

A Comparison of Two Confidence Scales

Tom W. Smith

National Opinion Research Center  
University of Chicago

GSS Methodological Report No. 80

December, 1993  
Revised February, 1994

This research was done for the General Social Survey project directed by James A. Davis and Tom W. Smith. The project is supported by the National Science Foundation, Grant No. SES-9122462.



On the 1991 General Social Survey (GSS) two confidence scales were administered. On the main, interviewer-administered survey the standard, 13-item confidence question was asked (Figure 1). In the self-administered, International Social Survey Program (ISSP) module a 6-item confidence question was asked (Figure 2). The two scales both ask about "confidence" in a list of similar, but not identical, groups (Figure 3). The scales differ in several other aspects. The standard items 1) are orally administered so respondents do not know what groups are included until they asked about each particular group, 2) ask about the "people running" the group rather than about the group itself, 3) use three explicit response categories (great deal, only some, hardly any) plus the precoded, but unread, response of Don't Know, and 4) cover 13 groups. The international items 1) are self-administered so respondents see all groups being covered from the start, 2) ask about the groups themselves rather than their leaders, 3) use five ordered categories (complete, a great deal, some, very little, and no confidence at all), plus a Can't Choose category, and 4) cover only six groups. In addition, because of the different formats, the different number of groups covered, and the different orders of the covered groups, the context in which particular groups appear also differs.

While the 6-item scale was added as part of the ISSP's module on religion and was not designed with the GSS's standard scale in mind, it is possible to compare these two scales and use them to examine issues of attitudinal consistency, meaning and validity, and response scales. Although not as powerful as an explicitly designed, methodological experiment, the comparison of the two scales can provide some useful information on the measurement properties of these confidence scales.

Table 1 shows the distribution of each item, including the Don't Knows. Don't Knows differ little. Each scale shows slightly higher Don't Know levels on three of the items and the average is 3.1% for the standard scale and 2.6% for the ISSP scale.

Table 2 compares the distributions of the similar items. (Don't Knows are omitted since they differ little across scales and since later analyses of associations will delete this category.) The first line of each comparison shows the full, five-category distribution for the ISSP version. The next line collapses the ISSP distribution to three categories by combining the first and second and fourth and fifth categories to match the three-category, standard item. The third line gives the distribution of the similar standard item. The last line compares the collapsed ISSP and standard item by subtracting line three from line two.

There are two major factors affecting the differences in distributions across the paired items: the different response scales used and the different group descriptors. We can not definitively separate these two factors, but can make some reasoned judgments about the contributions of these two factors.

In terms of descriptors, while we considered each pair as covering similar groups, the match is not exact. In addition, some descriptors also differ on how positively/negatively the group is

labelled. We judged that U.S. Supreme Court would be viewed more positively than the broader and less prestigious Courts and Legal System and that Churches and Religious Organizations had more positive appeal than Organized Religion.<sup>1</sup> Less certainly we thought that Business and Industry might be more favorable than Major Companies since people rate small business more favorably than big business.<sup>2</sup> Next, while the labels Executive Branch of the Federal Government and Government Departments might be seen as encompassing about the same group, previous research (Smith, Taylor, and Mathiowetz, 1980), shows that partisan attitudes towards the President are an important determinant of assessments of the Executive Branch. It is unlikely that Government Departments would convey either similar presidential or partisan associations. If this is true and Government Departments engenders more images of bureaucrats, one would expect less favorable ratings than for the Executive Branch. Finally, we believed that Education/Schools and the Educational System and U.S. Congress/Congress are probably similar in coverage and positivity.

Overall, the results were very much in line with these expectations. Looking at the positive end of the scale we see that Churches best Organized Religion by 14 percentage points and that the Supreme Court tops Courts by 12 percentage points. The Executive Branch exceeds Government Departments by 9 percentage points. Business narrowly edges out Major Companies by 1 percentage point, perhaps indicating that the big/small dimension is not being captured. However, an alternative interpretation will be presented shortly. For Education and Congress the ISSP versions win out by respectively 6 and 7 percentage points. If we are correct that the Congress and Education descriptors are actually equivalent, that suggests that the ISSP five-category scale attracts more response to the positive end than does the standard three-category scale. If we associated a 6.5 percentage point shift to the positive end as due to the response categories irregardless of content, that would indicate that Business might actually trail Major Companies by 5 percentage points, that the edge of Churches over Organized Religion would be only 7.5 percentage points, but that the Executive Branch/Government Departments gap would really be 16 percentage points and the Supreme Court/Court edge would be 18.5 percentage points. These adjustments are of course speculative, but

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<sup>1</sup>Smith (1981) shows that the label Organized Religion has negative shadings because a) the modifier "organized" is commonly used for such lowly ranked groups as Organized Labor and Organized Crime, b) it may be associated in some people's minds with religions as businesses, rather than as spiritual groups, and c) the phrase is not frequently used to describe religious groups.

<sup>2</sup>Smith, 1981. Also in the 1989 GSS Work Orientation module 53% preferred working for a small firm vs. 33.5% favoring a big firm. Whether the terms used here clearly capture this big/small distinction is uncertain.

both the raw and adjusted figures do indicate that our initial expectations on the impact of descriptors were supported for all but the less certain Business/Major Company comparison.

In terms of response scales, while we would not expect the three-category recode of the ISSP items to match the distribution of the categories employed on the standard items, the two response scales do use some similar terms. The highest two categories on the ISSP scale (complete and great deal) do correspond to Great Deal on the standard scale. Some on the ISSP scale lines up with Only Some on the standard scale. At the lower end, however, the terminology differs more (Very Little and No Confidence at All on ISSP and Hardly Any on the standard).

In comparing the response distributions in light of the differences expected from the variant descriptors, we above alluded to the possibility that the five-category scale attracts more responses into its top two categories than does the top category on the standard version (possibly because of the use of two categories or the exact terminology utilized indicated to respondents a broader range on the underlying confidence continuum). In addition, it appears that the middle category on the standard scale garners more responses than the corresponding middle category on the ISSP version. In each comparison the percent in the middle category on the standard version exceeds that on the ISSP version. This is of course consistent with the ISSP version attracting more responses to its top two categories.

Second, we consider how the two scales inter-correlate. The diagonal in Table 3 shows the correlations between each related pair. These correlations are substantial, ranging from .585 for Religion down to .356 for Executive Branch/Government. (Gammas range from .736 to .476.) Moreover, these are generally higher than the test/retest correlations that have been calculated for these variables (Business=.351, Religion=.418, Education=.263, Executive Branch=.415, Supreme Court=.264, Congress=.382, Smith and Stephenson, 1979). With one notable exception the diagonal rates are appreciably higher than the off-diagonal correlations. This indicates that considerable consistency in the rating of groups and that each pair evokes a similar object in most respondent evaluations.

The one exception involves the Executive Branch and Government Departments. Not only is their association the lowest of the related pairs, but their correlation (.356) is lower than the association between the Government Departments and Congress (.462) and only barely higher than the Executive Branch and Congress (.341). As we noted above and will expand upon later, this is due to the Executive Branch generating more partisan and presidential connections than does Government Departments. Congress also has low partisan correlates.

Third, we examine how the two scales inter-correlated amongst themselves. Table 4 shows that the standard scale has consistently lower inter-item correlations than the ISSP scale. The average correlation for the former is .266 and for the latter .440. This probably indicates that the five-response categories used by the

ISSP version do a better job of measuring respondents' confidence in groups. Both of these rates are higher than the across version inter-item correlations (excluding the related pairs) which average between .199 and .232. (These are the averages from the correlations in Table 3 above and below the diagonals.)

However, when we examine associations with criterion variables, we see no evidence that overall one scale produces higher associations than the other. Table 5 first compares the confidence ratings to two general measures (personal happiness and a three-item Srole anomia scale) that we hypothesize would be related to generalized confidence (i.e. across all groups). Next, Table 5 examines how domain specific confidence measures are related to specific criterion variables. Overall, neither the generalized nor the group-specific measures show any consistent measurement difference between the standard and ISSP scales.<sup>3</sup> The two generalized measures have higher correlations with standard items six times and with ISSP items six times. The 11 specific measures are more strongly associated with the standard six times and with the ISSP five times. Moreover, most of the correlations are very similar in magnitude. These patterns suggest that the five-category scale does not produce more reliable measurements and that the two scales are measuring similar stimuli.

For Executive Branch and Government Departments there is however evidence, as alluded to above, that the groups and attitudes accessed by these terms may be notably different. By looking at the association of Executive Branch and Government Departments with party identification and who one voted for in the 1988 presidential election, we confirm that the former is associated with partisan and presidential matters while the latter is not. Confidence in Government Departments is not significantly related to either party identification (prob.=.130; gamma=.018) or for whom they voted in 1988 (.792/-.039), but confidence in the Executive Branch is strongly related to both party identification (.000/-.240) and presidential vote (.000/-.509). In none of the criterion comparisons in Table 5 are the differences nearly as large.

Congress, despite its control by the Democrats, is not judged in partisan terms. Both the ISSP and the standard versions have non-significant or very weak relationships to party identification, vote in 1988 presidential election, or political ideology. In this regard Congress agrees with the non-partisanship of the ISSP Government Departments measure rather than the standard Executive Branch item.

Finally, Tables 3 and 4 show that all associations are positive. This indicates that much of what is being tapped is a general trust in society, its leaders, and/or its institutions and

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<sup>3</sup>This is similar to results from an earlier study involving an experimental comparison on the standard scale with a second version using a seven-point scale (Smith and Peterson, 1985 and Peterson, 1985).

not a group-by-group judgement. (Or perhaps that the group-by-group assessments are heavily driven by one's overall evaluation of society, etc.) When the ISSP and standard scales are factor analyzed separately, only a single, principal component emerges with all six measures loading heavily on this overall confidence factor. When the 12 items are factor analyzed together, additional factors emerge. Besides the same principal component factor of generalized confidence, the rotated factors include two scale or context factors. The first factor is basically the ISSP items and the second the standard items. Whether these factors are due to similar scales, proximity, or both is unknown, but these can basically be thought of as methods factors. A third factor loads on the ISSP and standard Religion items and a fourth on the ISSP and standard Education items.

In sum, the comparison of the two confidence scales underscores the lesson that differences in measurement procedures can yield different results. The choice of group descriptors, response scales, and other differences in measurement all contributed to variation in the distribution of confidence ratings and in some cases, notably Executive Branch and Government Departments, in the relationship of confidence to other variables. Moreover, inter-item relationships are clearly affected by method effects. However, the observed differences are neither especially common, large, nor inexplicable. This suggests that while confidence ratings are naturally sensitive to measurement, they are not merely substance-free products of measurement procedures.





**Figure 1**  
**Standard Scale**

**ASK EVERYONE:**

39. I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them? READ EACH ITEM, CODE ONE FOR EACH. REPEAT THE QUESTION, OR CATEGORIES, AS NECESSARY.



A great deal of confidence	Only some confidence	Hardly any confidence at all	DON'T KNOW
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A. Major companies	1	2	3	8	12/
B. Organized religion	1	2	3	8	13/
C. Education	1	2	3	8	14/
D. Executive branch of the federal government	1	2	3	8	15/
E. Organized labor	1	2	3	8	16/
F. Press	1	2	3	8	17/
G. Medicine	1	2	3	8	18/
H. TV	1	2	3	8	19/
I. U. S. Supreme Court	1	2	3	8	20/
J. Scientific community	1	2	3	8	21/
K. Congress	1	2	3	8	22/
L. Military	1	2	3	8	23/
M. Banks and financial institutions	1	2	3	8	24/

Figure 2

ISSP Scale

11. How much confidence do you have in . . .

1. Complete confidence
2. A great deal of confidence
3. Some confidence
4. Very little confidence
5. No confidence at all
8. Can't choose

PLEASE CIRCLE A NUMBER

a.	U.S. Congress . . . . .	1	2	3	4	5	8	23/
b.	Business and industry . . . . .	1	2	3	4	5	8	24/
c.	Government departments . . . . .	1	2	3	4	5	8	25/
d.	Churches and religious organizations . . . . .	1	2	3	4	5	8	26/
e.	Courts and the legal system . . . . .	1	2	3	4	5	8	27/
f.	Schools and the educational system . . . . .	1	2	3	4	5	8	28/

Figure 3

Descriptors Used for Six Overlapping Institutions

Standard Scale

Major Companies

Organized Religion

Education

Executive Branch of the  
Federal Government

U.S. Supreme Court

Congress

ISSP Scale

Business and Industry

Churches and Religious Organizations

Schools and the Educational System

Government Departments

Courts and the Legal System

U.S. Congress

Table 1

Distribution of Confidence Items

A. Standard Scale

	Great Deal	Only Some	Hardly Any	Don't Know
Major Companies	20.2%	61.9	13.0	4.9
Organized Religion	25.2%	51.5	20.8	2.5
Education	30.1%	54.8	13.4	1.7
Executive Branch	25.9%	50.8	20.9	2.4
Supreme Court	36.9%	46.4	12.3	4.4
Congress	17.8%	53.7	25.6	2.9

(1010-1016)

B. ISSP Scale

	Complete	Great Deal	Some	Very Little	None	Can't Choose
Business	3.4%	18.4	54.4	16.8	4.1	3.0
Churches	12.5%	27.0	39.7	12.2	6.2	2.4
Schools	9.0%	27.3	43.2	14.7	3.5	2.4
Govt Depts	4.3%	12.4	47.7	26.1	6.8	2.7
Courts	5.7%	19.2	46.0	21.0	6.1	2.0
Congress	7.7%	17.7	44.6	19.8	6.8	3.3

(1312-1331)

Table 2

Comparisons of Distribution of Related Confidence Items

A. Major Companies/Business

ISSP(5)	3.8	19.0	57.0	15.8	4.4
ISSP(3)	22.8		57.0	20.2	
Standard	21.4		65.0	13.6	
Standard - ISSP(3)	- 1.4		+ 8.0	- 6.6	

B. Organized Religion/Churches

ISSP(5)	12.3	26.5	40.6	13.8	6.8
ISSP(3)	38.8		40.6	20.6	
Standard	24.8		53.1	22.1	
Standard - ISSP(3)	-14.0		+12.5	+ 1.5	

C. Education/Schools

ISSP(5)	9.3	26.8	44.6	15.4	3.9
ISSP(3)	36.1		44.6	19.3	
Standard	30.2		56.1	13.7	
Standard - ISSP(3)	- 5.9		+11.5	- 5.6	

D. Executive Branch/Govt Depts

ISSP(5)	4.6	12.8	49.5	26.0	7.2
ISSP(3)	17.4		49.5	33.2	
Standard	26.7		51.8	21.5	
Standard - ISSP(3)	+ 9.3		+ 2.3	-11.7	

Table 2 (continued)

E. Supreme Courts/Courts

ISSP(5)	6.1	19.8	48.4	19.8	5.9
ISSP(3)	25.9		48.4	25.7	
Standard	37.8		48.9	13.3	
Standard - ISSP(3)	+11.9		+ 0.5	-12.4	

E. Congress/Congress

ISSP(5)	8.4	16.4	45.1	21.5	8.6
ISSP(3)	24.8		45.1	30.1	
Standard	17.8		54.5	27.6	
Standard - ISSP(3)	- 7.0		+ 9.4	- 2.5	

Table 3

Inter-item Correlations Across the Confidence Scales

(Pearson's r)

	<u>ISSP</u>					
	Business	Relig	Educ	Exec	Courts	Cong
<u>Standard</u>						
Business	.418	.147	.080	.181	.169	.190
Religion	.202	.585	.144	.215	.182	.186
Education	.150	.159	.442	.180	.163	.194
Exec/Govt	.302	.145	.148	.356	.284	.341
Courts	.268	.114	.229	.314	.435	.331
Congress	.274	.203	.188	.462	.322	.547

All coefficients are statistically significant at least at the .05 level.

Table 4

Inter-item Correlations within Each Confidence Scale

(Pearson's r)

A. Standard Scale

	Business	Relig	Educ	Exec	Courts	Cong
Business		.269	.179	.302	.273	.198
Religion			.197	.241	.162	.195
Education				.211	.244	.260
Exec/Govt					.400	.430
Courts						.437

B. ISSP Scale

Business		.356	.393	.536	.436	.506
Religion			.362	.361	.342	.322
Education				.411	.476	.389
Exec/Govt					.538	.698
Courts						.480

All coefficients are statistically significant at least at the .05 level.



Table 5

Association of Confidence Items with Generalized and  
Group-Specific Criterion Variables

## A. Generalized Variables (Pearson's r)

	Personal Happiness		Srole Anomia	
	Standard	ISSP	Standard	ISSP
Business	.072	.174	-.207	-.236
Religion	.083	.053NS	-.173	-.073
Education	.015NS	.047NS	-.119	-.104
Exec/Govt	.126	.120	-.256	-.169
Courts	.101	.119	-.312	-.185
Congress	.064	.092	-.153	-.169

## B. Group-Specific Variables (Probability/Gamma)

	Standard	ISSP
Business x		
Financial Satisfaction	.006/ .162	.000/ .186
Job Satisfaction	.086/ .173	.002/ .207
Religion x		
Church Attendance	.000/-.320	.000/-.369
Religious Strength	.000/ .261	.000/ .386
Have Religion	.000/-.661	.000/-.616
Education x		
Educational Spending	.000/-.142	.003/-.092
Executive/Government x		
Political Alienation	.000/-.434	.000/-.307
Courts x		
Courts Too Lenient	.017/ .155	.081/ .145
Congress x		
Party Identification	.115/ .004	.044/ .034
Voted in 1988	.005/-.192	.137/-.028
Political Alienation	.001/-.345	.000/-.305

NS=not statistically significant

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