

Appendix

TO: NES Board

FROM: Celinda Lake (NES Staff)

RE: Comparison of 3-point, 5-point, and 7-point scales
from the Cati experiment 1982 election study

Two types of comparisons were made in assessing the impact of branching from 3-point to 5-point to 7-point scales. The first was to look at the increase in "Don't Know" responses as respondents were asked to refine their position by branching. The second was to look at the increased predictive power of the scales using the Reagan thermometer and Reagan approval as the dependent variables. The scales are those present in the ISR Cati version--Defense Spending, Guaranteed Jobs, and Equal Role (for self only). All independent and dependent measures were rescaled to 0-1 interval.

Table A looks at the increase in Don't Know responses as we move from 3 to 5-point scales. Noted at the beginning of each issue is the number of respondents who answered "no opinion" or "don't know if I have an opinion" to the initial opinion filter. As noted in the table, the question format used in the ISR Cati made it impossible to separate out the increase in Don't Know responses between the 5 and 7-point versions of the scale.

Overall, there is little increase in Don't Know's as one moves from the 3-point to the 5-point scale. Defense spending was the first issue asked in the branching scale format and shows the highest level of increase between scale versions. (12 respondents, who could place Reagan on defense spending on the 3-point scale, could not do so on the 5-point scale--i.e., could not further distinguish Reagan's position.) The decline may be issue specific or it may represent a learning phenomenon as respondents become used to the branching format. Across issues, the increase in respondents who answer Don't Know to the branching tends to be concentrated in respondents at one end of the scale. For example, for defense spending it is among those who place objects at the increase spending end. Finally, there is a predictable increase in Don't Know responses to the initial 3-point scale as one moves through the series to placing less immediate political objects; but that does not extend to additional increases in the "Don't Know" responses with the branching to the 5-point version.

Table A

Don't Know Increase By Branching
Additional Cases Don't Know

<u>Issue</u>	<u>Cases Responding DK</u>
<u>DEFENSE SPENDING</u> (On opinion filter: 5 cases No Opinion, 78 cases Don't Know)	
Self-Placement	
3-point scale	2
5-point scale	0 (Decrease) + 0 (Increase) = 0
7-point scale	- (see Note A)
Placement Reagan	
3-point scale	17
5-point scale	0 (Decrease) + 12 (Increase) = 12
Placement Democratic Party	
3-point scale	36
5-point scale	3 (Decrease) + 1 (Increase) = 3
Placement Republican Party	
3-point scale	34
5-point scale	0 (Decrease) + 6 (Increase) = 3
Placement Democratic House Candidate	
3-point scale	60
5-point scale	1 (Decrease) + 2 (Increase) = 3
Placement Republican House Candidate	
3-point scale	88
5-point scale	1 (Decrease) + 1 (Increase) = 2
Placement Federal Government	
3-point scale	29
5-point scale	0 (Decrease) + 8 (Increase) = 8

Table A(2) (continued)

Additional Cases Don't Know

Issue

GOVERNMENT GUARANTEED JOBS (On opinion filter: 11 No Opinion,
63 Don't Know)

Self-Placement

3-point scale 1
5-point scale 3 (Gov't) + 1 (Own) = 4
7-point scale - (see Note A)

Placement Reagan

3-point scale 32
5-point scale 1 (Gov't) + 4 (Own) = 5

Placement Democratic Party

3-point scale 33
5-point scale 1 (Gov't) + 0 (Own) = 1

Placement Republican Party

3-point scale 27
5-point scale 1 (Gov't) + 0 (Own) = 1

Placement Democratic House Candidate

3-point scale 40
5-point scale 1 (Gov't) + 0 (Own) = 1

Placement Republican House Candidate

3-point scale 64
5-point scale 1 (Gov't) + 0 (Own) = 1

Placement Federal Government

3-point scale 18
5-point scale 0 (Gov't) + 0 (Own) = 0

Table A(3) (continued)

Additional Cases Don't Know

Issue

EQUAL ROLE (On opinion filter: 4 No Opinion, 39 Don't Know)

Self-Placement

3-point scale	0
5-point scale	1 (Equal Role) + 0 (Home) = 1
7-point scale	- (see Note A)

Note A: Because of the way the branching was done, there are never any additional Don't Know cases from the 5 to 7-point branching in the ISR versions. Respondents who first responded "In between" to the three branch question and then responded "Don't Know" to the follow-up were combined with others in the middle category--"Neither, R refuses to choose" in the 7-point scale.

Tables B and C look at the difference in predictive power for the 3 versions of the scales. Table B looks at these relationships for each issue for the sample of respondents who were valid respondents on all three versions of the scales. Table C looks at these relationships for the broadest possible sample, recoding those respondents when possible who fell out of the analysis in Table B through interviewer error in the branching or through Don't Know responses to the branching questions. The actual recoding is detailed in Note A to Table C. Included in parentheses after the "N" for each issue is the number of cases which were added by the recode. Tables B & C present the unstandardized coefficients and the error and significance level attached to each.

The overall conclusion from this analysis is that the predictive power for both dependent variables increases significantly as one moves from the three to the five-point versions of the issue scales. Though the coefficients are higher for predicting the Reagan thermometer with these issues, the pattern persists for Reagan approval (see Note B below). The pattern and relationships are the same for both samples (Table B & C) largely because the recodes rarely add a significant number of cases.

In five instances the jump in predictive power between the 3-point scale and the 5-point scale is great enough that one would draw opposite conclusions using a .05 significance level. For both dependent variables using the federal government defense spending placement, for Reagan's position on government guaranteed jobs predicting Reagan approval, and for perceived Democratic party's and Republican party's positions on government guaranteed jobs predicting the Reagan thermometer--the 3-point versions of the scales are not significant at the .05 level, while the 5-point versions are. (Note, however, for the Democratic Party's position on government guaranteed jobs, the 7-point version of the scale is again not significant at the .05 level.) The 7-point version of the scales across issues and objects is always a stronger predictor than the 3-point version, although it is not always stronger than the 5-point version. When it is, the increment is frequently small.

Specifically, by issue then, for the defense spending scales we see the major jump in predictive power between the 3 and 5-point versions of the scales. For self-placement, the 7-point version of the scale has the strongest coefficient (a small increase in the coefficient over the 5-point version of the scale). For placement of political objects the 5-point version of the scale is usually a stronger predictor than the 7-point--(the exception is for the Republican Party placement). For the government guaranteed jobs scales, there is usually an increase in the strength of the coefficients as one moves from 3-5-7 point versions of the scale, but the largest increase is from the 3 to the 5-point versions. Again, the placements of the parties are the exceptions--in part because these coefficients are always the weakest--and the coefficient for the 5-point version of the scales is the highest. Finally, the coefficients for self-placement on the equal role scale are essentially the same for all three versions of the scales. The 7-point scale has marginally the highest coefficient but the differences are quite small.

Note B: The Reagan approval measure was recoded 0-1 internal, after the Don't Know and Pro-Con respondents were recoded in the middle of the scale--at point 3.

Table B

Comparison of b Coefficients on Issue Scales

(Analysis limited to subset of cases valid on 7-point scales)

<u>Issue Scale</u>	<u>b</u>	<u>sigma b</u>
<u>DEFENSE SPENDING</u>		
Self-Placement predicting Reagan thermometer N=390		
3-point scale	.219	.035 *
5-point scale	.289	.043 *
7-point scale	.299	.040 *
Self-Placement predicting Reagan approval N=378		
3-point scale	-.374	.065 *
5-point scale	-.493	.080 *
7-point scale	-.517	.075 *
Placement of Reagan predicting Reagan thermometer N=365		
3-point scale	-.126	.055 *
5-point scale	-.227	.062 *
7-point scale	-.215	.067 *
Placement of Reagan predicting Reagan approval N=353		
3-point scale	.103	.103
5-point scale	.257	.116 *
7-point scale	.195	.126

Placement of Federal Gov't predicting Reagan thermometer N=353

3-point scale	-.078	.046 **
5-point scale	-.153	.059 *

(Note Defense spending for the federal gov't does not have a branch for the 7-point scale.)

Placement of Federal Gov't predicting Reagan approval N=345

3-point scale	.084	.087
5-point scale	.205	.110 **

Placement of Democratic Party predicting Reagan thermometer N=354

3-point scale	-.094	.045 *
5-point scale	-.168	.057 *
7-point scale	-.158	.055 *

Placement of Republican Party predicting Reagan thermometer N=351

3-point scale	.004	.046
5-point scale	-.045	.059
7-point scale	-.063	.059

Placement of Federal Gov't predicting Reagan approval N=368

3-point scale	.413	.089 *
5-point scale	.541	.100 *
7-point scalep	.622	.102 *

Placement of Democratic Party predicting Reagan thermometer N=364

3-point scale	-.081	.045 **
5-point scale	-.120	.050 *
7-point scale	-.083	.049 **

Placement of Republican Party predicting Reagan thermometer N=369

3-point scale	-.076	.047 **
5-point scale	-.121	.055 *
7-point scale	-.119	.058 *

Table B(3) (continued)

Issue Scale

EQUAL ROLE FOR WOMEN

Placement of Self-predicting Reagan thermometer N=424

3-point scale	.089	.039 *
5-point scale	.091	.042 *
7-point scale	.099	.041 *

Placement of Self-predicting Reagan approval N=408

3-point scale	-.062	.075
5-point scale	-.056	.081
7-point scale	-.064	.080

* significant at .05 level

** significant at .10 level

Table C

Comparison of b coefficients on Issue Scales

(Analysis of fullest Subset of cases - see Note 1)

<u>Issue Scale</u>	<u>b</u>	<u>sigma b</u>
<u>DEFENSE SPENDING</u>		
Self-Placement predicting Reagan thermometer N=391(+1)		
3-point scale	.220	.035 *
5-point scale	.290	.043 *
7-point scale	.300	.040 *
Self-Placement predicting Reagan approval N=379(+1)		
3-point scale	-.378	.065 *
5-point scale	-.496	.080 *
7-point scale	-.520	.075 *
Placement of Reagan predicting Reagan thermometer N=376(+11)		
3-point scale	-.123	.054 *
5-point scale	-.227	.061 *
7-point scale	-.215	.066 *
Placement of Reagan predicting Reagan approval N=365(+12)		
3-point scale	.099	.102
5-point scale	.257	.116 *
7-point scale	.196	.126

Placement of Federal Gov't predicting Reagan thermometer N=363(+10)

3-point scale	-.080	.045 **
5-point scale	-.150	.057 *

(Note Defense spending does not have a branch to the 7-point scale for the placement of the federal gov't.)

Placement of Federal Gov't predicting Reagan approval N=354(+9)

3-point scale	.095	.084
5-point scale	.208	.106 *

Placement of Democratic Party predicting Reagan thermometer N=358(+4)

3-point scale	-.094	.044 *
5-point scale	-.167	.056 *
7-point scale	-.156	.055 *

Placement of Republican Party predicting Reagan thermometer N=358(+7)

3-point scale	-.005	.046
5-point scale	-.052	.059
7-point scale	-.070	.059

Table C(2) (continued)

Issue Scale

GOVERNMENT GUARANTEED JOBS

Self-Placement predicting Reagan thermometer N=400(+2)

3-point scale	.243	.033 *
5-point scale	.296	.038 *
7-point scale	.315	.035 *

Self-Placement predicting Reagan approval N=384(+1)

3-point scale	-.356	.064 *
5-point scale	-.433	.074 *
7-point scale	-.480	.070 *

Placement of Reagan predicting Reagan thermometer N=370(+6)

3-point scale	-.107	.047 *
5-point scale	-.165	.053 *
7-point scale	-.208	.055 *

Placement of Reagan predicting Reagan approval N=358(+4)

3-point scale	.149	.091 **
5-point scale	.257	.102 *
7-point scale	.338	.106 *

Placement of Federal Gov't predicting Reagan thermometer N=380(+1)

3-point scale	-.246	.047 *
5-point scale	-.318	.053 *
7-point scale	-.344	.055 *

Placement of Federal Gov't predicting Reagan approval N=369(+1)

3-point scale	.395	.088 *
5-point scale	.525	.100 *
7-point scale	.600	.102 *

Placement of Democratic Party predicting Reagan thermometer N=366(+2)

3-point scale	-.082	.045 **
5-point scale	-.121	.050 *
7-point scale	-.084	.049 **

Placement of Republican Party predicting Reagan thermometer N=371(+2)

3-point scale	-.086	.047 **
5-point scale	-.131	.055 *
7-point scale	-.131	.057 *

Sent ahead for, or distributed at, November 19-20, 1983 Berkeley Board meeting

Estimated costs for monitoring and panel. dated 11/14/83

Prepared but not distributed due to lack of time. Expenditures for Years VI and VII.

Kinder 11/9/83 Mock-up of Rolling Thunder, memo and schedule

Alternative Media Exposure Battery from Brody
Excerpt from letter re media to Dave Sears

Kinder 11/8/83 Demographics in Rolling Thunder

Sears 11/8/83 Demographics and Personal Impact Items, Rolling Cross-Section.

Henry Brady and Merrill Shanks 11/16/83 Perceptions of Strength for Presidential Candidates in 1984: Measurement Proposals for Analyses of "Momentun" and "Strategic Voting"

Achen, et al., 11/17/83 to Wolfinger re summer seminar and APSA panel on methodological issues suggested by rolling cross-section

Celinda Lake undated Comparison of 3-point, 5-point, and 7-point scales from the CATI experiment 1982 election study

Two pages of items from Herbert McClosky. Revised ISD Scales Hawk-Dove and Revised OVS Scales Patriotism/Nationalism

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Table C(3) (continued)

Issue Scale

EQUAL ROLE FOR WOMEN

Placement of Self-predicting Reagan thermometer N=427(+3)

3-point scale	.086	.039 *
5-point scale	.091	.042 *
7-point scale	.099	.041 *

Placement of Self-predicting Reagan approval N=411(+3)

3-point scale	-.055	.075
5-point scale	-.054	.081
7-point scale	-.062	.080

* significant at the .05 level

** significant at the .10 level

Note 1: Table C expands the analysis in Table B to include those cases who dropped from Table B because they responded Don't Know or were Not Ascertained at the branching steps to the 5-point and 7-point versions of the scale. If respondents were originally coded 8 (Don't Know) or 9 (Not Ascertained) to the 5-point branching, they were recoded into the category "To some extent." If respondents were originally coded 9 (Not Ascertained) to the 7-point branching, they were recoded into the category "Neither, R refuses to choose." As noted in Table A, there were no additional "Don't Know" cases possible as one branched from the 5 to 7-point scale.