

Response Order and Response Balance Effects Experiments on the 2008 General Social Survey

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Two experiments involving the reversal of response options and two experiments involving the balancing of dichotomies response options were conducted on the 2008 General Social Survey (Davis, Smith, and Marsden, 2009).

#### Balance Responses to Yes/No Dichotomies

The acquiescence or yea-saying literature generally finds that people are inclined to accept or agree with a statement offered to them rather than to reject or disagree with it (Javeline, 1999; Schuman and Presser, 1981; Sudman and Bradburn, 1982; Tourangeau, Rips, and Rasinski, 2000). Jon Krosnick (2008) has argued that “the logic of acquiescence suggests that it should contaminate yes/no questions as well...” Counter to this expectation are the findings of Schuman and Presser (1981) that “the purely formal balance of attitude items” makes no detectable difference in distributions. To test for this he proposed to fully balance yes/no questions that only explicitly mention the affirmative option. Two examples are LETDIE1 (see Appendix 1: Question Wordings) which asks about allowing doctors to practice euthanasia and POLHITOK which asks about approving of the police striking an adult male. In the experimental variants, both positive and negative responses were made explicit. People were asked if doctors “should or should not be allowed” to terminate a life and whether they “would approve of a policeman striking an adult male citizen or are there no situations you can imagine in which you would approve of this.”

Counter to both the acquiescence hypothesis and the null fully balanced findings, Table 1 shows marginally statistically significant differences with more affirmative responses in the balanced variant than in the unbalanced and affirmative-leaning standard wording. With DKs excluded affirmative responses in the balanced version exceeded those in the standard wording by 5.1 points for euthanasia and by 5.2 points for police hitting.

#### Order of Response Options

Considerable research has demonstrated that the order of response options can affect the distribution of answers (Holbrook et al., 2007; Schuman and Presser, 1981; Sudman, Bradburn, and Schwarz, 1996). Most response order research has examined categorical or nominal response choices rather than rating scales (Holbrook et al., 2007; Krosnick, 2008; Sudman, Bradburn, and Schwarz, 1996). Two threads in the research literature suggest that reserving what Sudman, Bradburn, and Schwarz (1996) call “verbal rating scales” would shift response. First, the presenting negative responses first may act to overcome a generalized acquiescence bias. Second, there is evidence that the scale response options presented first are favored over later presented responses and that this occurs regardless of whether the response options are negatively or positively oriented (Sudman, Bradburn, and Schwarz, 1996). To test whether rating scales are subject to response order effects, two scales were reverse coded. For PILLOK about contraception for teenagers, the standard four-point scale running from Strongly Agree to Strongly Disagree was reversed on the variants version and asked as running from Strongly Disagree to Strongly Agree. For POPESPKS which asked Catholics to evaluate the doctrine of papal infallibility, the standard five-point scale ran from Complete True to Completely False and the experimental variant from Completely False to Completely True.

As Table 2 shows, no meaningful differences occur in the distributions for birth control for teenagers or among Catholics for papal infallibility. There is no evidence that extra respondents were attracted to the “agree” side because this option was presented first. Either there is no agreeing bias or presenting the negative options first (disagree or false) fails to reduce this possible bias. Perhaps the use of a show card for the papal infallibility item reduced possible primacy or recency effects since all responses were both read and simultaneously visible to respondents and they did not to hold the response options in memory. The agree/disagree items on birth control did not use a show card, but perhaps the simple and symmetrical scale was easy for people to recall and they were able to fully process all response options. While these null findings are counter to what is reported, it is notable that Sudman, Bradburn, and Schwarz (1996) that the “size of response order effects along rating scales seems more limited than the frequency and size of order effects that involve discrete response alternatives...” It is also worth noting that most experiments of response order effects in general have not found statistically significant results (Schuman and Presser, 1981; Holbrook et al., 2007).

Table 1  
Experiments with Balanced Questions

	Standard (Unbalanced)	Variant (Balanced)
LETDIE1		
Yes	66.2	71.3
No	33.8	28.7
	(617)	(679)
Prob.		.049
LETDIE1		
Yes	63.6	69.5
No	32.5	28.0
Don't Know	3.9	2.5
	(617)	(696)
Prob.		.050
POLHITOK		
Approve	68.6	73.8
Disapprove	31.4	26.2
	(627)	(659)
Prob.		.040
POLHITOK		
Approve	65.3	70.5
Disapprove	29.9	25.1
Don't Know	4.8	4.4
	(659)	(689)
Prob.		.114

Source: 2008 GSS

Table 2

## Experiments on the Order of Response Options

	Standard (Positive first)	Variant (Reversed; Negative First)
PILLOK		
Strongly Agree	23.1	21.7
Agree	33.9	32.6
Disagree	21.4	25.7
Strongly Disagree	21.6	20.0
	(629)	(687)
Prob.		.348
PILLOK		
Strongly Agree	22.8	21.4
Agree	33.3	32.2
Disagree	21.1	25.3
Strongly Disagree	21.2	19.7
Don't Know	1.6	1.4
	(639)	(697)
Prob.		.499
POPESPKS (Catholics Only)		
Certainly True	17.2	18.1
Probably True	32.7	27.8
I am uncertain whether this Is true/false or false/true.	38.7	41.4
Probably False	7.9	7.7
Certainly False	3.5	5.0
	(248)	(241)
Prob.		.752
POPESPKS (Catholics Only)		
Certainly True	16.9	17.6
Probably True	32.3	27.0
I am uncertain whether this Is true/false or false/true.	38.2	40.3
Probably False	7.9	7.5
Certainly False	3.4	4.8
Don't Know	1.2	2.7
	(251)	(248)
Prob.		.646

## References

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## Appendix 1: Question Wording

### **POPESPKS**

If Catholic:

We are interested in what American Catholics think about religious matters. Please select the answer from this card that comes closest to your own personal opinion about the following statement:

Under certain conditions, the pope is infallible when he speaks on matters of faith and morals.

Standard Responses on Show Card:

Certainly true  
Probably true  
I am uncertain whether this is true or false.  
Probably false  
Certainly false

Experimental Response on Show Card:

Certainly false  
Probably false  
I am uncertain whether this is false or true.  
Probably true  
Certainly true

### **PILLOK**

Standard Wording:

Do you strongly agree, agree, disagree, or strongly disagree that methods of birth control should be available to teenagers between the ages of 14 and 16 if their parents do not approve?

Experimental Variant:

Do you strongly disagree, disagree, agree, or strongly agree that methods of birth control should be available to teenagers between the ages of 14 and 16 if their parents do not approve?

### **POLHITOK**

Standard Wording:

Are there any situations you can imagine in which you would approve of approve of a policeman striking an adult male citizen?

Experimental Variant:

Are there any situations you can imagine in which you would approve of approve of a policeman striking an adult male citizen or are there no situations you can image in which you would approve of this?

### **LETDIE1**

Standard Wording:

When a person has a disease that cannot be cured, do you think doctors should be allowed by law to end the patient's life by some painless means if the patient and his family request it?

Experimental Variant:

When a person has a disease that cannot be cured, do you think doctors should or should not be allowed by law to end the patient's life by some painless means if the patient and his family request it?