Psychological Reports, 2007, 100, 455-466. © Psychological Reports 2007

THE SITUATIONAL OUTLOOK QUESTIONNAIRE: ASSESSING THE CONTEXT FOR CHANGE[1,2]

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Summary.—The Situational Outlook Questionnaire has been in use for many years as an assessment of the climate that supports change, innovation, and creativity. This study reports the descriptive statistics, internal consistency, factor structure, and other psychometric results from a sample of 4,730 respondents. Further areas for improvement of the questionnaire and assessment approach are identified.

Organizations, and the leaders and teams within them, face ever increasing challenges to change to compete and deal with escalating complexity. More often than not, large-scale changes that organizations undertake are not successful. For example, 79% of downsized organizations do not improve shareholder value.[3] Organizations that have implemented ERP systems designed to improve their performance often report a negative return on investment.[4] Many organizations seek single and simple solutions even when the evidence points to the need to take a more systemic approach (Leslie, Loch, & Schaninger, 2006). A key factor that many organizations seem to ignore is the readiness, willingness, and ability of the context to accept and embrace change.

The context includes many things, including the people, the process and procedures, and the purpose or desired outcomes, as well as the place or work environment. Organizations can obtain the needed information about their place by assessing their climate. The Situational Outlook Questionnaire is a measure of the climate that supports change, innovation, and creativity and provides the basis for a range of consulting and other interventions to assist those who lead and manage organizations. The Situational Outlook Questionnaire was recently revised, and no current data have been reported regarding its psychometric properties.

The Situational Outlook Questionnaire is based on more than fifty years

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[2]The author acknowledges assistance of Hans Akkermans from the Catholic College of Limberg, Belgium, who assisted with the analysis of the data as a part of his internship at the Creative Problem Solving Group.
[3]Performance Edge. (2006) CFO insights: your critical strategic initiative is at risk. Retrieved September 2006 from www.cepworldwide.com.
[4]Stein, T., 1999 Making ERP add up. Retrieved October 2005 from www.informationweek.com.

DOI 10.2466/PR0.100.2.455-466

of research and development, starting with the original work by Göran Ekvall during the 1950s (Isaksen & Ekvall, 2006). Numerous earlier publications have outlined the psychometric characteristics (Isaksen, Lauer, Murdock, Dorval, & Puccio, 1995) and evidence supporting the validity of earlier versions (Isaksen & Lauer, 2001, 2002; Isaksen, Lauer, Ekvall, & Britz, 2001). The purpose of this article is to provide an update regarding the psychometric properties, reliability, and validity of the current version of the Situational Outlook Questionnaire.

Overview of the Questionnaire and Its Foundations

The Situational Outlook Questionnaire is a measure of organizational climate based on the conceptual and theoretical foundations of earlier work done by Ekvall (1987, 1991, 1996, 1997). Climate is defined as the perceived and recurring patterns of behavior, attitudes, and feelings that characterize life in the organization. Climate is distinct from culture in that the latter refers to the underlying values and traditions reflecting the deeper foundations of the organization (Denison, 1996). As such, climate represents an intervening variable that is influenced by numerous antecedent factors such as leadership behavior, organizational structure and size, and the mission and strategy of the organization, among others (Isaksen, *et al.*, 2001). Climate exerts an influence on organizational and psychological process, and therefore also on individual and organizational performance and well-being.

The initial development of the dimensions assessed by the Situational Outlook Questionnaire was derived from early organizational research into the success of various personnel practices and improvement efforts including idea-suggestion schemes (Ekvall, 1967, 1971). Ekvall observed that a key factor in determining the success or failure of the diffusion and effects of these initiatives was the climate within the target area of the organization. These observations led to the development of an assessment of climate (Ekvall, 1983; Ekvall, Arvonen, & Waldenström-Lindblad, 1983). This Swedish measure was translated into English, and inquiry was conducted regarding its reliability, validity, and psychometric properties (Isaksen, *et al.*, 1995; Isaksen, Lauer, & Ekvall, 1999).

Each of the nine dimensions of the Situational Outlook Questionnaire is defined below, and a sample item is included. The number of items for each dimension is identified. Items are designed to help the respondent make observations about the behaviors and interactions among the individuals within the work group or organization. The 4-point scale includes 0 for not at all applicable; 1 for applicable to some extent; 2 for fairly applicable; and 3 for applicable to a high extent. The overall score for each dimension is calculated by taking the average of the respondent's scores for each dimension, and multiplying this by 100. This procedure allows for ease of comparison across dimensions.

The Challenge/Involvement dimension focuses on how much people are involved in daily operations, long-term goals, and visions. High challenge and involvement means that people are intrinsically motivated and committed to making contributions to the success of the organization. People find joy and meaningfulness in their work, and therefore, they invest much energy. In the opposite situation, people are not engaged and feelings of alienation and indifference are present. The common sentiment and attitude is apathy and lack of interest in that work and interaction is both dull and listless. "Most people here strive to do a good job" is a sample question for this dimension. There are seven items on this dimension.

The Freedom dimension refers to the independence in behavior exerted by the people in the organization. In a climate with much freedom, people are given autonomy to define much of their own work. People are able to exercise discretion in their day-to-day activities. People perceive that they have freedom to take the initiative to acquire and share information, and they make plans and decisions about their work. In the opposite climate people work within strict guidelines and roles. People carry out their work in prescribed ways with little room to redefine their tasks. "People here make choices about their own work" is a sample question for this dimension. There are six items on this dimension.

The Trust/Openness dimension addresses emotional safety in relationships. When there is high trust, individuals can be genuinely open and frank with one another. People have a sincere respect for one another and can count on each other for personal support. Where trust is missing, people are suspicious of each other, and therefore, they closely guard themselves and their ideas. People also find it extremely difficult to communicate openly with each other. "People here do not steal each others' ideas" is a sample question for this dimension. There are five items on this dimension.

Idea-Time refers to the amount of time people can use (and do use) for elaborating new ideas. In the high Idea-Time situation, there are possibilities to discuss and test impulses and fresh suggestions which are not planned or included in the task assignment. There are opportunities to take the time to explore and develop new ideas. Flexible timelines permit people to explore new avenues and alternatives. In the reverse case, every minute is booked and specified. The time pressure makes thinking outside the instructions and planned routines impossible. "One has the opportunity to stop work here in order to test new ideas" is a sample question for this dimension that includes six items.

The Playfulness/Humor dimension addresses the spontaneity and ease displayed within the workplace. A relaxed atmosphere where good-natured jokes and laughter occur often is indicative of this dimension. People can be seen having fun at work. The atmosphere is seen as easy-going and light-

hearted. The opposite climate is characterized by gravity and seriousness. The atmosphere is stiff, gloomy and cumbrous. Jokes and laughter are regarded as improper and intolerable. "People here exhibit a sense of humor" is a sample question for this dimension. There are six items on this dimension.

Conflict refers to the presence of personal and emotional tensions in the organization. When the level of conflict is high, groups and individuals dislike and may even hate each other. The climate can be characterized by "interpersonal warfare." Plots, traps, power, and territory struggles are usual elements in the life of the organization. Personal differences yield gossip and slander. In the opposite case, people behave in a more mature manner; they have psychological insight and control of impulses. People accept and deal effectively with diversity. "There is a great deal of personal tension here" is a sample question for this dimension that includes six items.

The Idea-Support dimension focuses on the ways new ideas are treated. In the supportive climate, ideas and suggestions are received in an attentive and professional way by bosses, peers, and subordinates. People listen to each other and encourage initiatives. Possibilities for trying out new ideas are created. The atmosphere is constructive and positive when considering new ideas. When Idea-Support is low, the automatic "no" is prevailing. Every suggestion is immediately refuted by a destructive counter-argument. Fault-finding and obstacle raising are the usual styles of responding to ideas. "People here receive support and encouragement when presenting new ideas" is a sample question for this dimension that includes five items.

The Debate dimension assesses the occurrence of encounters and disagreements between viewpoints, ideas, and differing experiences and knowledge. In the debating organization many voices are heard, and people are keen on putting forward their ideas for consideration and review. People can often be seen discussing opposing opinions and sharing a diversity of perspectives. Where debates are missing, people follow authoritarian patterns without questioning. "Many different points of view are shared here during discussion" is a sample question for this dimension. There are six items on this dimension.

The Risk-taking dimension addresses the tolerance of uncertainty and ambiguity exposed in the workplace. In the high risk-taking case, bold new initiatives can be taken even when the outcomes are unknown. People feel as though they can "take a gamble" on some of their ideas. People will often "go out on a limb" and will put an idea forward. In a risk-avoiding climate there is a cautious, hesitant mentality. People try to be on the "safe side." They make decisions by "sleeping on the matter." They set up committees, and they cover themselves in many ways before making a decision. "People here feel as though they can take bold action even if the outcome is

unclear" is a sample question for this dimension. There are five items on this scale.

The 53 items designed to assess these nine dimensions comprise the first part of the Situational Outlook Questionnaire. The current version also includes three open-ended questions designed to obtain narrative data from respondents regarding what is supporting and hindering their creativity within their working environment, as well as the actions they would take to improve the climate for creativity. Including narrative data within the Situational Outlook Questionnaire allows the results to be contextualized through descriptive coding and the construction of themes or categories (Huberman & Miles, 2002). These three questions comprise Part 2 of the Situational Outlook Questionnaire.

Numerous studies have been conducted to examine the reliability and validity of the earlier versions (Talbot, Cooper, & Barrow, 1992; Lauer, 1994; Turnipseed, 1994; Cabra, 1996). Other studies sought to estimate the relationship between climate as an interpersonal variable, and cognitive or problem-solving style as an intrapersonal construct (Isaksen & Kaufmann, 1990; Isaksen & Lauer, 1999). The Situational Outlook Questionnaire has been examined in relation to its effectiveness in discriminating levels of creativity in teamwork (Isaksen & Lauer, 2002) as well as perceived support for creativity within the organization (Isaksen & Lauer, 2001). The questionnaire has also been applied to help organizational leaders with their transformation and change efforts (Isaksen & Tidd, 2006).

Qualitative research utilizing the Situational Outlook Questionnaire has also been conducted. One study examined the relationship between the quantitative results from Part 1 of the questionnaire with a measure of cognitive style. Grivas (1996) found no significant relationship among the nine dimensions with the measure of cognitive style. He did, however, find meaningful qualitative differences in the narrative responses from Part 2 for those of different styles. For example, he found that those with a more innovative cognitive style preferred to have their supervisors and managers more distant than those with a more adaptive style who preferred to have their managers closer.

Another study sought to examine the narrative results from across multiple sites (Sobieck, 1996). She reported that roughly half the narrative comments related directly to the nine dimensions assessed by Part 1. The other half of the narrative comments were related to other organizational factors described in the Model for Organizational Change (Isaksen, *et al.*, 2001).

A third study was conducted by Speranzini (1997) aimed at understanding the effect of providing organizational leaders feedback on their results. She found support for the application of the Situational Outlook Questionnaire to help leaders make changes in their behavior in service of climate

improvement. The organizational leaders and managers integrated their climate results into concrete plans for improvement by considering both their strategy and their desired results along with the readiness and ability of the climate to deal with these intentions.

The current version, the sixth in the series, was developed in 2001, following a review of the item distributions, scale reliabilities, and factor structure of the previous version. The Risk-taking and Trust/Openness scales were key targets for improvement since their Cronbach alphas were .64 and .62, respectively (below our minimum target of .70), and some of the items within these dimensions did not load on their appropriate theoretic factors. Some items were carefully edited, and new items were added to each of these dimensions based on the revised Cronbach alphas if certain items were removed. These items were selected for editing.

Since this questionnaire has been utilized as a part of an overall assessment and action research program, it is important to review its psychometric adequacy continuously and use the results to guide continuous improvement of the measure and the approach to organizational improvement.

Method

The present sample of 4,730 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 were collected from September of 2002, through February of 2006. Twenty-seven organizations were included with samples ranging from 1,169 individuals involved in a leadership development program within a global enterprise software provider, another 1,052 individuals from a North American division of a global financial services and accounting firm, to a sample of five individuals from a small plastics manufacturing firm. For the 2,646 individuals who indicated their sex, 1,628 were men and 1,018 were women. The ages ranged from 17 to 69 years, with an average of 38.0 yr. for the 2,864 who reported these data. All participants took the questionnaire in English via the web. Fifty-four percent of the sample came from outside North America and included respondents from the UK, Germany, Italy, France, The Netherlands, Belgium, and Denmark.

Results and Discussion

Table 1 presents the scale means, standard deviations, standard error of measure, and Cronbach alphas for the entire sample ($N=4,730$). The standard error of measurement (*SEM*) for each of the nine dimensions was calculated by multiplying the standard deviation by the square root of one, minus the reliability coefficients for each dimension. There was a noticeable improvement in the internal consistency of the Risk-taking dimension that was .62 on the earlier version and is now above .70. There was some improve-

ment in the internal consistency of the Trust/Openness dimension that was .64, and is now .69. The distribution of the scales represented the full range of 0 to 300 for all dimensions as would be expected with such a large sample.

TABLE 1
SITUATIONAL OUTLOOK QUESTIONNAIRE: MEANS, STANDARD DEVIATIONS, STANDARD ERRORS OF MEASURE AND CRONBACH ALPHAS ($N = 4,730$)

Dimension	*M*	*SD*	*SEM*	α
Challenge/Involvement	215.1	53.9	20.2	.86
Freedom	170.7	56.3	23.2	.83
Trust/Openness	174.5	54.2	29.7	.69
Idea-Time	132.8	60.3	22.7	.87
Playfulness/Humor	169.3	63.7	22.8	.88
Conflict	90.4	66.5	24.9	.86
Idea-Support	179.8	61.9	20.6	.89
Debate	190.6	57.6	19.9	.88
Risk-taking	146.7	55.7	25.5	.79

Lauer and Isaksen (2001) reported a number of significant differences in subclimates using the Situational Outlook Questionnaire. They examined the results within a series of single organizations rather than aggregating the results from across various organizations. One of their most meaningful results was the observation of differences in climate scores for men and women in some organizations. Further analysis was conducted using data from the current version of the Situational Outlook Questionnaire. From the total sample of 4,730, 2,248 individuals did not report their sex. Of the 2,482 reporting their sex, 933 were women and 1,549 were men. Significant differences were found for sex, with women having significantly higher scores on all dimensions except conflict, a negative dimension. The results from the analysis of variance for sex are included in Table 2.

TABLE 2
ANALYSIS OF VARIANCE ON DIFFERENCES BY SEX ($n = 2,482$)

Dimension	*df*	*F*	*p*
Challenge/Involvement	2481	29.57	.001
Freedom	2481	29.02	.001
Trust/Openness	2481	30.99	.001
Idea-Time	2481	4.30	.04
Playfulness/Humor	2481	57.09	.001
Conflict	2481	6.54	.01
Idea-Support	2481	43.13	.001
Debate	2481	15.76	.001
Risk-taking	2481	18.31	.001

It appears that there are significant differences in the way men and women view their climate. Women have significantly more positive scores on all nine dimensions. Statistical significance may be influenced by the relatively large sample size: When comparing the actual means for each sex, the actual differences are relatively small. For example, the actual difference in the means for Risk-taking is 9.6 points (on a theoretic scale of 300 points with a *SEM* of 25.5). Whatever the case, those who use the questionnaire will need to consider carefully any sex differences within certain organizations and levels of analysis.

Lauer and Isaksen (2001) also reported significant differences on the questionnaire based on age. For the sample, 2,863 provided their ages. Correlations involving age are reported in Table 3. All but two dimensions (Playfulness/Humor and Idea-Time) yielded a significant correlation. These significance levels could reflect the size of the sample, as the *r*s are rather small. Again, those who use the questionnaire may want to consider the differences in age within certain organizations or conducting various levels of analysis.

TABLE 3
PEARSON CORRELATIONS OF SITUATIONAL OUTLOOK QUESTIONNAIRE DIMENSIONS AND AGE ($n = 2,863$)

Dimension	Pearson *r*	*p*
Challenge/Involvement	.161	.001
Freedom	.071	.001
Trust/Openness	.134	.001
Idea-Time	.024	.10
Playfulness/Humor	−.027	.08
Conflict	−.081	.001
Idea-Support	.078	.001
Debate	.085	.001
Risk-taking	.060	.001

Previous factor analyses of the Situational Outlook Questionnaire used a variety of extraction and rotation methods. Russell (2002) reviewed the use and abuse of factor analysis and concluded that both principal components analysis and principal axis factoring yield somewhat similar results. He noted that an oblique rotation, such as Promax, allows the rotated factors to be correlated with each other. The present dimensions are intercorrelated (Isaksen & Ekvall, 2006), and there is theoretical support for the nine dimensions. For these reasons, the Promax method of extraction was selected for the factor analysis of Situational Outlook Questionnaire Version 6. Since the nine dimensions are theoretically derived, the analysis was restricted to identify nine factors rather than relying solely on a scree test or applying an automatic cut-off for eigenvalues greater than one. After conducting the scree

test, a ninth factor yielded an eigenvalue of .94, very close to the generally accepted cut-off of one. This approach is consistent with the suggestions offered by Ferrando and Lorenzo-Seva (2000), and Costello (2005).

Table 4 shows the results of the principal component analysis (Promax rotation) that was restricted to nine factors accounting for 61.4% of the variance. The structure results show major improvement for the Risk-taking dimensions and slight improvement for the Trust/Openness dimension from the earlier version.

TABLE 4
PRINCIPAL COMPONENT (PROMAX ROTATION) ANALYSIS SITUATIONAL OUTLOOK QUESTIONNAIRE VERSION 6 (N = 4,730)

Theoretic Dimension	Component								
	1	2	3	4	5	6	7	8	9
Challenge/Involve	.81								
	.71								
	.71								
	.66								
	.59								
	.46	.71							
	.32	.65							
Idea-Support		.69							
		.65							
		.51							
		.48							
		.44							
Conflict			−.84						
			−.81						
			−.81						
			−.80						
			−.76						
			−.68						
Idea-Time				.95					
				.91					
				.83					
				.82					
				.54					
		.32		.54					
Risk-taking					.92				
					.77				
					.73				
					.46				
		.33			.46				
Debate						.92			
						.86			
						.81			
						.78			

(continued on next page)

TABLE 4 (CONT'D)
PRINCIPAL COMPONENT (PROMAX ROTATION) ANALYSIS SITUATIONAL OUTLOOK QUESTIONNAIRE VERSION 6 (N = 4,730)

Theoretic Dimension	Component								
	1	2	3	4	5	6	7	8	9
						.77			
						.43			
Freedom							.84		
							.78		
							.76		
							.69		
							.64		
					.38				
Playfulness/Humor								.90	
								.83	
								.79	
								.74	
								.68	
		.40						.50	
Trust and Openness									.93
									.86
									.34
								.43	
	.66								
Eigenvalues	16.79	3.77	2.28	2.20	1.98	1.63	1.24	1.07	0.94
% variance accounted for	32.29	7.25	4.39	4.23	3.81	3.13	2.39	2.07	1.80

Further work is required to improve the Trust/Openness scale, as it is the only one that fell below .70 for internal consistency and has some items which load on other scales more strongly than the pertinent theoretic scale. Certain items from the Challenge/Involvement and Freedom dimensions also need to be examined for content to see if they will also load on their respective theoretic scales. Further factor analytic work should be done to examine high-order factors and the intercorrelations among the nine dimensions.

In general, the current version of the Situational Outlook Questionnaire has obtained stronger psychometric properties than earlier versions. As its use has expanded, further research and development is necessary to improve the deficiencies as well as strengthen the evidence for predictive, concurrent and content validity. Further refinement of certain items appears desirable.

Additional qualitative research needs to be conducted to strengthen the multimethod nature of the assessment and intervention approach. The relationships between and among the elements of the conceptual model (The Model for Organizational Change) and the nine dimensions assessed through a quantitative approach need further investigation.

REFERENCES

CABRA, J. F. (1996) Examining the reliability and factor structure of the Climate for Innovation Questionnaire. Unpublished master's thesis, Center for Studies in Creativity, State Univer. College at Buffalo.

COSTELLO, A. B. (2005) Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research and Evaluation*, 10, 1-9.

DENISON, D. R. (1996) What is the difference between organizational culture and organizational climate? A native's view on a decade of paradigm wars. *Academy of Management Review*, 21, 619-694.

EKVALL, G. (1967) *Industrial suggestion schemes: studies concerning their psychological background*. Stockholm: PAcouncil.

EKVALL, G. (1971) *Creativity at the place of work: a study of suggestors and suggestion systems in the Swedish mechanical industry*. Stockholm: PAcouncil.

EKVALL, G. (1983) *Climate, structure and innovativeness of organizations: a theoretical framework and an experiment*. Stockholm, Sweden: FArådet-The Swedish Council for Management and Work Life Issues (Report No. 1).

EKVALL, G. (1987) The climate metaphor in organization theory. In B. Bass & P. Drenth (Eds.), *Advances in organizational psychology*. Beverly Hills, CA: Sage. Pp. 177-190.

EKVALL, G. (1991) The organizational culture of idea-management: a creative climate for the management of ideas. In J. Henry & D. Walker (Eds.), *Managing innovation*. London: Sage. Pp. 73-79.

EKVALL, G. (1996) The organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology*, 5, 105-123.

EKVALL, G. (1997) Organizational conditions and levels of creativity. *Creativity and Innovation Management*, 6, 195-205.

EKVALL, G., ARVONEN, J., & WALDENSTRÖM-LINDBLAD, I. (1983) *Creative organizational climate: construction and validation of a measuring instrument*. Stockholm, Sweden: The Swedish Council for Management and Organizational Behaviour (Report No. 2).

FERRANDO, P. J., & LORENZO-SEVA, U. (2000) Unrestricted versus restricted factor analysis of multidimensional test items: some aspects of the problem and some suggestions. *Psicológica*, 21, 301-323.

GRIVAS, C. C. (1996) An exploratory investigation of the relationship of cognitive style with perceptions of creative climate. Unpublished master's thesis, Center for Studies in Creativity, State Univer. College at Buffalo.

HUBERMAN, M., & MILES, M. B. (Eds.) (2002) *The qualitative researcher's companion*. Thousand Oaks, CA: Sage.

ISAKSEN, S. G., & EKVALL, G. (2006) *Assessing your context for change: a technical manual for the Situational Outlook Questionnaire*. Buffalo, NY: The Creative Problem Solving Group.

ISAKSEN, S. G., & KAUFMANN, G. (1990) Adaptors and innovators: a discriminant analysis of the perceptions of the psychological climate for creativity. *Studia Psychologica: The Journal for Basic Research in Psychological Sciences*, 32, 129-141.

ISAKSEN, S. G., & LAUER, K. J. (1999) Relationship between cognitive style and individual psychological climate: reflections on a previous study. *Studia Psychologica*, 41, 177-191.

ISAKSEN, S. G., & LAUER, K. J. (2001) Convergent validity of the Situational Outlook Questionnaire: discriminating levels of perceived support for creativity. *North American Journal of Psychology*, 3, 31-40.

ISAKSEN, S. G., & LAUER, K. J. (2002) The climate for creativity and change in teams. *Creativity and Innovation Management Journal*, 11, 74-86.

ISAKSEN, S. G., LAUER, K. J., & EKVALL, G. (1999) Situational Outlook Questionnaire: a measure of the climate for creativity and change. *Psychological Reports*, 85, 665-674.

ISAKSEN, S. G., LAUER, K. J., EKVALL, G., & BRITZ, A. (2001) Perceptions of the best and worst climates for creativity: preliminary validation evidence for the Situational Outlook Questionnaire. *Creativity Research Journal*, 13, 171-184.

ISAKSEN, S. G., LAUER, K. J., MURDOCK, M. C., DORVAL, K. B., & PUCCIO, G. J. (1995) *Situa-*

tional Outlook Questionnaire: understanding the climate for creativity and change (SOQ)—a technical manual. Buffalo, NY: Creative Problem Solving Group-Buffalo.

ISAKSEN, S. G., & TIDD, J. (2006) *Meeting the innovation challenge: leadership for transformation and growth.* Chichester, UK: Wiley.

LAUER, K. J. (1994) The assessment of creative climate: an investigation of Ekvall's Creative Climate Questionnaire. Unpublished master's thesis, Center for Studies in Creativity, State Univer. College at Buffalo.

LAUER, K. J., & ISAKSEN, S. G. (2001) Driving through changing climates: using the SOQ to direct organizational change. In J. Buijs, R. Van der Lugt, & H. Van der Meer (Eds.), *Idea Safari: Proceedings of the Seventh European Conference in Creativity and Innovation.* Enschede, The Netherlands: Twente Univer. Press. Pp. 231-238.

LESLIE, K., LOCH, M., & SCHANINGER, B. (2006) Managing your organization by the evidence. *The McKinsey Quarterly*, 3, 67-75.

RUSSELL, D. W. (2002) In search of underlying dimensions: the use (and abuse) of factor analysis. *Personality and Social Psychology Bulletin*, 28, 1629-1646.

SOBIECK, M. A. (1996) Examination of cross-site narrative responses on the CIQ and SOQ. Unpublished master's thesis, Center for Studies in Creativity, State Univer. College at Buffalo.

SPERANZINI, G. D. (1997) Understanding the impact of a climate intervention: debriefing the Situational Outlook Questionnaire (SOQ). Unpublished master's thesis, Center for Studies in Creativity, State Univer. College at Buffalo.

TALBOT, R. J., COOPER, C. L., & BARROW, S. (1992) Creativity and stress. *Creativity and Innovation Management*, 1, 183-193.

TURNIPSEED, D. (1994) The relationship between the social environment of organizations and the climate for innovation and creativity. *Creativity and Innovation Management*, 3, 184-195.

Accepted February 13, 2007.