

PSYCHOMETRICS OF THE CURRENT VERSION OF THE SITUATIONAL OUTLOOK QUESTIONNAIRE®

A Technical Resource



**Situational
Outlook
QuestionnaireSM**

**Enhancing Performance of Organizations, Leaders, and
Teams for Over 50 Years**

**Scott G. Isaksen
Göran Ekvall**

PSYCHOMETRICS OF THE CURRENT VERSION OF THE SITUATIONAL OUTLOOK QUESTIONNAIRE®

A Technical Resource for the SOQ

***Enhancing Performance of Organizations, Leaders and
Teams for Over 50 Years***

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CHAPTER 1: PSYCHOMETRICS OF THE SOQ VERSION 7

Version 7 of the SOQ was developed in 2009 following a review of the item distributions, scale reliabilities and factor structure of SOQ version 6. The Trust/Openness scale was a key target for improvement, so some items were prudently edited.

The sample for this version of the SOQ included 3491 individuals. It was composed of individuals from a variety of programs and services provided by the Creative Problem Solving Group. For this study, data from an aggregated set of samples of convenience was collected from June of 2009, through May of 2012. Fifty-two organizations were included with samples ranging from 525 individuals from a university, another 73 individuals from a North American construction and engineering firm, to a sample of nine individuals from a leading manufacturing organization. For the 2077 individuals who indicated their gender, 1295 were males and 782 were females. The ages ranged from 19 to 76, with an average of 41.59 for the 2086 who reported this data. All participants took the SOQ via the web. Like the sample in version 6, the sample in the SOQ version 7 was an international mix. The SOQ version 7 is now offered exclusively online and in six different languages (English, Dutch, Spanish, French, Polish, and Norwegian).

Table 1 illustrates the item means and standard deviations for version 7 of the SOQ.

Table 1
SOQ V 7 Item Norms: Means and Standard Deviations

Overall SOQ Item	Mean	Std. Dev.	n
2	213	72.5	3491
3	174	79.1	3491
4	127	90.1	3491
5	207	75.5	3491
6	180	77.8	3491
7	217	74.3	3491
8	82	89.1	3491
9	197	76.5	3491
10	191	75.3	3491
11	241	70.6	3491
12	140	83.4	3491
13	180	75.9	3491
14	193	77.0	3491
15	188	79.4	3491
16	228	74.3	3491
17	186	75.9	3491
18	175	83.4	3491
19	130	80.9	3491
20	197	80.5	3491
21	182	72.8	3491
22	162	77.9	3491
23	230	70.7	3491
24	53	78.5	3491
25	129	79.4	3491
26	183	74.4	3491
27	236	70.0	3491
28	137	74.9	3491
29	139	84.7	3491
30	108	93.5	3491
31	188	73.7	3491
32	138	80.7	3491
33	178	78.3	3491
34	138	94.0	3491
35	122	76.8	3491
36	186	82.4	3491
37	186	79.0	3491
38	196	72.8	3491
39	239	67.8	3491
40	160	79.5	3491
41	158	76.3	3491
42	161	77.6	3491
43	167	84.2	3491
44	110	99.2	3491
45	191	80.1	3491
46	62	81.0	3491
47	180	77.9	3491
48	161	103.6	3491
49	201	74.7	3491
50	136	75.7	3491
51	203	74.3	3491
52	156	77.9	3491
53	200	75.3	3491

Table 2 presents the scale means and standard deviations for the entire sample (n=3491). This table also presents the Standard Error of Measurement (sem) for each of the nine dimensions of the SOQ. This was calculated by multiplying the standard deviation by the square root of one minus the reliability coefficients for each dimension. Thus, given an observed score for Challenge/Involvement, there is a 68.26% probability that the person's true score would be that score ± 19.3 .

Table 2
SOQ V 7 Scale Norms: Means, Standard Deviations, and Standard Error

Dimension	Mean	Std. Dev	Sem	n
Challenge/Involvement	223.18	55.75	19.31	3491
Freedom	171.16	57.86	23.14	3491
Trust/Openness	178.47	63.46	29.08	3491
Idea-Time	139.90	60.92	21.97	3491
Playfulness/Humor	180.90	63.50	22.00	3491
Conflict	90.48	67.98	25.44	3491
Idea-Support	187.57	64.92	20.53	3491
Debate	194.02	58.12	20.13	3491
Risk-Taking	153.90	59.02	25.73	3491

Comparing version 7 with version 6, the means for all dimensions of version 7, except Idea-Support, are higher. The standard deviations for version 7 are similar to those of version 6.

Distribution and Performance of Items

The purpose of this section is to describe the distribution results of the SOQ version 7's dimensions and item performance. The intent is to determine to what extent do the responses on the items illustrate acceptable levels of discrimination and relationship to their assigned scale. Such information is useful for solving a variety of problems in inferential statistics (Jaeger, 1990) e.g., eliminating items that caused overly skewed results. These results will be presented and interpretations will be discussed.

Table 3
SOQ V 7 Internal Reliability
(n = 3491)

Dimension	Cronbach's Alpha
Challenge/Involvement	.88
Freedom	.84
Trust/Openness	.79
Idea-Time	.87
Playfulness/Humor	.88
Conflict	.86
Idea-Support	.90
Debate	.88
Risk-Taking	.81

The results of Cronbach's alpha for the SOQ version 7 are presented in Table 3. General improvement on the Trust/Openness items was found. More detail on the distribution of items as well as item to scale correlation and internal consistency of the scales follows.

Table 4
Frequency Distribution – Challenge/Involvement

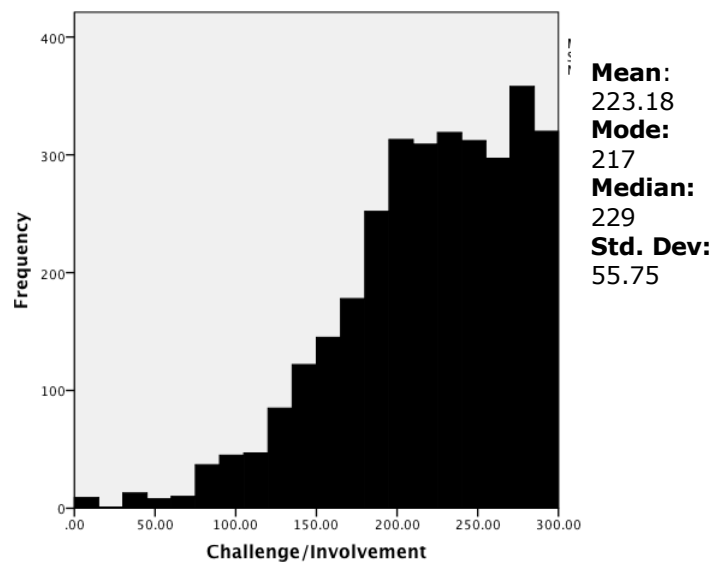


Table 4 presents the frequency distribution for the scores on the Challenge/Involvement scale. This scale has a negative skew indicating that for the samples of convenience used for this analysis, more respondents are choosing higher scores on this dimension. The central tendency results include a mean of 223.2, median of 229, and a mode of 271. This dimension has a standard deviation of 55.8.

Table 5
Frequency Distribution – Freedom

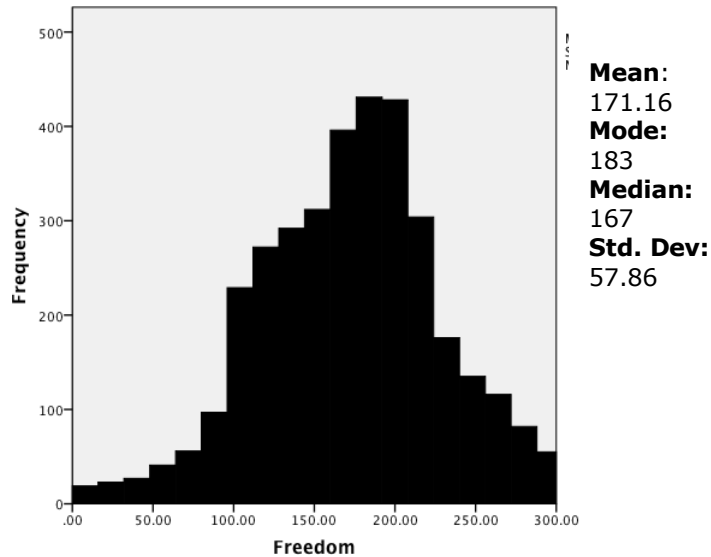


Table 5 presents the frequency distribution for the scores on the Freedom dimension of SOQ version 7. The results indicate a leptokurtic distribution with a slight negative skew. The central tendency results include a mean of 171.2, median of 167, and a mode of 183. This dimension has a standard deviation of 57.9.

Table 6 presents the frequency distribution for the scores on the Trust/Openness dimension of the SOQ version 7.

The results indicate a leptokurtic distribution with a slight negative skew. The central tendency results indicate a mean of 178.5, median of 180, and a mode of 160. This dimension has a standard deviation of 63.5.

Table 6
Frequency Distribution – Trust/Openness

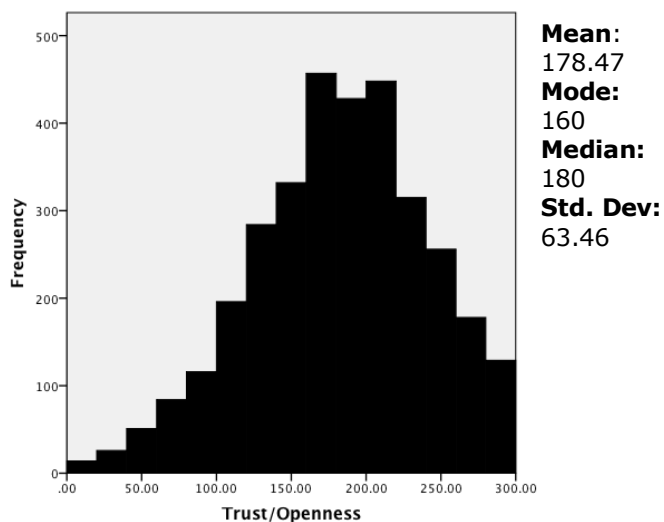


Table 7 presents the frequency distribution for the scores on the Idea-Time dimension of the SOQ version 7. The results indicate a more mesokurtic distribution with a slight positive skew. This suggests that most respondents are scoring lower on this dimension. The central tendency results indicate a mean of 139.9, median of 133, and a mode of 117. This dimension has a standard deviation of 60.9.

Table 7
Frequency Distribution – Idea-Time

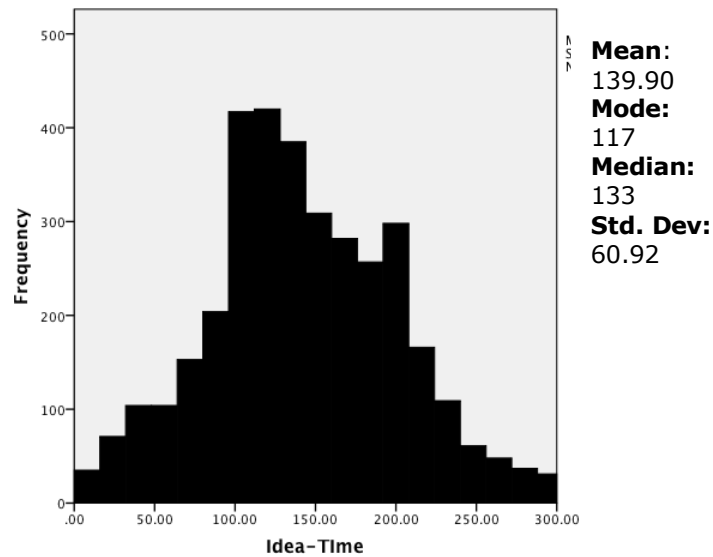


Table 8 presents the frequency distribution for the scores on the Playfulness/Humor dimension of the SOQ version 7.

The results indicate a mesokurtic distribution with a slight negative skew and uneven tails. The central tendency results indicate a mean of 180.9, median of 183, and a mode of 200. This dimension has a standard deviation of 63.5.

Table 8
Frequency Distribution – Playfulness/Humor

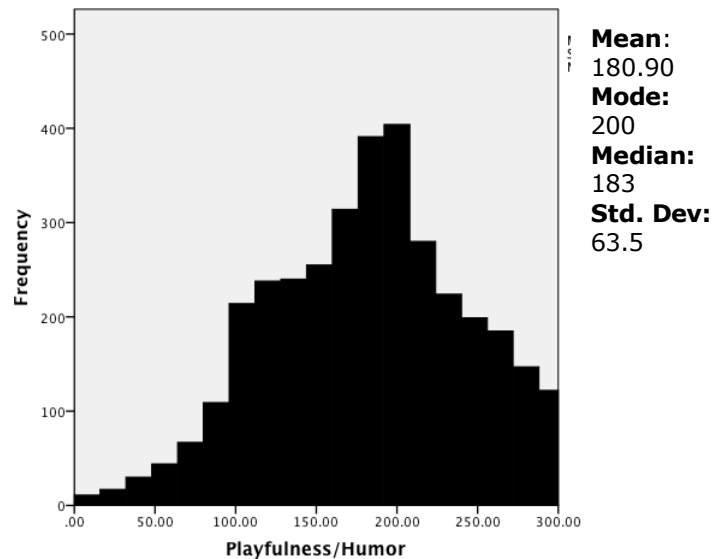


Table 9 presents the frequency distribution for the scores on the Conflict dimension of the SOQ version 7. The Conflict dimension is one that has a negative connotation in comparison to the other eight dimensions of the SOQ. The results indicate distribution with a clear positive skew and uneven tails. The central tendency results indicate a mean of 90.5, median of 83, and a mode of 50. This dimension has a standard deviation of 68. These results indicate that most respondents are providing lower scores on the items within this dimension, particularly relative to the other eight dimensions.

Table 9
Frequency Distribution – Conflict

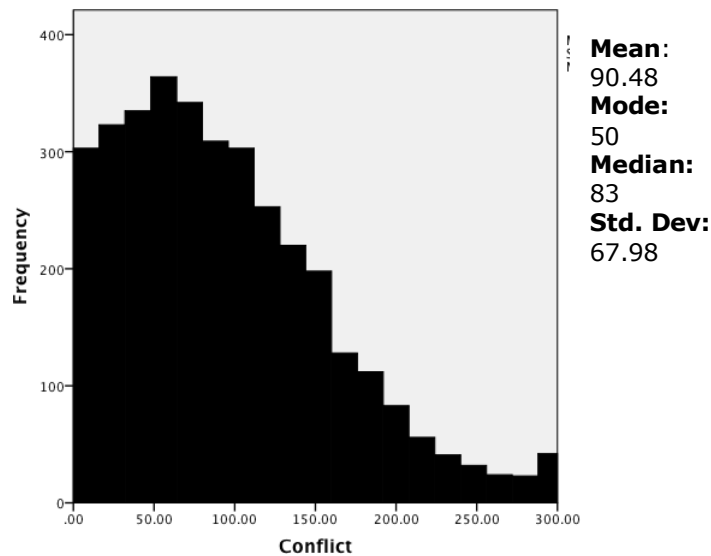


Table 10 presents the frequency distribution for the scores on the Idea-Support dimension of the SOQ version 7.

The results indicate a mesokurtic distribution with a slight negative skew and uneven tails. The central tendency results indicate a mean of 187.57, median of 200, and a mode of 200. This dimension has a standard deviation of 64.9.

Table 10
Frequency Distribution – Idea-Support

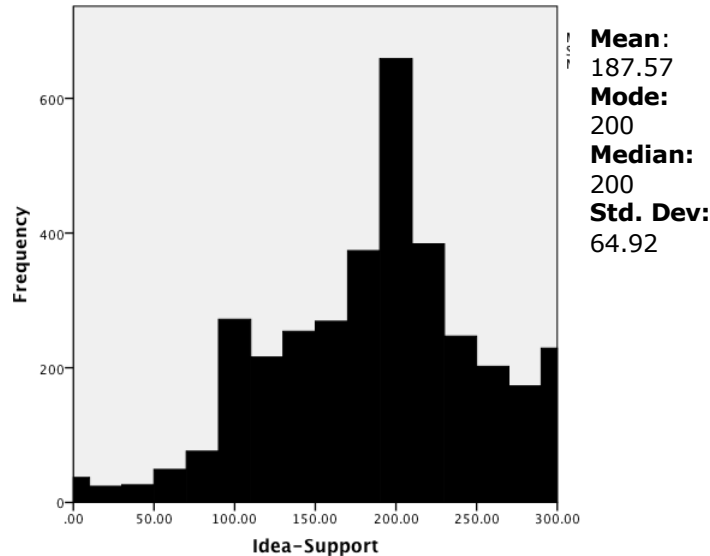


Table 11 presents the frequency distribution for the scores on the Debate dimension of the SOQ version 7. The results indicate a mesokurtic distribution with a slight negative skew and uneven tails. The central tendency results indicate a mean of 194, median of 200, and a mode of 200. This dimension has a standard deviation of 58.12.

Table 11
Frequency Distribution – Debate

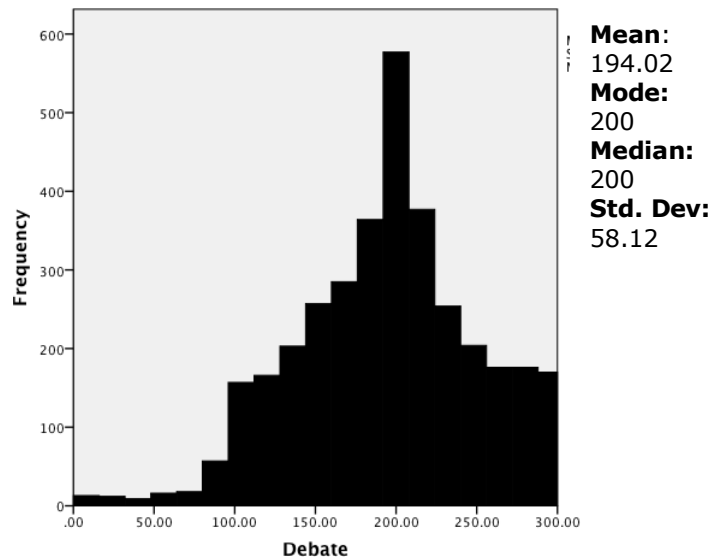
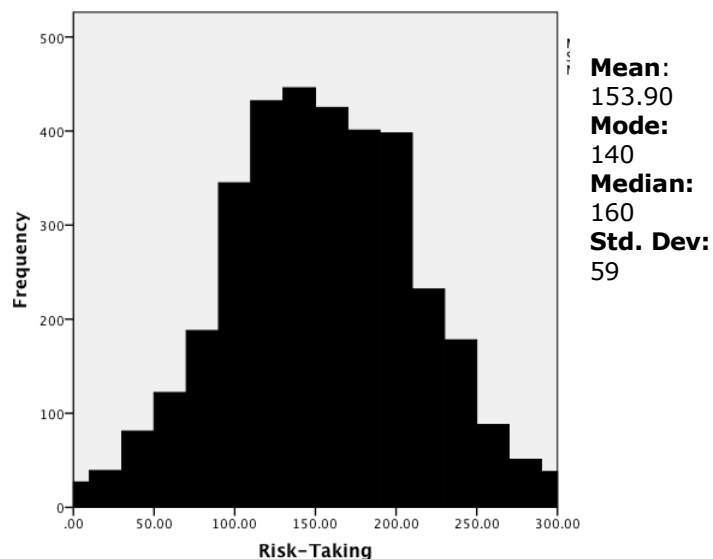


Table 12 presents the frequency distribution for the scores on the Risk-Taking dimension of the SOQ version 7. The results indicate a slightly leptokurtic distribution with a very slight negative skew. The central tendency results indicate a mean of 153.90, median of 160, and a mode of 140. This dimension has a standard deviation of 59.

Table 12
Frequency Distribution – Risk-Taking



The frequency distributions for the scores on the dimensions of the SOQ version 7 do not reflect purely mesokurtic shapes and are often positively or negatively skewed.

The results are derived from samples of convenience, rather than from a completely random sampling approach, so this is not surprising. This does, however, indicate that care must be taken with many statistical tests requiring the conformance with the assumption of a normal distribution.

Inter-item Correlations

The following tables report the correlations among items for all nine dimensions of the SOQ version 7. For example, Table 13 presents the correlations among all items for the Challenge/Involvement scale of the SOQ version 7. The table also reports a Cronbach's alpha of .88 for this dimension.

Table 13
Correlations among SOQ V 7 Challenge/Involvement Items
for Overall Sample (n = 3491) $\alpha = .8817$

Challenge/ Involvement Items	1	2	3	4	5	6	7
1	1.00						
2	.53	1.00					
3	.57	.58	1.00				
4	.58	.49	.50	1.00			
5	.42	.49	.49	.41	1.00		
6	.49	.52	.52	.47	.49	1.00	
7	.55	.59	.65	.48	.54	.55	1.00

All correlations are significant at $p < .01$ level

Table 14 presents the correlations among all items for the Freedom scale of the SOQ version 7. The table also reports a Cronbach's alpha of .84 for this dimension

Table 14
Correlations among SOQ V 7 Freedom Items
for Overall Sample (n = 3491) $\alpha = .8379$

Freedom Items	1	2	3	4	5	6
1	1.00					
2	.51	1.00				
3	.47	.50	1.00			
4	.41	.42	.38	1.00		
5	.40	.49	.50	.35	1.00	
6	.47	.53	.50	.47	.55	1.00

Table 15 presents the correlations among all items for the Trust/Openness scale of the SOQ version 7. The table also reports a Cronbach's alpha of .79 for this dimension. This represents an improvement on the internal reliability of this scale as the alpha for version 6 of the SOQ was .69

Table 15
Correlations among SOQ V 7 Trust/Openness Items
for Overall Sample (n = 3491) $\alpha = .7879$

Trust/Openness Items	1	2	3	4	5
1	1.00				
2	.42	1.00			
3	.44	.42	1.00		
4	.41	.66	.41	1.00	
5	.32	.53	.31	.55	1.00

All correlations are significant at $p < .01$ level

Table 16 presents the correlations among all items for the Idea-Time scale of the SOQ version 7. The table also reports a Cronbach's alpha of .87 for this dimension.

Table 16
Correlations among SOQ V 7 Idea-Time Items
for Overall Sample (n = 3491) $\alpha = .8682$

Idea-Time Items	1	2	3	4	5	6
1	1.00					
2	.42	1.00				
3	.47	.50	1.00			
4	.39	.44	.61	1.00		
5	.42	.45	.63	.60	1.00	
6	.44	.46	.69	.69	.66	1.00

All correlations are significant at $p < .01$ level

Table 17 presents the correlations among all items for the Playfulness/Humor scale of the SOQ version 7. The table also reports a Cronbach's alpha of .88 for this dimension.

Table 17
Correlations among SOQ V 7 Playfulness/Humor Items
for Overall Sample (n = 3491) $\alpha = .8784$

Playfulness/ Humor Items	1	2	3	4	5	6
1	1.00					
2	.52	1.00				
3	.66	.57	1.00			
4	.48	.54	.55	1.00		
5	.60	.49	.65	.54	1.00	
6	.49	.55	.52	.56	.51	1.00

All correlations are significant at $p < .01$ level

Table 18 presents the correlations among all items for the Conflict scale of the SOQ version 7. The table also reports a Cronbach's alpha of .86 for this dimension.

Table 18
Correlations among SOQ V 7 Conflict Items
for Overall Sample (n = 3491) $\alpha = .8581$

Conflict Items	1	2	3	4	5	6
1	1.00					
2	.47	1.00				
3	.47	.55	1.00			
4	.51	.46	.47	1.00		
5	.47	.50	.54	.53	1.00	
6	.45	.51	.63	.46	.58	1.00

All correlations are significant at $p < .01$ level

Table 19 presents the correlations among all items for the Idea-Support scale of the SOQ version 7. The table also reports a Cronbach's alpha of .90 for this dimension.

Table 19
Correlations among SOQ V 7 Idea-Support Items
for Overall Sample (n = 3491) $\alpha = .8973$

Idea-Support Items	1	2	3	4	5
1	1.00				
2	.69	1.00			
3	.56	.62	1.00		
4	.64	.68	.64	1.00	
5	.60	.63	.60	.70	1.00

All correlations are significant at $p < .01$ level

Table 20 presents the correlations among all items for the Debate scale of the SOQ version 7. The table also reports a Cronbach's alpha of .88 for this dimension.

Table 20
Correlations among SOQ V 7 Debate Items
for Overall Sample (n = 3491) $\alpha = .8751$

Debate Items	1	2	3	4	5	6
1	1.00					
2	.50	1.00				
3	.49	.60	1.00			
4	.55	.55	.59	1.00		
5	.56	.54	.59	.66	1.00	
6	.49	.41	.45	.50	.63	1.00

All correlations are significant at $p < .01$ level

Table 21 presents the correlations among all items for the Risk-Taking scale of the SOQ version 7. The table also reports a Cronbach's alpha of .81 for this dimension.

Table 21
Correlations among SOQ V 7 Risk-Taking Items
for Overall Sample (n = 3491) $\alpha = .8053$

Risk-Taking Items	1	2	3	4	5
1	1.00				
2	.48	1.00			
3	.39	.46	1.00		
4	.46	.48	.53	1.00	
5	.41	.47	.41	.44	1.00

All correlations are significant at $p < .01$ level

The results on the item and item-to-scale performance represent a general trend towards improvement on the psychometrics for the Risk-Taking scale without negative effects on the other scales. Further refinement will be required for the Trust/Openness dimension.

Inter-Dimension Correlations

The purpose of this section is to describe the results from the correlation analysis of the SOQ's dimensions and items. Table 22 shows the correlations among the dimensions for the entire sample ($n=3491$). The level of significance for each correlation was very strong, at $p < .01$. The results showed that the dimensions had positive relationships to each other. For example, the Challenge/Involvement dimension is strongly correlated to Idea-Support, Trust/Openness, and Risk-Taking. Risk-Taking and Idea-Support also show strong inter-relationships. Conflict is negatively correlated with all dimensions except for Challenge/Involvement.

Table 22
Inter-Correlations Among Dimensions of the SOQ V 7
(n = 3491)

Dimension	1	2	3	4	5	6	7	8	9
Challenge/Involvement	1.00								
Freedom	.482	1.00							
Trust/Openness	.660	.396	1.00						
Idea-Time	.523	.508	.433	1.00					
Playfulness/Humor	.579	.431	.525	.504	1.00				
Conflict	.479	-.171	-.577	-.260	-.386	1.00			
Idea-Support	.700	.501	.645	.642	.617	-.473	1.00		
Debate	.549	.458	.465	.520	.512	-.226	.679	1.00	
Risk-Taking	.574	.554	.477	.595	.515	-.228	.681	.596	1.00

Gender Differences

Lauer and Isaksen (2001) reported a number of significant differences in sub-climates using the SOQ. One of the most meaningful results from this study was the occurrence of differences in climate scores for males and females. The published study used data from approximately 1,000 individuals so further analysis was conducted using the current data available for SOQ version 7.

Table 23
Descriptive Statistics V 7 - Female

Dimension	N	Minimum	Maximum	Mean	Std. Deviation
Challenge/Involvement	782	29	300	222.42	53.60
Freedom	782	0	300	173.62	57.16
Trust/Openness	782	0	300	180.43	61.57
Idea-Time	782	0	300	138.91	58.98
Playfulness/Humor	782	0	300	183.50	62.94
Conflict	782	0	300	80.82	62.20
Idea-Support	782	0	300	194.32	61.68
Debate	782	67	300	192.64	54.48
Risk-Taking	782	0	300	158.29	57.25

The descriptive statistics for those who reported their gender as female are included in Table 23. Of the total sample of 3491, 1414 individuals did not report their gender. Of the 2077 who did report their gender, 782 were females and 1295 were males.

The descriptive statistics for those who reported their gender as male are included in Table 24 below.

Table 24
Descriptive Statistics V 7 - Male

Dimension	N	Minimum	Maximum	Mean	Std. Deviation
Challenge/Involvement	1295	14	300	225.16	50.63
Freedom	1295	0	300	175.39	56.33
Trust/Openness	1295	0	300	182.58	56.97
Idea-Time	1295	0	300	147.36	60.18
Playfulness/Humor	1295	0	300	179.49	59.73
Conflict	1295	0	300	87.80	61.58
Idea-Support	1295	0	300	192.22	60.01
Debate	1295	17	300	199.71	55.07
Risk-Taking	1295	0	300	158.08	56.17

An Analysis of Variance was conducted to test the significance of the difference between the means for males and females. These results are reported in Table 25 below.

Table 25
ANOVA on Differences in Gender SOQ V 7

Dimension	df	F	Sig.
Challenge/Involvement	2481	1.365	.243
Freedom	(1,2075)	.476	.490
Trust/Openness	(1,2075)	.650	.420
Idea-Time	(1,2075)	9.747	.002
Playfulness/Humor	(1,2075)	2.103	.147
Conflict	(1,2075)	6.219	.013
Idea-Support	(1,2075)	.588	.443
Debate	(1,2075)	8.097	.004
Risk-Taking	(1,2075)	.006	.937

It appears that there are some significant differences in the way males and females view their climate. Males tend to have a higher score on the Idea-Time, Conflict, and Debate dimensions of the SOQ version 7. To some degree, the level of significance may be influenced by the relatively large sample size. When comparing the actual means for each gender, the actual differences are relatively small. For example, the actual difference in the means for Idea-Time is 8.45 points (on a theoretic scale of 300 points). Whatever the case, those who use the SOQ should carefully consider the gender differences that may exist within certain organizations and levels of analysis.

Age Differences

Lauer & Isaksen (2001) noted that for some organizations, there were significant differences on climate scores based on age. For the existing sample, 2086 individuals provided their age when they took the SOQ version 7.

Table 26 shows the correlation results for climate dimension scores and age. Four dimensions show a significant correlation with age. These significance levels could be due to the size of the sample, as the *r*-values are rather small.

Table 26
Correlation SOQ V 7 Dimensions & Age (n = 2086)

Dimension	Pearson Correlation	Sig.
Challenge/Involvement	.129	.000
Freedom	.026	.239
Trust/Openness	.059	.007
Idea-Time	.019	.376
Playfulness/Humor	-.093	.000
Conflict	-.091	.000
Idea-Support	.034	.123
Debate	-.002	.926
Risk-Taking	.015	.498

The next step to examine age differences was to place the respondent into one of nine, five-year intervals. Table 27 presents the correlation results for each interval.

Table 27
Correlation SOQ V 7 Dimensions & Age Ranges

		Age 17-24 n = 69	Age 25-29 n = 131	Age 30-34 n = 276	Age 35-39 n = 390	Age 40-44 n = 418	Age 45-49 n = 389	Age 50-54 n = 262	Age 55-59 n = 103	Age 60+ n = 48
Challenge/ Involvement	Pearson Correlation	-.041	-.059	.047	.121*	.005	-.144**	.010	.055	-.170
	Sig.	.736	.506	.435	.017	.927	.004	.876	.580	.248
Freedom	Pearson Correlation	-.045	.002	.034	.077	-.041	-.041	.050	.048	-.039
	Sig.	.715	.980	.577	.128	.402	.425	.423	.632	.790
Trust/ Openness	Pearson Correlation	-.055	-.080	.028	.124*	-.020	-.070	.038	-.026	-.177
	Sig.	.653	.363	.645	.015	.684	.168	.539	.798	.228
Idea-Time	Pearson Correlation	-.278*	.070	.048	.073	.001	-.097	.032	.070	-.039
	Sig.	.021	.427	.429	.150	.982	.056	.608	.480	.793
Playfulness/ Humor	Pearson Correlation	.043	-.102	.020	.115*	-.061	-.126*	.039	.081	-.156
	Sig.	.725	.246	.739	.023	.214	.013	.529	.417	.290
Conflict	Pearson Correlation	-.120	.000	.004	-.177**	.065	.076	-.038	-.064	-.017
	Sig.	.325	.996	.953	.000	.183	.137	.539	.520	.911
Idea-Support	Pearson Correlation	.058	.064	.043	.102*	-.078	-.097	.030	-.036	-.065
	Sig.	.635	.466	.474	.044	.110	.055	.628	.720	.663
Debate	Pearson Correlation	-.114	.101	.046	.078	-.091	-.065	.079	.048	-.289*
	Sig.	.350	.249	.451	.124	.064	.199	.200	.629	.047
Risk-Taking	Pearson Correlation	-.145	-.019	.059	.079	-.005	-.099	.123*	.033	-.188
	Sig.	.234	.831	.332	.119	.915	.052	.046	.740	.201

**Correlation is significant at $p < .01$ level (2-tailed).

* Correlation is significant at $p < .05$ level (2-tailed).

The results from the analysis of the relationship between these age intervals and each of the nine dimensions of climate show generally negligible correlations, yet one age group (35-39) has five significant relationships. The age group (45-49) shows two significant relationships. The age groups (17-24), (50-54), and (60+) each show one significant relationship. In general, the low *r* values indicate a very slight relationship between scores on the SOQ version 7 and age. Again, these data do indicate that those who use the SOQ may wish to look at age and the amount of time (tenure) within the organization as other factors to consider when interpreting results.

Table 28
ANOVA on Differences in Age Intervals – SOQ V 7

	df	F	Sig.
Challenge/Involvement	8	7.488	.000
Freedom	8	2.223	.023
Trust/Openness	8	3.608	.000
Idea-Time	8	2.018	.041
Playfulness/Humor	8	4.438	.000
Conflict	8	3.609	.000
Idea-Support	8	1.953	.049
Debate	8	1.423	.182
Risk-Taking	8	1.411	.187

A final level of analysis for exploring age differences was to conduct an Analysis of Variance using the age intervals to see if we could find significant differences among the intervals (see Table 28). Again, significant differences between age groupings were found among seven dimensions identified above. To some extent, these may be due to the large sample size.

Internal Factor Structure

Table 29 shows the SOQ version 7 results of the principal component (Promax rotation) that was restricted to nine factors accounting for 62.8% of the variance.

The first factor Challenge/Involvement, accounted for 34.7% of the variance with an Eigenvalue of 18.03. Six of its items load strongly and clearly on its theoretical dimension, with one item sharing a stronger loading on the Idea-Support factor.

The second factor, Conflict, accounted for 7.4% of the variance and had an Eigenvalue of 3.83. All of its items load appropriately on the theoretical dimension.

The third factor, Playfulness/Humor, accounted for 4.1% of the variance with an Eigenvalue of 2.11. All of its items also load appropriately on the theoretical dimension.

The fourth factor, Idea-time, accounted for 3.9% of the variance with an Eigenvalue of 2.01. Five of its items load appropriately on the theoretical dimension, with one item loading more strongly on the Idea-Support factor.

The fifth factor, Debate, accounted for 3.5% of the variance with an Eigenvalue of 1.84. Four of its items load appropriately on the theoretical dimension. One item shares a moderate loading on the Idea-Support factor. Another item of the Debate dimension shares a stronger loading on the Idea-Support factor.

The sixth factor, Freedom, accounted for 3.0% of the variance with an Eigenvalue of 1.53. Five of its items load strongly and clearly on its theoretical dimension. One of the Freedom dimension item shares a moderate loading with the Risk-Taking factor.

The seventh factor, Idea-Support, accounts for 2.49% of the variance with an Eigenvalue of 1.29. Four of its items clearly and strongly load on the theoretical dimension, with one item only moderately sharing a loading with the Risk-Taking factor. One item shows a loading of 1.07, suggesting that there may be high levels of multi-collinearity in the SOQ version 7 data (Babakus, Ferguson, & Joreskog, 1987).

The eighth factor, Risk-Taking, accounts for 2.1% of the variance with an Eigenvalue of 1.10. Its five items load strongly on the theoretical dimension, with one item sharing a moderate loading with the Risk-Taking factor.

The ninth factor, Trust/Openness, accounts for 1.8% of the variance with an Eigenvalue of .93. Three of its items load clearly and appropriately on the theoretical dimension. One item shows a stronger loading with the Challenge/Involvement factor. Another item shares a moderate loading with the Idea-Support factor.

Overall, the factor structure of the SOQ version 7 shows an improvement over the factor structure of version 6. Further developmental work will be needed to address the multicollinearity issues of the Idea-Support dimension.

Table 29
Principal Component (Promax Rotation) Analysis
SOQ version 7 items (n = 3491)

Theoretic scale	Component								
	1	2	3	4	5	6	7	8	9
Challenge/Involvement	.936								
Challenge/Involvement	.934								
Challenge/Involvement	.799								
Challenge/Involvement	.766								
Challenge/Involvement	.700								
Challenge/Involvement	.665								
Challenge/Involvement	.253						.451		
Conflict		-.844							
Conflict		-.802							
Conflict		-.791							
Conflict		-.773							
Conflict		-.758							
Conflict		-.681							
Playfulness/Humor			.903						
Playfulness/Humor			.899						
Playfulness/Humor			.847						
Playfulness/Humor			.755						
Playfulness/Humor			.651						
Playfulness/Humor			.536						
Idea-Time				.956					
Idea-Time				.904					
Idea-Time				.850					
Idea-Time				.846					
Idea-Time				.374					
Idea-Time				.306			.453		
Debate					.849				
Debate					.816				
Debate					.725				
Debate					.644				
Debate					.627		.276		
Debate					.349		.553		
Freedom						.815			
Freedom						.813			
Freedom						.737			
Freedom						.721			
Freedom						.672			
Freedom						.562		.324	
Idea-Support							1.069		
Idea-Support							.994		
Idea-Support							.792		
Idea-Support							.754		
Idea-Support							.626	.260	
Risk-Taking								.793	
Risk-Taking								.736	
Risk-Taking								.714	
Risk-Taking							.267	.492	
Risk-Taking								.479	
Trust/Openness	.396								.292
Trust/Openness									.895
Trust/Openness									.867
Trust/Openness									.359
Trust/Openness							.287		.334
Eigenvalues	18.025	3.830	2.107	2.005	1.837	1.534	1.293	1.100	.931
% Variance Accounted for by Factors	34.663	7.365	4.052	3.855	3.532	2.950	2.486	2.116	1.791

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