?

NONE OF YOUR BUSINESS.



WHICH DO YOU SEE AS A GREATER THREAT TO NATIONAL SECURITY? THE CIA OR A FREE PRESS?

NONE OF YOUR BUSINESS.



DO YOU THINK THE RIGHT TO PRIVACY IS MORE IMPORTANT THAN THE RIGHT TO PUBLIC OPINION POLLS?

NONE OF YOUR BUSINESS.



OK, THEY ASKED FOR IT.

WE'LL GO BACK TO MAKING IT UP.



3-7

© 1976 JULES FEIFFER

DET FIELD NEWS/EVER-SUNNKAIE. (7)