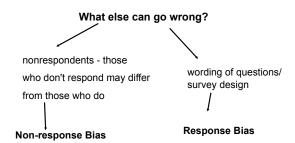
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Lesson 20: What can go wrong when conducting our survey?	
0.1411 - 1.111 - 1.111	
Q: What did you learn from the vegetable soup example about creating a survey?	
about creating a survey?	
How to comple hadly?	
How to sample badly?	
How to sample badly?	
How to sample badly?	
Voluntary Response Sample	
Voluntary Response Sample individuals are invited to respond, and all who do	
Voluntary Response Sample	
Voluntary Response Sample individuals are invited to respond, and all who do	
Voluntary Response Sample individuals are invited to respond, and all who do	
Voluntary Response Sample individuals are invited to respond, and all who do respond are counted	
Voluntary Response Sample individuals are invited to respond, and all who do respond are counted individuals with strong opinions generally respond	
Voluntary Response Sample individuals are invited to respond, and all who do respond are counted	
Voluntary Response Sample individuals are invited to respond, and all who do respond are counted individuals with strong opinions generally respond → sample not representative	
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How to sample badly?	
Get surveys done from individuals who are easily	
available \	
\ Convenience sampling	
\	
\	
sample may not be representative	
How to sample badly?	
/	
Sample from a Bad Sampling Frame:	
An SRS from an incomplete sampling frame introduces	
bias because the individuals included may differ from the	
ones not in the frame.	
Undercoverage:Many of these bad survey designs suffer from	
undercoverage, in which some portion of the population	
is not sampled at all or has a smaller representation in	
the sample than it has in the population.	



What else can go wrong?



Don't bore respondents with surveys that go on and on and on and on...

Surveys that are too long are more likely to be refused, reducing the response rate and

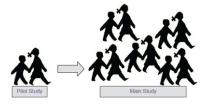
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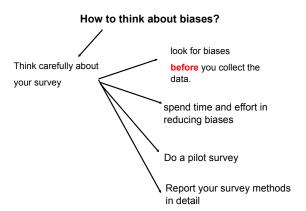
3

M. Singh

The best way to protect a survey from unanticipated measurement errors is to perform a pilot survey.

 A pilot is a trial run of a survey you eventually plan to give to a larger group.





 -

M. Singh

Cautions about data

Comment on the usefulness of the data collected as described. (a) A uniformed police officer interviews a group of 20 college freshmen. She asks each one his or her name and then if he or she has used an illegal drug in the last month. (b) Jessica saw some data showing that cities with more low-income housing have more homeless people. Does building low-income housing cause homelessness? (c) A survey about food in the student cafeteria was conducted by placing forms for customers to pick up at the cash register. A drop box for completed forms was available outside the cafeteria. (d) Extensive studies on coronary problems were conducted using men over age 50 as the subjects.

The article "What People Buy from Fast-Food Restaurants: Caloric Content and Menu Item Selection" (Obesity [2009]: 1369-1374) reported that the average number of calories consumed at lunch in New York City fast food restaurants was 827. The researchers selected 267 fast food locations at random. The paper states that at each of these locations "adult customers were approached as they entered the restaurant and asked to provide their food receipt when exiting and to complete a brief survey." Approaching customers as they entered the restaurant and before they ordered may have influenced what they purchased. This introduces the potential for response bias. In addition, some people chose not to participate when approached. If those who chose not to participate differed from those who did participate, the researchers also need to be concerned about nonresponse bias. Both of these potential sources of bias limit the researchers' ability to generalize conclusions based on data from this study.