



# Testing Branching Techniques and Rating Scales

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# Objectives

- Analyze sets of routinely asked questions and explore the practical significance of variations in scale designs
- Understand how respondents interpret response options in rating scales
- Establish practical guidelines for asking scale questions
- Identify areas for follow-up research

# Sources of Data

- A European general-population survey with embedded split-ballot experiments
  - 3 types of experiments, each applied to at least 2 sets of questions
- Insights from cognitive interviewing to help ground the statistical analysis with perspectives from members of the targeted populations

# Methodology

- Experiments embedded in a nationally representative survey of 1,536 adults
- Parallel scale questions asked of each subsample
- Respondents randomized to different versions of the test questions
- Randomization carried out within each sampling point
- Subsamples for testing each question version almost equal ( $n_1=796$ ,  $n_2=740$ )
- Each subsample representative of the survey population
- Face-to-face interviews; computer assisted data collection

# Experiment 1:

## 4-point vs 5-point scale; branching of mid-point

A

What is your opinion of our country's neighbors? Please tell me if you have a **very favorable, somewhat favorable, somewhat unfavorable, or a very unfavorable opinion**. First of all, what is your opinion of [neighboring country]? (DK option accepted, if volunteered)

B

What is your opinion of our country's neighbors? Please tell me if you **have a very favorable, somewhat favorable, neither favorable nor unfavorable, somewhat unfavorable, or a very unfavorable opinion**. First of all, what is your opinion of [neighboring country]?



(If "Neither" or "Don't Know")  
Alright, I recorded your answer, but would you say you lean more towards **favorable or unfavorable, or are you neutral** towards [neighboring country]?  
("Have not thought about this" option accepted, if volunteered.)

# Experiment 1: Findings

- When presented with a 5-point scale, at least a fourth picked the “neither...nor” option across all 8 test questions
- Slightly over half of them selected the “neutral” response in the follow-up question
- Cognitive interviewing showed that the mid-point is a holder for different opinions
  - Some respondents said they “liked” and “disliked” in equal measure
  - Others did not have “sufficient” information to make a judgment
  - Still others “did not care about the country”
- The 5-point scale question produced fewer “favorable” responses for all 8 questions
- Differences in net favorability were statistically significant for 6 out of 8 questions

# Experiment 1: Results

	$n_1$	$n_2$	$n_{2x}$	$n_{1-n_{2x}}$
Unweighted n	796	740	740	
<b>Favorable NET</b>	73	61	66	7*
Very favorable	19	22	22	-3
Somewhat favorable	54	38	44	10*
Neither favorable nor unfavorable		21	13	8
<b>Unfavorable NET</b>	24	17	19	5
Somewhat unfavorable	15	9	11	4
Very unfavorable	9	8	8	1
Don't know	2	2	2	0
No answer	1	1		1

Differences statistically significant at the .05 level.

## Experiment 2:

### 4- vs 2-point scale with two follow-up intensity options

A

Please tell me how much confidence, if any, do you have in the ability of [country] to deal with world problems? Do you have a **great deal of confidence, a fair amount of confidence, little confidence or no confidence at all?**

B

Please tell me if you **have or do not have confidence** in the ability of [country] to deal with world problems?



Would you say that you have a **great deal of confidence or a fair amount of confidence?**

Would you say that you have **little confidence or no confidence at all?**



# Experiment 2: Findings

- The branched dichotomous scale produced fewer “confident” responses and more “not confident” responses than the 4-point alternative.
  - Statistically significant differences emerged at the Net “confidence” level, as well as at the “fairly confident” level
- Cognitive interviewing showed that respondents
  - Found the dichotomous scale to be too constraining
  - Interpreted it to mean **complete** confidence vs **complete** lack of confidence
  - Some picked a DK answer because the dichotomous scale was not sufficiently “nuanced” for them

# Experiment 2: Results

	Unweighted n	n <sub>1</sub>	n <sub>2</sub>	n2x	n1-n2x
		796	740	740	
<b>Have confidence NET</b>		31	18	18	13*
Great deal of confidence		7		7	-1
Fair amount of confidence		24		11	13*
<b>Do not have confidence NET</b>		68	75	75	-7*
Little confidence		26		27	-1
No confidence at all		42		48	-6
Don't know		1	6	7	-6
No answer		0	1		0

Differences statistically significant at the .05 level.

## Experiment 3:

### 4- vs 2-point scale with three follow-up intensity options

A

What is your view of our country's membership in [organization]? Do you **strongly support, somewhat support, somewhat oppose or strongly oppose** our country's membership in [organization]?

B

Do you **support or oppose** our country's membership in [organization]?



Would you say that you **strongly support, somewhat support or slightly support** our country's membership in [organization]?

Would you say that you **strongly oppose, somewhat oppose or slightly oppose** our country's membership in [organization]?

# Experiment 3: Findings

- Very few respondents (4%) picked the “slightly” support/oppose option on the 6-point scale
- Cognitive interviewing showed that
  - Some respondents could not differentiate between “somewhat” and “slightly”. They found the 6-point scale confusing and argued against using it.
  - Others made use of the “slightly” option and thought it could be useful if slight variations in opinion were of interest to the researcher

# Experiment 3: Results

	Unweighted n	$n_1$	$n_2$	$n_{2x}$	$n_{1-n_{2x}}$
		796	740	740	
<b>Support NET</b>		57	50	50	7*
Strongly support		24		28	-4
Somewhat support		33		20	13*
Slightly support				2	
<b>Oppose NET</b>		39	39	39	0
Slightly oppose				2	
Somewhat oppose		14		14	0
Strongly oppose		25		23	2
Don't know		4	9	11	-7
No answer		1	2		1

Differences statistically significant at the .05 level.

# Conclusions

For the tested questions

- Changes in scale design did not produce changes in the direction of net responses...
- ...But they did yield statistically significant differences
- The “neither...nor” category is a hodgepodge of attitudes...
- ... but could be useful if research aims to identify respondents who are undecided
- Branched dichotomous scales seem to be suboptimal as sometimes either point of the directional question is perceived as extreme
- Dichotomous scales with three follow-up intensity measures may be too overwhelming for respondents yet could be useful if granularity is of the essence