Agree-Disagree Response Formats:
Problems and Alternatives

Sowmya Anand
Survey Research Laboratory
University of Illinois at Chicago

GENERAL INFORMATION

• Please hold questions until the end of the presentation

• Webinar slides available at
  http://www.srl.uic.edu/SEMINARS/semnotes.htm

• Please raise your hand so that I can see that you can hear me
Agree-Disagree Questions

- Simplest form – ask respondents whether they agree or disagree with a statement

- Do you agree or disagree with the following statement?
  My health is good.
  Agree
  Disagree

Agree-Disagree Questions

- Can include intensity (agree strongly or agree somewhat)

- How much do you agree or disagree with the following statement?
  My health is good.
  Strongly agree
  Somewhat agree
  Strongly disagree
  Strongly disagree
Agree-Disagree Questions

- Can include a midpoint (neither agree nor disagree)

- How much do you agree or disagree with the following statement?
  My health is good.
  Strongly agree
  Somewhat agree
  Neither agree nor disagree
  Somewhat disagree
  Strongly disagree

Agree-Disagree Questions

- In self-administered surveys, often part of a scale or a set of items that uses the same response options.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>People around here are willing to help their neighbors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People in this neighborhood share the same values</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This is a close-knit neighborhood</td>
<td></td>
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</tbody>
</table>
If you have used agree-disagree survey questions...

- You are not alone.
- These questions are ubiquitous in survey research today...

American National Election Studies – 2012 Survey (In-Person and Web)

- **Political efficacy**
  - 'Sometimes, politics and government seem so complicated that a person like me can’t really understand what’s going on.'
  - Do you AGREE STRONGLY, AGREE SOMEWHAT, NEITHER AGREE NOR DISAGREE, DISAGREE SOMEWHAT, or DISAGREE STRONGLY with this statement?
National Health and Nutrition Examination Survey (In-Person)

- I am going to read a statement and I want you to let me know if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with the statement.
  I enjoy participating in PE or gym class.

2013 Quinnipiac University Poll (Web survey)

- "In general, do you agree or disagree with the 1973 Roe v. Wade Supreme Court decision that established a woman's right to an abortion?"
Handbook of marketing scales (2010)

- **Ten-Item and Five-Item Personality Inventories** (Gosling, Rentfrow, and Swann 2003)
- **Long-Term Orientation: LTO** (Bearden, Money, and Nevins 2006)
- **Maximization** (Schwartz et al. 2002; Nenkov et al. 2008)
- **Need for Cognition: NFC** (Cacioppo and Petty 1982)
- **Consumer’s Need for Uniqueness: CNFU** (Tian, Bearden, and Hunter 2001)
- ….and many others

Why are Agree-Disagree Questions so Popular?

- They’re easy to write.
- It’s easy to ask about several unrelated topics using the same response scale.
- They seem efficient
  - Space in self-administered questionnaires
  - Time in both self-administered and interviewer-administered surveys
- Sometimes one needs to re-use items and scales used in previous surveys.
Issues with the use of A-D items

1. A-D Questions more of a cognitive burden for respondents.
2. Acquiescence response bias
3. Difficulty in interpreting the meaning of a “disagree” response
4. Respondents often have to think through double negatives

1. A-D items present more cognitive burden

- Cognitive necessary to answer a question carefully and completely (Tourangeau, Rips, and Rasinski, 2000)
  - Understand the question
  - Retrieve relevant information from memory
  - Integrate the information into a judgment
  - Map that judgment onto the response options provided
For example:

Do you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with the statement.

“I am usually happy.”

For example:

- A respondent answering this question has to:
  - Understand that the question is asking about the number of times he or she experiences the emotion of happiness
  - Determine the underlying dimension:
    - How often do I feel happy (frequency)
  - Retrieve relevant information
    - I laugh a lot, everyone says I smile a lot…
  - Form a judgment – I am usually happy.
  - Mapping that judgment into the A-D format
    - AD dimension different from that of the underlying question
    - Mapping more difficult
For example:

- Map that judgment into the A-D format requires extra step
- Take judgment = I am usually happy
- Compare to statement = I am usually happy
- Link judgment to A-D response option
  - strongly agree, agree, neither agree nor disagree, disagree or strongly disagree

One goal in writing survey questions:

- To make the respondent’s cognitive task as simple as possible
- If the task of answering a survey question is difficult
  - Some respondents will look for ways to make the task easier
  - Either go through the cognitive steps necessary to answer a survey question incompletely or not at all → survey satisficing (Krosnick, 1991)
  - One easy way to do that is to agree with statements made by the interviewer
Problems with individual A-D items

1. A-D Questions more of a cognitive burden for respondents

2. Acquiescence response bias

3. Difficulty in interpreting the meaning of a “disagree” response

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2. Acquiescence Response Bias (ARB)

- **Definition:** Agreeing with assertion made regardless of content
  - Response option selected does not reflect ‘true’ underlying attitude

- **Example:** “I like candy”
  - Acquiescing respondents as likely to ‘agree’ as with, “I dislike candy” (e.g., Gendall & Hoek, 1998)

- **ARB is more likely when**
  - **Ability** is low: e.g., Cognitive skills: Education
  - **Motivation** is low: e.g., Interest in the survey or question topic
  - **Task difficulty** is high: e.g., Location of the question in the survey
2. Acquiescence Response Bias (ARB)

Form A (agree I’s version):
Individuals are more to blame than social conditions for crime and lawlessness in this country.

<table>
<thead>
<tr>
<th>Form A (Agree I’s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree (I):</td>
<td>59.6%</td>
</tr>
<tr>
<td>Disagree (SC):</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(473)</td>
</tr>
</tbody>
</table>

Form B (agree SCs version):
Social conditions are more to blame than individuals for crime and lawlessness in this country.

<table>
<thead>
<tr>
<th>Form B (Agree SCs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree (SC):</td>
<td>56.8%</td>
</tr>
<tr>
<td>Disagree (I):</td>
<td>43.2</td>
</tr>
<tr>
<td></td>
<td>(472)</td>
</tr>
</tbody>
</table>

Cultural Differences in ARB

- **Deference norms → greater ARB**
  - Cultures high in power distance
  - Cultures low in individualism.

- **Evidence that ARB is greater among**
  - Latino respondents (relative to non-Hispanic Whites)
  - Respondents from collectivistic countries (e.g., east asian countries) than those from individualistic countries (e.g., western countries)
  - Individuals who score low on measures of individualism and high on measures of collectivism
Example:

Members of four racial/ethnic groups rated agreement with the following two statements:

- I tend to put off making important decisions until the last possible moment.
- I usually make important decisions quickly and confidently.

Percent who agreed with both statements:

- Non-Hispanic White = 15%
- Non-Hispanic Black = 26%
- Mexican-American = 31%
- Korean American = 31%

Possible Results of ARB

- Failure to find relationships between variables that should be related (hidden by differences in ARB)
  - Including actual differences between groups

- Finding spurious relationships between variables where there should be none (actually due to ARB)
  - Including spurious appearance of systematic group differences
Problems with individual A-D items

1. A-D Questions more of a cognitive burden for respondents

2. Acquiescence response bias

3. Difficulty in interpreting the meaning of a “disagree” response

4. Respondents often have to think through double negatives

3. Difficulty in Interpreting the meaning of a “Disagree” Response

- Researchers often choose statements that are moderate
  - “I am usually happy”
  - Use of words like “some” “mostly” “often” “usually”
3. Difficulty in Interpreting the meaning of a “Disagree” Response

- Consider the following survey question:
  “Do you agree or disagree with the statement: My health is good?”

- Does a respondent who answers “disagree somewhat” think that:
  - His or her health is poor
  - His or her health is excellent

Problems with individual A-D items

1. A-D Questions more of a cognitive burden for respondents

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3. Difficulty in interpreting the meaning of a “disagree” response

4. Respondents often have to think through double negatives
4. Respondents Often have to think through double negatives.

- 'Public officials don’t care much what people like me think.’
  Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with this statement?

Disagree = Public officials DO care

Requires thinking through a double negative

Extra cognitive step

Double negatives are understood and used in other languages differently
So What To Do?

- Use item-specific response formats
  - Decide what the underlying dimension of interest is
  - Write a question using item-specific responses to measure that underlying dimension
  - Questions with item-specific responses provide higher quality data than A-D items
    - (Saris, Revilla, Krosnick, & Shaeffer, 2010 Survey Research Methods)
  - Smaller number of higher quality items

Example: 2012 ANES

- 'Sometimes, politics and government seem so complicated that a person like me can't really understand what's going on.' Do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with this statement?

- Decide what the underlying dimension of interest is:
  - How often politics and government are too complicated to understand
  - How complicated politics and government are
  - How well the R feels s/he understands politics and government
Example: 2012 ANES

- How often do politics and government seem so complicated that you can't really understand what's going on? always, most of the time, about half the time, some of the time, or never?

Example: National Health and Nutrition Examination Survey

- “I enjoy participating in PE or gym class.”

- Underlying dimension is
  - how much does the respondent like PE
Example: National Health and Nutrition Examination Survey

- Do you like or dislike PE or gym class?
  - [IF LIKE]: Do you like it a lot or somewhat?
  - [IF DISLIKE]: Do you dislike it a lot or somewhat?

OR

- How much of the time do you like PE or gym class?
  Always, most of the time, about half of the time, some of the time, or never?

Example: 2013 Quinnipiac University Poll

- "In general, do you agree or disagree with the 1973 Roe v.Wade Supreme Court decision that established a woman’s right to an abortion?"

- Underlying dimension is presumably opinions about legalized abortion
  - Support for Supreme Court decision
  - Trust in Government?
Example: 2013 Quinnipiac University Poll

Alternative item-specific question:

Which of the following best represents your opinion about abortion: 1) abortion should not be legal under any circumstances, 2) abortion should be legal only in case of rape, incest, or when the woman’s life is in danger, 3) abortion should be legal for reasons other than rape, incest, or danger to the woman or 4) abortion should be legal under all circumstances.

But, But what about...

Comparing results to previous studies

If data comparability is absolutely a must, use old items, but understand and try to estimate and control for potential error.

- Include ARB experiments or
- Include items to measure ARB to use as a covariate
- *NOT* ideal solution
- Doesn’t account for many of the problems with A-D questions (double negatives; uncertainty in interpreting disagree responses)
But, But what about...

- Longitudinal data collection
  - Include new and old questions as a means to transition.

And what about...

- Length of time (or amount of space) for revised items

- Study by Anand, Parsons, and Owens (2010)
  - Respondents randomly assigned to receive item-specific response options or yes/no response options
  - Did not significantly affect interview length

- Using item-specific items does not appear to substantially increase administration time
  - Trade-off with data quality
  - Minimizes needed sample size and items
**Final conclusions:**

- **Agree-disagree questions:**
  - Yes-no questions and True-False questions come under this heading
  - Avoid!!!!!
  - Recommended alternative: questions with item-specific response options

- **Particularly problematic:**
  - Culturally diverse populations
  - Group differences
  - Circumstances or individuals where ARB is most likely
  - Negative statements
  - Statements that use moderate qualifiers (e.g., most, usually, sometimes)
Final conclusions:

- Very limited set of circumstances where you may consider using A-D items:
  - Direct comparison with previous data in which they were used
  - Longitudinal data collections
  - Even in these cases, there may be ways to move away from A-D items.

Thank You!

Questions?
References: