

Survey Research

Types of Surveys

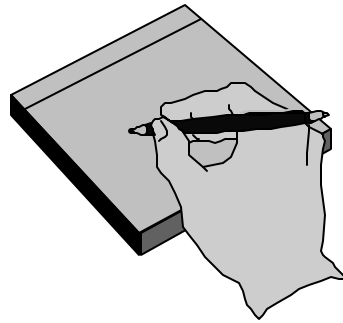
Selecting the Survey Method

Advantages and Disadvantages

Writing Survey Questions

Interviews

Types of Surveys

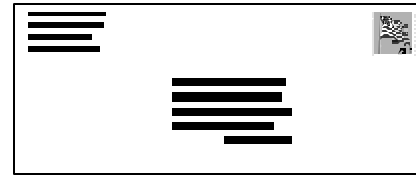


Questionnaires

Group administration



Mail or “self-administered”



Household drop off

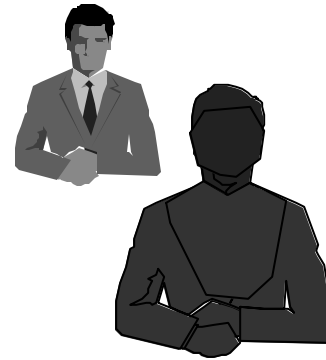


Internet (web or email)



Interviews

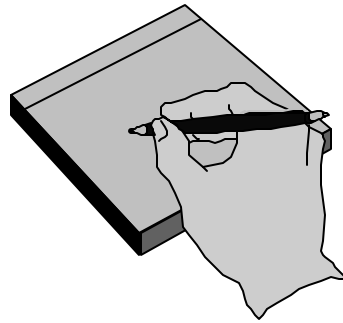
Personal (face-to-face) and “on-site”, especially if conducted in park or recreation facility setting



Telephone



Selecting the Survey Method



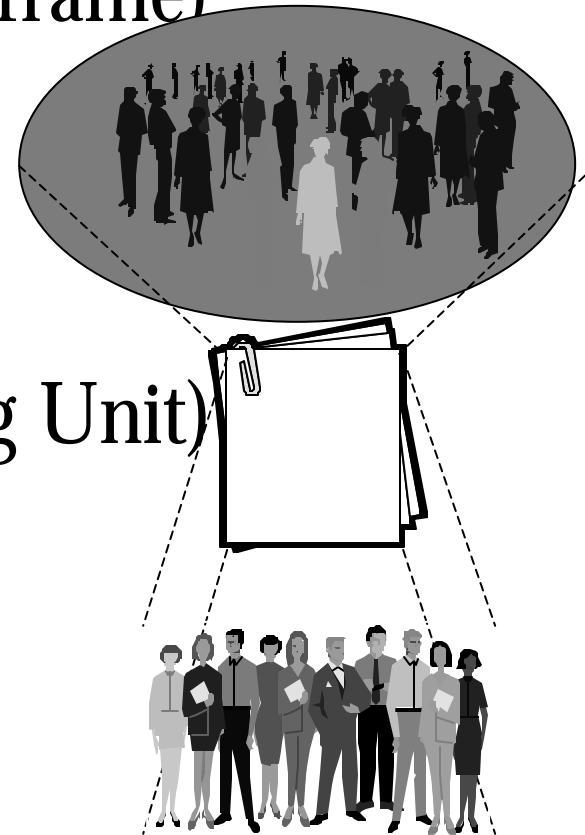
Population Issues

- Can the population be enumerated?
- Is the population literate?
- Are there language issues?
- Will the population cooperate?
- What are the geographic restrictions?



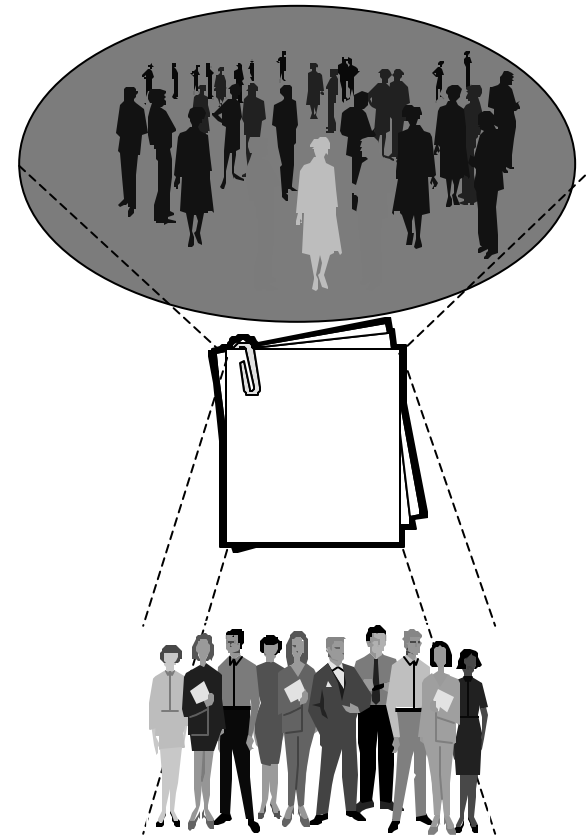
Sampling Issues

- What data is available? (Sampling frame)
 - Addresses
 - Phone numbers
- Can respondents be found?
- Who is the respondent? (Sampling Unit)
 - Individual
 - Head of household
 - Any member of household
 - Groups or agencies



Sampling Issues

- Can all members of population be sampled?
- Are response rates likely to be a problem? (*always a concern*)



Survey says trails are No. 1

ANCHORAGE: Respondents want tax money spent on maintaining what we have.

By ROSEMARY SHINOHARA
Anchorage Daily News

(Published: October 19, 2003)

Trails are the most popular part of the Anchorage parks and recreation system, a new public survey done for the city Parks and Recreation Division shows.

"All indications show trails are our most valued recreational resources and will continue to be in high demand," the city and its consultants wrote in a recent report.



Top Jobs

Project Manager Assistant
Prince William Sound Regional
Citizens' Advisory Council

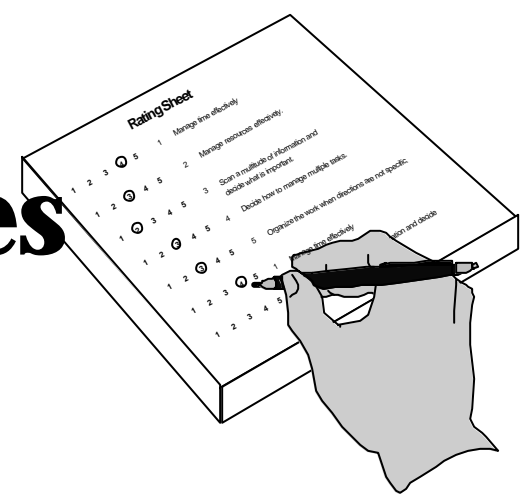
[More](#)

A smaller than desired number of people, 259, or 18 percent of those targeted, returned the survey questionnaires. Because of that, statistically the conclusions could be off by 10 percent in either direction, said Van Le of Land Design North, who administered the poll.

University of Alaska Anchorage economist Matt Berman said a mail-in poll with a low return rate makes it difficult, without costly follow-ups, to tell whether the people who responded are biased, for example, by caring more about parks than the general population does.

But, he said, such a survey is still useful as one source of information for policy-makers, even if it's not perfect.

Question Issues



- What types of questions can be asked?
- How complex will the questions be?
- Will screening questions be needed?
- Can question sequence be controlled?
- Will lengthy questions be asked?
- Will long response scales be used?

Content Issues

- Can the respondents be expected to know about the issue?
- Will respondent need to consult records?



Administrative Issues

- ☞ Costs (\$ per contact will vary by method)
- ☞ Facilities (e.g., phone banks, bulk mailing infrastructure)
- ☞ Time
- ☞ Personnel

Visual Presentations Possible?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
Yes	Yes	Yes	Yes	No

Access to Dispersed Samples?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
No	Yes	No	No	Yes

Long Survey Feasible?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
No	No	No	Yes	No

Long Response Categories Possible?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
Yes	Yes	Yes	Maybe	No

High Response Rates?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
Yes	No	Yes	Yes	No

Quick Turnaround?

Questionnaire			Interview	
Group	Mail	Drop-Off	Personal	Phone
No	No	No	No	Yes

Internet Surveys

Advantages

- Can provide dynamic interaction between respondent and questionnaire
- Difficult skip patterns can be designed that are mostly invisible to the respondent
- Pop-up instructions can be provided for individual questions
- Drop-down boxes with long lists of answer choices can be used to provide immediate coding of questions using asked as open-ended questions
- Pictures, animation, video-clips, and audio can be added

Weaknesses

- Lack of adequate coverage. Most households and people do not have computers and /or email addresses (as of October, 1998 42% of US households reported owning a computer and 26% had internet connections). An estimated 35% of U.S. households have access to an email account (1998). Access is increasing but is not adequate for certain purposes.
- Survey design may appear differently on respondent's computer

Design Principles for E-mail Surveys*

1. Use a multiple-contact strategy.
2. Personalize all e-mail contacts.
3. Keep cover letter brief to enable respondents to see first question without scrolling.
4. Inform respondents of alternative ways to respond such as printing and sending back responses.
5. Include a replacement questionnaire with the reminder message.
6. Limit column width of questionnaire to about 70 characters to decrease likelihood of text wrap.
7. Begin with interesting, simple-to-answer question.
8. Ask respondents to place X's inside brackets to indicate answers.
9. Make accommodation to facilitate mixed-mode (e.g., paper) comparisons

Design Principles for Web Surveys*

1. Introduce questionnaire with motivational welcome screen that emphasizes ease of responding and instructs respondents about how to proceed
2. Provide a PIN number for limiting access only to people in sample.
3. Choose a first question that is likely to be interesting, easily answered, and fully visible on the welcome screen.
4. Present each question in a conventional format similar to paper self-administered questionnaires.
5. Restrain the use of color so that figure/background consistency and readability are maintained, navigational flow is unimpeded, and measurement properties are maintained
6. Avoid differences in visual appearance of questions that result from different screen configurations, operating systems, browsers, partial screen displays, and wrap-around text.
7. Provide specific instructions on how to take each necessary computer action for responding.
8. Use drop-down boxes sparingly and identify each with a “click here” instruction.
9. Don't require respondents to provide an answer to each question before being allowed to answer subsequent questions
10. Provide skip directions that encourages marking of answers and being able to click to the next application question
11. Construct questionnaires so they scroll from question to question unless order effects are a major concern
12. When number of answer choices exceeds number that can be displayed in a single column, double-bank with appropriate grouping device such as a surrounding box
13. Use graphical symbols or words to convey where respondent is in the completion process
14. Exercise restraint in the use of “check-all-that-apply” and open-ended questions

Writing Survey Questions

Types of Questions

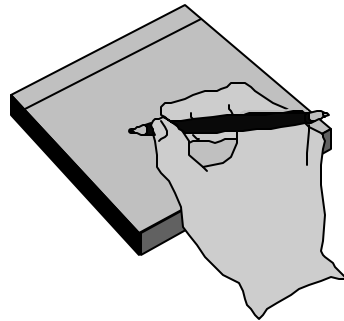
Decisions About Question Content

Decisions About Question Wording

Decisions About Response Form

Placement and Sequence

Decisions About Question Content



Decisions About Question Content

Is the question necessary/useful?

- Do you need the age of each child or just the number of children under 16?
- Do you need to ask income or can you estimate?

Decisions About Question Content

Are several questions needed?

Don't combine two issues in one...these are called "double-barreled" questions

- Do you favor allowing bicycles and horses on the tracks in the park?
- What do you think of the proposed changes in facility hours and recreation programs?

Decisions About Question Content

Are several questions needed?

Did you get all the info desired...

- If you ask about earnings, might not mention all income
- If ask if they're in favor of public TV, ask for whom (might not mention it's because of *Sesame Street* for the kids)

Decisions About Question Content

Are several questions needed?

Do you need more context to interpret answer...

- If you ask about attitudes towards Catholics, can you interpret this without finding out about their attitudes towards religion?

Decisions About Question Content

Are several questions needed?

Need more info to determine the intensity...

- If they say they support public TV, do they watch it?
- If they would be willing to have their tax dollars spent on it?

Decisions About Question Content

Do respondents have the needed info?

- ‘Do you think John Howard acted correctly in sending troops to Iraq?’ -- can’t say if they don’t know who he is.
- In park surveys, those who have visited can be asked about park programs, those who have not visited should not be asked.

Decisions About Question Content

Does question need to be more specific?

- How well did you like the book?

Versus...

- Did you recommend the book to others?
- Did you look for other books by that author?

Decisions About Question Content

Is question sufficiently general?

- For instance, seasonal specificity.
- If you ask what they usually watch and it's summer, you'll get a different answer than in the winter.

Decisions About Question Content

Is question biased or loaded?

- Ask about the benefits of a tax cut without asking about the disadvantages
- Ask about the disadvantages of eliminating welfare without asking about the benefits

Decisions About Question Content

Will respondent answer truthfully?

- To find out age or income, give brackets [because this is considered sensitive, not because it yields the best information]
- To find out about charitable contributions, ask how much “people you know” typically give.
- To find out what magazines they read, offer to buy used ones.

Types of Questions

Type of Questions

- Unstructured (open-ended)
- Structured (closed-ended)
- Mixed (partially closed-ended but contains “Other (Please specify _____)” category)

Structured (Closed-ended) Questions

Dichotomous

_____ *Yes*

_____ *No*

Male **Female**

Structured (Closed-ended) Questions

Nominal

Occupational Class:

1 = Truck driver

2 = Lawyer

3 = etc.

Structured (Closed-ended) Questions

Ordinal

Rank the candidates in order of preference from best to worst...

- ___ *Bob Dole*
- ___ *Bill Clinton*
- ___ *Newt Gingrich*
- ___ *Al Gore*

Structured (Closed-ended) Questions

Interval

Likert Response Scale

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Structured (Closed-ended) Questions

Interval

Semantic Differential

	very much	some- what	neither	some- what	very much	
<i>interesting</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>boring</i>
<i>simple</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>complex</i>
<i>uncaring</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>caring</i>
<i>useful</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>useless</i>

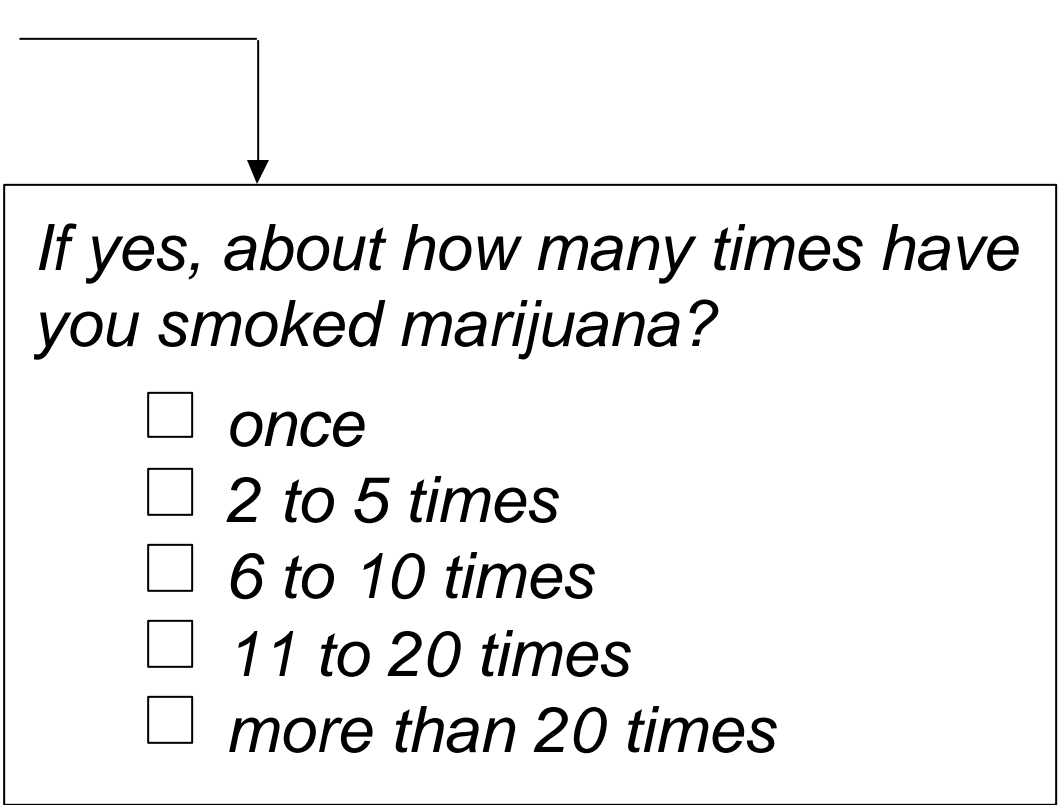
etc.

Filter or Contingency Questions

Have you ever smoked marijuana?

yes

no



If yes, about how many times have you smoked marijuana?

once

2 to 5 times

6 to 10 times

11 to 20 times

more than 20 times

Filter or Contingency Questions

- Try to avoid having more than three levels (two jumps) for any question.
- If only two levels, use graphic to jump (for example, arrow and box).
- If possible, jump to a new page.

Decisions About the Response Format

Should the Response Format be...

- dichotomous (2 choices)
- multiple choice
- scale
- open-ended responses
- combination of structured (closed-ended) response with open-ended follow-up

Checklist for Survey Questions

- Do the question response categories allow for a full-range of responses?
- Are response categories evenly distributed between opposing positions?
- Are the questions and response categories of reasonable length?
- Is the wording clear and neutral? Avoid jargon, technical terms, and acronyms.
- Is the form of the response easy and consistent across multiple questions?
- Are questions preceded by easy to understand instructions for responding? Is it possible to provide a sample response in the instructions?

Purposes of Scaling

Hypothesis testing

- Is the construct or concept a single dimensional one?

Exploration

- What dimensions underlie some ratings?
- For assigning values to responses.

Scoring

What Is a Scale?

...of objects...

The assignment...

...to numbers...

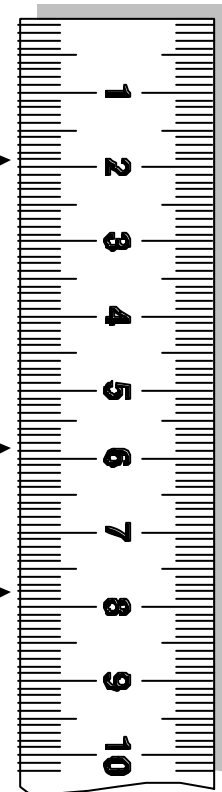
Are you willing to permit immigrants to live in your country?

Are you willing to permit immigrants to live in your neighborhood?

Would you let your child marry an immigrant?

Cumulative

...according to a rule...



Types of Scales

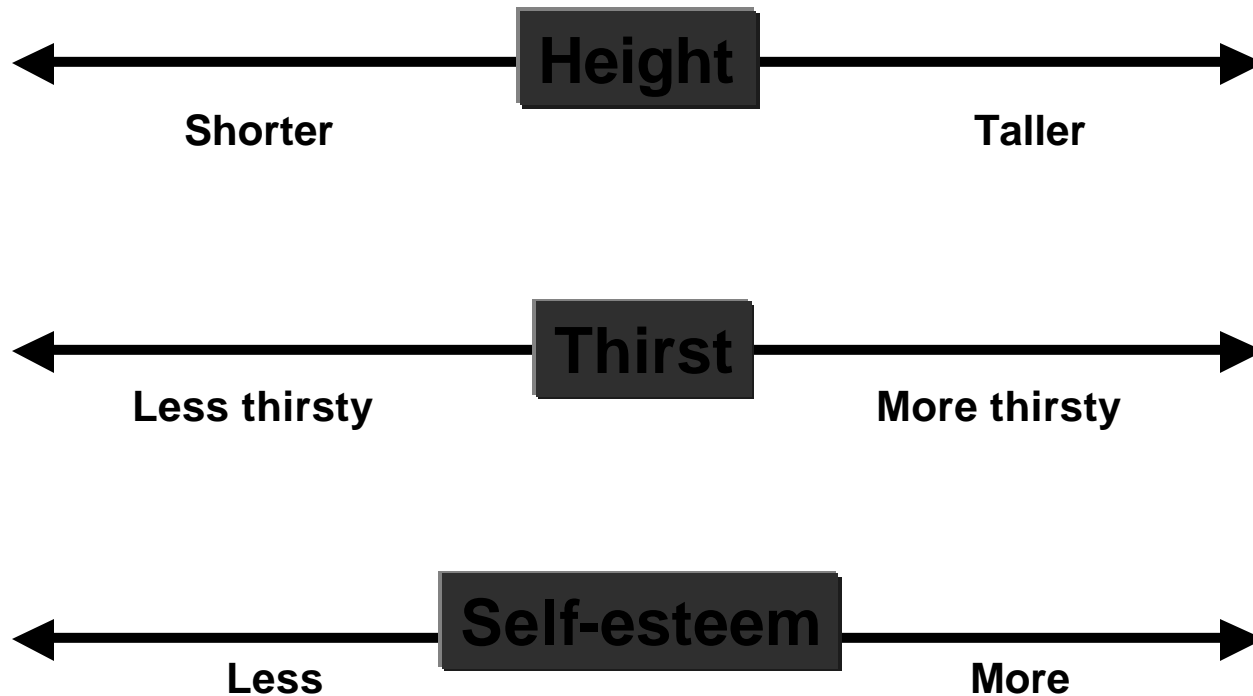
One-dimensional

- Easier to understand
- Useful for understanding multidimensional
- Many concepts may be one-dimensional
- Reflect multiple properties simultaneously

Multidimensional

Dimensionality

One-dimensional constructs

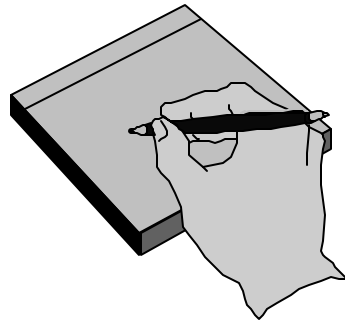


Example—Land Ethic Scale

Is it one-dimensional?



Decisions About Question Wording



Decisions About Question Wording

Can the question be misunderstood?

- Questions containing broad, undefined constructs yield ambiguous results. For example, “Are you an environmentalist?” “What is your ‘nationality’? What is your ‘marital status’? are too vague.

Decisions About Question Wording

What assumptions does question make?

- If you ask what social class someone's in, you assume that they know what social class is and that they think of themselves as being in one.
- Check assumption in a previous question.

Decisions About Question Wording

Is the time frame specified?

- Do you think Parliament will cut taxes?
- Do you think Parliament will successfully resist tax cuts?
- Neither of these specifies a time frame.

Decisions About Question Wording

How personal is the wording?

- Are working conditions satisfactory or not satisfactory in the building where you work? (Belief)
- Do you think that working conditions are satisfactory or not satisfactory in the building where you work? (Belief)
- Are you personally satisfied with working conditions in the building where you work? (Attitude)

Decisions About Question Wording

Is the wording too direct?

- How did you feel about being in the war? -
Possibly too direct
- How well did the equipment hold up in the field?
- How well were new recruits trained?

Decisions About Question Wording

Some Additional Issues...

- Does question contain difficult or unclear terminology?
- Does the question make each alternative explicit?
- Is the wording objectionable?
- Is the wording loaded or slanted (i.e., biased)?

Examples of Common Wording Problems

Vaguely worded questions and responses

POOR

Do you actively support, support, or not support expanded public transportation services in your community?

1 ACTIVELY SUPPORT

2 SUPPORT

3 NOT SUPPORT

BETTER

A proposal has been made to increase the number of public bus routes so that residents will not have to travel so far to catch a bus. Would you be willing or not willing to pay an increase of 1 percent in the city gas tax to finance more bus routes?

1 WILLING

2 NOT WILLING

3 UNDECIDED

Examples of Common Wording Problems

Avoid abbreviations (acronyms) or jargon

POOR Do you believe LISA research should or should not be funded by the CSIRO?

1 SHOULD

2 SHOULD NOT

3 UNDECIDED OR UNSURE

BETTER The Commonwealth Scientific and Industry Research Organization (CSIRO) recently began a research program on “low-input sustainable agriculture” (LISA). The program is primarily designed to investigate farming techniques that use reduced levels of agri-chemicals. Do you favor or not favor having a CSIRO research program on LISA?

1 FAVOR

2 DO NOT FAVOR

3 UNDECIDED OR UNSURE

Examples of Common Wording Problems

Too much precision

POOR How many times, if any, did you, yourself, buy gasoline last year? _____

BETTER How many times, if any, did you yourself buy gasoline last year?

1 NEVER

2 1-12

3 13-24

4 24-52

5 More than 52

Examples of Common Wording Problems

Bias from slanted introduction

POOR

More Australians exercise regularly now than they did 10 years ago. Do you exercise—such as bike, walk, or swim—regularly, or do you not exercise regularly?

1 DO EXERCISE REGULARLY

2 DO NOT EXERCISE REGULARLY

BETTER Do you exercise—such as bike, walk, or swim—regularly, or do you not exercise regularly?

1 DO EXERCISE REGULARLY

2 DO NOT EXERCISE REGULARLY

Examples of Common Wording Problems

Bias from unequal comparison

POOR

Who do you feel is most responsible for the high cost of Australian automobiles?

1 AUTOWORKERS

2 AUTO COMPANY EXECUTIVES

3 CONSUMERS

BETTER

Who do you feel is most responsible for the high cost of Australian automobiles?

1 WORKERS WHO PRODUCE AUTOS

2 AUTO COMPANY EXECUTIVES WHO MANAGE
MANUFACTURING PLANTS

3 CONSUMERS WHO BUY AUTOS

Examples of Common Wording Problems

Bias from unbalanced response choices

POOR

The projected annual cost of purchasing agricultural water rights to restore flows in the River Murray is roughly \$50 million. Do you believe this amount is:

- 1 TOO HIGH
- 2 ABOUT RIGHT
- 3 SLIGHTLY TOO LOW
- 4 MODERATELY TOO LOW
- 5 FAR TOO LOW

BETTER

The projected annual cost of purchasing agricultural water rights to restore flows in the River Murray is roughly \$50 million. Do you believe this amount is:

- 1 FAR TOO HIGH
- 2 SLIGHTLY TOO HIGH
- 3 ABOUT RIGHT
- 4 SLIGHTLY TOO LOW
- 5 FAR TOO LOW

Examples of Common Wording Problems

Bias from the tone of the question

POOR

Do you agree that garbage from big cities should be dumped in rural landfills to provide small communities with what will likely be modestly higher tax revenues?

- 1 NO
- 2 YES
- 3 UNSURE OR UNDECIDED

BETTER

Some people suggest that one way of increasing revenues in small communities is to allow waste from urban areas to be transported to rural landfills. Under this plan, landfill owners would pay property taxes to local governments in the communities with the landfills. In your opinion, should rural communities consider or not consider this proposal?

- 1 CONSIDER
- 2 NOT CONSIDER
- 3 UNSURE OR UNDECIDED

Examples of Common Wording Problems

Questions that are too difficult for respondents

POOR

What percentage of your weekly grocery bill is spent on dairy products?
_____ PERCENT

BETTER

About how much money do you spend each week on the following items?

MILK	\$ _____
CHEESE	\$ _____
COTTAGE CHEESE	\$ _____
SOUR CREAM	\$ _____
OTHER DAIRY	\$ _____

About how much do you spend on all groceries each week?
_____ DOLLARS

Examples of Common Wording Problems

Double-barreled questions

POOR

Do you favor protecting Australian textile manufacturers from foreign competition but not Australian farmers?

- 1 NO
- 2 YES
- 3 UNSURE OR UNDECIDED

BETTER

Do you favor or not favor protecting Australian textile manufacturers from foreign competition?

- 1 FAVOR
- 2 NOT FAVOR
- 3 UNSURE OR UNDECIDED

Do you favor or not favor protecting Australian farmers from foreign competition?

- 1 FAVOR
- 2 NOT FAVOR
- 3 UNSURE OR UNDECIDED

Examples of Common Wording Problems

Answers that are not mutually exclusive

POOR

How did you first hear about the proposed tax refund?

- 1 FROM A FRIEND OR RELATIVE
- 2 AT A MEETING OF AN ORGANIZATION
- 3 AT WORK
- 4 FROM MY SPOUSE
- 5 FROM THE TELEVISION, RADIO, OR NEWSPAPER

BETTER

From whom or what did you first hear about the proposed tax refund?

- 1 FROM A FRIEND OR RELATIVE
- 2 FROM MY SPOUSE
- 3 OVER THE TELEVISION OR RADIO
- 4 FROM THE NEWSPAPER

Where were you when you first heard about the proposed tax refund?

- 1 AT A MEETING OF AN ORGANIZATION
- 2 AT HOME
- 3 AT WORK

Examples of Common Wording Problems

Too much knowledge is assumed on the part of respondent

POOR

Do you tend to agree or disagree with the new regulations on labeling criteria for organic produce?

- 1 AGREE
- 2 DISAGREE
- 3 UNSURE OR UNDECIDED

BETTER

The Parliament has recently passed legislation regarding criteria for using the “Organic” label on fresh produce. Were you aware or not aware of the new legislation?

- 1 AWARE
- 2 NOT AWARE

If aware, please describe the legislation in your own words. _____

Is this legislation acceptable or not acceptable to you, personally?

- 1 ACCEPTABLE
- 2 NOT ACCEPTABLE
- 3 UNSURE OR UNDECIDED

Examples of Common Wording Problems

Inappropriate time references

POOR How many hours a day did you work last week?
_____ HOURS

BETTER How many hours a day did you work during the first week of June 2003?
_____ HOURS

OR

On average, how many hours a day do you usually work?
_____ HOURS

Examples of Common Wording Problems

Responses that can't be compared with existing information

POOR How many years of school have you completed?
1 0 TO 8
2 9-10
3 11-12
4 MORE THAN 12

BETTER How many years of school have you completed?
1 0 TO 8
2 9-11
3 12
4 MORE THAN 12

Response categories should match up with ABS or U.S. Census (standard government sources)

Examples of Common Wording Problems

Cryptic questions that may be misunderstood by respondents

POOR

Q-1. Number of years employed in present job? _____ YEARS

Q-2. Your occupation _____

BETTER

Q-1. How many years have you been employed in your present job?
_____ YEARS

Q-2. What is your present occupation? _____

Avoid incomplete sentences.

Question Placement and Sequence

Decisions About Placement

- Is the answer influenced by prior questions?
- Does question come too early or too late to arouse interest?
- Does the question receive sufficient attention?

The Opening Questions

- Should be easy to answer
- Should not be sensitive material
- Should get the respondent “rolling”

Sensitive Questions

- Only after trust is developed
- Should make sense in that section of the survey
(not “out of left field”)
- Precede with warm-up questions

A Checklist of Considerations

- ☞ Start with easy, nonthreatening questions.
- ☞ Put more difficult, threatening questions near end.
- ☞ Never start mail survey with an open-ended question.
- ☞ Put demographics at end (unless needed to screen).
- ☞ End the survey with an open-ended question that allows participant to express any opinion about the subject of the survey

A Checklist of Considerations

- ❏ Avoid demographics at beginning.
- ❏ Ask about one topic at a time.
- ❏ When switching topics, use a transition sentence in the instructions.
- ❏ Select consistent response category formats. e.g, top-down.
- ❏ For filter or contingency questions, make a flowchart.
- ❏ Include clear instructions for responding and where possible, sample responses.

The Most Important Rule

**Generally, keep
questionnaire as
short as possible.**

**But as always, there
are exceptions!**

Bias Issues

- Can social desirability be avoided?
- Can interviewer distortion and subversion be controlled?
- Can false respondents be avoided?