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### **Validity Testing of the Leader Behavior Description Questionnaire XII for Use Across National Cultures**

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### **ABSTRACT**

This study describes the processes of establishing validity of the Leader Behavior Description Questionnaire XII (LBDQXII, Stogdill, 1965, 1974; Littrell, 2002, 2010, 2013) for use across cultures. A major contribution of this research project is demonstrating the construct and content validity of the operationalization of a widely-used ELT dimension survey for use across cultures. The study contributes to empirical field survey research study literature concerning societal cultural effects on explicit preferred leader behavior of employed businesspeople. An introduction to the history and systems of the LBDQXII for assessing preferred leader behavior priorities is presented, followed by discussion of the results of focus group studies of the survey translated to local languages in China, Ghana, Iceland, Iran, Lithuania, Romania, Russia, Turkey, and Syria. The findings indicate that the LBDQXII has construct validity for assessing preferred leader behavior dimensions across national cultures. The LBDQXII is a useful,

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reliable, and valid survey instrument that can be employed to assess and prioritize leader behavior dimensions in a society or organization. The survey results can be used to prepare, educate, and develop expatriates and local managers as to what behaviors are expected in business organizations in different cultures. The practical implications of the project are to identify and measure preferred leader behavior dimensions that are similar and different across national and sub-national cultures. Such information can be used to develop global leaders and to educate and train managerial leaders for success in multiple countries, and the LBDQXII can be employed to prepare, educate, and develop local businesspeople to more effectively engage with foreign businesspeople.

**Keywords:** Explicit Leadership Theory, Preferred Leader Behavior, Diversity & Organizations Intercultural Competence, Leadership

## INTRODUCTION

*Culture clash is terrific drama.*  
--Ken Follett

### APPROACHES TO THE STUDY OF LEADERSHIP

Adler & Gundersen (2008) pointed out that in periods of great change, which seem to be continuous so far in the 21<sup>st</sup> century, only those international business leaders and managers survive who understand the myriad and particular changes driven by international differences. A research project, the Global Preferred Leader Behavior and Societal Culture Values Project was conceived in China in 1997, and currently operates under the auspices of the Centre for Cross Cultural Comparisons (CCCC), an international voluntary association of researchers and others interested in cross-cultural studies. The project aims to extend knowledge concerning the measurement of preferred leader behavior and value priorities across cultures, and to apply the results to suggesting how to facilitate successful transactions amongst businesspeople working in businesses requiring interaction with culturally diverse stakeholders.

Two threads of research since the mid-1990s focus on explicit theories of leadership (ELTs) and implicit theories of leadership (ILTs). The authors of this report focus on ELTs (Explicit Theories of Leadership). A major contribution of this project is the development of testing and support of an Explicit Theory of Leadership and presenting progress in its operationalization using the LBDQXII. From a lexical perspective, *implicit* refers to a thing capable of being understood through knowledge of something else. *Explicit* refers to something fully revealed or expressed without vagueness, implication, or ambiguity, leaving no question as to meaning or intent. The study of leadership will obviously benefit from greater emphasis on ELTs.

For ILTs, the reader is directed for introductions and summaries to Lord, Foti, & DeVader (1984), to the seminal article on theories by House & Aditya (1997), and Dorfman & House (2004). The ILT theory has been further developed in the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project research focusing upon managerial leadership by middle managers in business organizations. For summaries and review of the GLOBE project studies of ILTs the reader is referred to House, Sully-de Luque, Dorfman, Javidan & Hanges (2013), 2004) and Chhokar, Brodbeck & House (2007), and Dorfman, Javidan, Hanges, Dastmalchian & House (2012).

ELTs are based upon leaders' actual behaviors, identified and measured through observations and evaluations of overt behaviors (Silverthorne, 2005, p. 68), while ILTs explore the covert conceptual structure of leadership. The implicit/explicit approach is derived from leadership-categorization theory (Lord & Maher, 1991), which suggests that a person is more likely to be accepted as a leader if the person who is evaluating sees a good fit between a leader's expected and actual behavior. That is, if the follower

perceives the leader to be behaving as expected, then the leader is likely to be accepted. The better the fit between the leader's behavior and the explicit leader behavior template, the more influential the leader can be. Researchers have specified that implicit leader theory can be shaped by the societal culture in which the leader operates (Ayman & Chemers, 1983). The approach of our global leadership and values project has been defining explicit leader behavior prototypes within cultures, and comparing the prototypes across cultures.

### **History of This Project**

In 1997 the Preferred Leader Behavior Across Cultures project was initiated, first in China, now with data from China, South Korea, Japan, England, Germany, Iceland, Lithuania, Romania, Russia, Turkey, Uganda, Ghana, Kenya, Zambia, South Africa, Mexico, Chile, the USA, and New Zealand, with work underway in other countries. The project contributes to the empirical field survey research study literature concerning societal cultural value priorities' effects on explicit preferred leader behavior of employed businesspeople, and in some cases tertiary business students. The findings indicate that societal cultural differences moderate variability in preferences for leader behavior associated with leadership effectiveness.

### **Selection of the LBDQXII for Assessment of Preferred Leader Behavior**

In 1997 the Preferred Leader Behavior Across Cultures project was initiated, first in China, now with data from China, South Korea, Japan, England, Germany, Romania, Turkey, Uganda, Ghana, Kenya, Zambia, South Africa, Mexico, Chile, the USA, the UK, New Zealand, Russia, Lithuania, and Iceland, with work underway in other countries (see Littrell, 2013 for a review). The project contributes to the empirical field research study literature concerning societal cultural effects on explicit preferred leader behavior of employed businesspeople. The findings indicate that societal cultural differences moderate variability in preferences for leader behavior associated with leadership effectiveness.

Considering theory development defined in Bass & Bass (2008, pp. 15-23), they propose a list of the processes defining leadership that is essentially a typology. This is a start for the development of a scientific theory from the typology. In Table 1 we relate this list to the LBDQXII dimensions validating the instrument as an effective operationalization of a framework that will be developed into a theory of preferred explicit leader behavior, based upon the Ohio State leader behavior project.

**Table 1. Correspondences Amongst Bass & Bass (2008) Components of Leadership and the LBDQXII Dimensions**

<b>Bass and Bass (2008) Components of Leadership</b>	<b>LBDQXII Components of Leadership</b>
“Leadercentric definitions	<i>The LBDQXII approach is an explicit Followercentric leader behavior theory, a neglected approach in the body of research.</i>
The leader as a personality	<b>F 3: Tolerance of Uncertainty</b>
Leadership as an attribution	An implicit cognitive behavior
Leaders as foci of group processes	<b>F 2: Demand Reconciliation</b> <b>F 11: Integration</b> <b>F 12: Superior Orientation</b>
The leader as a symbol	<b>F 1: Representation</b>
Leadership as the making of meaning	<b>F 10: Predictive Accuracy</b>
Leadership of thought	<b>F 4: Persuasiveness</b> <b>F 7: Role Assumption</b>
Leadership of purposeful behavior	<b>F 4: Persuasiveness</b>
Leadership as persuasive behavior	<b>F 4: Persuasiveness</b>
Leadership as initiation of structure	<b>F 5: Initiation of Structure</b>
Leadership as discretionary influence	<b>F 7: Role Assumption</b>
Leadership as the art of inducing compliance	<b>F 9: Production Emphasis</b> <b>F 4: Persuasiveness</b>
Leadership as an effect The leader as an instrument of goal achievement Leadership as an effect of interaction	<b>F 12: Superior Orientation</b> <b>F 5: Initiation of Structure</b> <b>F 11: Integration</b>
Leadership as interaction between leader and led Leadership as a process Leadership as a power relationship Leadership as a differentiated role Recognition of the leader by the led Identification with the leader Leadership as a combination of elements	This is self-evident and probably a law of leadership. <b>F 6: Tolerance of Freedom</b> <b>F 7: Role Assumption</b> <b>F 7: Role Assumption</b> <b>F 8: Consideration</b> This is self-evident and probably a law of leadership.

**The Ohio State Leader Behavior Project**

The research of the Ohio State group investigating leader behavior in the 1950s and 1960s has been frequently labelled by reviewers who rely on secondary sources as the “behavioral theory of research” (e.g., Glynn and DeJordy, 2010, pp. 122-123), however the Ohio State group identified themselves as developing a contingency theory of leader behavior (Kerr, Schreisheim, Murphy & Stogdill, 1974). The contingency is the kind of organization led, such as religious, governmental, business, military, etc. Inadequate consideration of relevant literature, history, and systems is an example of what Hunt & Bedian (2006) and Hunt & Dodge (2000, pp. 435) call *academic amnesia*, “Much leadership literature neglects its

historical-contextual antecedents and as a result overemphasizes zeitgeist, or tenor of the time's social forces. This neglect impedes leadership research by encouraging academic amnesia and promoting a strong feeling of research de' ja' vu amongst many researchers and practitioners." My reading of the publications developing and using the Ohio State project approach demonstrate to me that theoretical and practical development warrants continuing. Blunt & Jones (1997, pp. 10) propose that many theories of leadership have been developed in the last 50 years, and, like most other theories of human behavior, ways of testing these theories and, hence, of establishing their scientific credentials have remained elusive. The result is that such theories can be assessed only in terms of the intuitive appeal of the explanations they offer, rather than by their ability to withstand repeated attempts to falsify predictions drawn from them following conventional norms of scientific testing (see e.g. Blunt, 1981; Popper, 1959). Blunt & Jones propose theories of leadership which have fallen from favor are therefore more likely to have been victims of changes in fashion in the broad field of management than of anything else.

Supporting the idea of Blunt and Jones, Hunt & Dodge (2000) note the effect of *Champions*, describing three cases of Bernard Bass championing Transformational Leadership, Fred Fiedler the Leadership Contingency Model, and George Graen the Leader-Member Exchange (LMX) Model. Some have time lags, such as House's Charismatic Leadership, discussed in House (1977) that did not take off until publication of House, Spangler and Woycke (1991), culminating at the moment in the GLOBE project (House et al., 2004). Success is driven by a volume of publications and an assault force of colleagues and PhD students working on the theory, hopefully the assault force survives the founder, finds a new Champion, and continues the research programmer.

### ***The Leader Behavior Description Questionnaire XII***

Evaluations of leadership may be obtained readily enough by means of various trait rating schedules. A less common procedure is the measurement of a group's beliefs about descriptions of its leader's explicit behavior. Hemphill and Coons (1950) devised a survey for this purpose, the Leader Behavior Description Questionnaire, assessing two dimensions of leader behavior, *consideration* and *task structuring*. Kerr, Schriesheim, Murphy, & Stogdill (1974) found additional variables that significantly moderated relationships between leader behavior predictors and satisfaction and performance criteria. These were, *subordinate need for information, job level, subordinate expectations of leader behavior, perceived organizational independence, leader's similarity of attitudes and behavior to managerial style of higher management, leader upward influence, and characteristics of the task* (including pressure to accomplish the task and provision of intrinsic satisfaction). Stogdill (1963) developed an assessment of twelve leader behavior dimensions with the LBDQXII. A brief review of the research and development of leader behavior survey instruments leading to and including the LBDQXII is available in Schriesheim & Bird (1979). Development of the LBDQXII was the result of an extensive programmer of research in the USA identifying dimensions of leader behavior across different types of organizations. Stogdill (1965) reported that reliabilities of measures of the dimensions of *initiating structure, consideration, and hierarchical influence* consistently fall in the range of Cronbach's  $\alpha=0.80$  and above for several different populations including United States senators, company presidents, middle managers, military officers, and state police officers. These data reported by Stogdill attest to the internal consistency of the leader behavior scales in the U.S. Halpin (1957) has shown the LBDQ to have concurrent criterion validity, and an experiment reported by Stogdill (1969), conducted under well-controlled laboratory conditions resulted in clear experimental criterion validation of the Ohio State scales. A study by Comrey, Pfiffner & High (1954) indicates construct validity of the leader *Decisiveness, Influence, and Technical Competence* scales. In an extensive series of field investigations, they found these three measures to have factorial independence and to have significant correlations with objective measures of work unit performance such as scrap and output as well as subjective ratings of managerial performance by superiors.

The LBDQXII consists of 100 items with Likert type response categories designed to describe typical behaviors of leaders. These 100 items were factor analyzed to construct 12 dimensions of leader behavior, listed in TABLE 2. The survey instructions can be tailored to describe the behavior of the “ideal leader” or a particular leader, including oneself.

**TABLE 2. Leader Behavior Dimensions Defined by the LBDQ XII**

<b>Factor 1: Representation</b> measures to what degree the manager speaks as the representative of the group.	<b>Factor 7: Role Assumption</b> measures to what degree the manager exercises actively the leadership role rather than surrendering leadership to others.
<b>Factor 2: Demand Reconciliation</b> reflects how well the manager reconciles conflicting demands and reduces disorder to system.	<b>Factor 8: Consideration</b> depicts to what extent the manager regards the comfort, well-being, status and contributions of followers.
<b>Factor 3: Tolerance of Uncertainty</b> depicts to what extent the manager is able to tolerate uncertainty and postponement without anxiety or getting upset.	<b>Factor 9: Production Emphasis</b> measures to what degree the manager applies pressure for productive output.
<b>Factor 4: Persuasiveness</b> measures to what extent the manager uses persuasion and argument effectively; exhibits strong convictions.	<b>Factor 10: Predictive Accuracy</b> measures to what extent the manager exhibits foresight and ability to predict outcomes accurately.
<b>Factor 5: Initiation of Structure</b> measures to what degree the manager clearly defines own role, and lets followers know what is expected.	<b>Factor 11: Integration</b> reflects to what degree the manager maintains a closely-knit organization; resolves inter-member conflicts.
<b>Factor 6: Tolerance of Freedom</b> reflects to what extent the manager allows followers scope for initiative, decision and action.	<b>Factor 12: Superior Orientation</b> measures to what extent the manager maintains cordial relations with superiors; has influence with them; is striving for higher status.

In Sashkin’s (1979) review of the LBDQXII he noted that the *Consideration* and *Initiating Structure* scales were developed exclusively using a factor analytic procedure. The *Tolerance of Freedom* and *Production Emphasis* scales were related to the Bowers & Seashour (1966) leadership dimensions of Interaction Facilitation and Goal Emphasis (Taylor and Bowers, 1972; Yunker and Hunt, 1976). The remaining eight scales were created by Stogdill in consultation with colleagues. Sashkin indicates the LBDQXII is a good choice when investigating leadership climate in organizations, and when doing team building with moderate-sized or large groups, despite its length.

### Reverse Scored Items

The LBDQXII contains 20 items of 100 that are reverse-scored (21 for the Chinese version due to impossibility of identical translation of one item). Use of reverse-scored items has proven to be problematic in survey research. Schriesheim and Hill (1982) demonstrate using samples of items from the LBDQXII that the empirical evidence does not support the then-conventional wisdom that mixing positively and negatively worded items in psychological measures to counteract acquiescence response bias is an acceptable practice. Reflecting upon the large volume of literature on reverse-scored items, almost all indicating that they detract from the reliability and possibility the validity of questionnaires, I am led to the conclusion that the only value of this kind of item is to identify careless and/or malicious subjects, and after being used for that function, they should be omitted from analyses. As this has not been done by other researchers using the LBDQXII, the investigation is a project for the future, and we will follow the use of the conventional form to maintain comparability for comparisons.

A future research project will investigate the possibility that reverse-worded items, that is, items worded in a negative context, measure something other than the opposite of a positively worded item, stemming from, for example, the reluctance of members of Japanese and some Southeast Asian cultures to express explicit and specific disagreement. For the articles in this special issue the LBDQXII is used in the original version in various translations.

## COMPONENTS OF LEADERSHIP THEORIES

Greenwood (1996) reviewed leadership theory development in the 20<sup>th</sup> century to 1995. The common thread is that most contemporary theories are a *marriage of convenience* between situational and trait theory (Greenwood, p. 3). Northouse (2009) and many others identify trait theory as the root of contemporary theory development, characterized by an implicit or explicit search for the one best way to lead. Bass (1990, pp. 19-20) provides a definition of leadership from that period.

Leadership is an interaction between two or more members of a group that often involves structuring or restructuring the situation and the perceptions of the members. Leaders are agents of change; persons whose acts affect other people more than other people's acts affect them. Leadership occurs when one group member modifies the motivation or competencies of others in the group.

Bass & Bass (2008, pp. 15-16) recognize this as a *Leadercentric* definition (Teard, 1929). Avolio, Walumbwa & Weber (2009, pp. 434) state, "Perhaps one of the most interesting omissions in theory and research on leadership is the absence of discussions of followership and its impact on leadership." The CCCC studies focus on followership and fill a *Followercentric* gap in the list from Bass & Bass (2008, pp. 15-23), who list components of what needs to be in a comprehensive definition of leadership. We have cross-referenced the list to the LBDQXII dimensions, the most psychometrically sound version of the Ohio State leadership scales (Schriesheim & Bird, 1979; Schriesheim and Kerr, 1977). The LBDQXII asks respondents to describe the behavior of a person in a managerial leader, leadership, or supervisory position toward the work group or unit, usually groups of which the subjects are a member (Stogdill, 1965). Most approaches to the study of leadership are Leadercentric and define implicit characteristics. Stogdill's contingency approach is Followercentric and defines explicit leader behaviors. The vagaries in correspondence in the table in Table 1 above reflect this dichotomy.

Following the prescriptions of Cronbach & Meehl (1955), Littrell prior to the study described in Littrell (2002), reviewed the construct, content, and criterion literature relating to the LBDQXII, as discussed immediately below.

### Construct Validity of the LBDQXII

An extensive meta-analysis of the survey instruments developed by the Ohio State studies has been carried out by Judge, Piccolo and Iles (2004). These authors found that all the survey instruments had significant predictive validity for leader success, and they found the LBDQXII to have the highest validities averaged across the overarching dimensions of Consideration and Initiating Structure of their exhaustive array of studies reviewed. Vecchio (1987) found the psychometric qualities of the LBDQXII, i.e., its reliability and construct validity, to have received considerable attention and that it was a widely accepted index of leader behavior. Schriesheim and Kerr (1974) in a review of reliability and validity concluded that for the LBDQXII, whilst not being a perfect set of measures, "Its contents appear reasonably valid, it has been subjected to experimental validation with successful results, and it does not confound frequency of behavior with magnitude".

The process of selection of the LBDQXII began in 1996 when, as Training Manager of the Zhongzhou Guesthouse/Holiday Inn Crowne Plaza hotel complex in Zhengzhou City, Henan Province, China, Littrell (2002) began developing manager training courses for multicultural managers employed there, and located publications on Chinese social psychology by Michael Harris Bond of the Chinese University of Hong Kong, contacted him, and began studying the Hofstede-Bond paradigm of cultural value dimensions as a basis for the training and development concerning working with diverse cultures. In 1997 Littrell began development of a managerial leadership training programmer for the hotels, and found there was no contemporary research literature specifically concerning assessment of leadership in Mainland China using a validated survey instrument. A search for information located Selmer (1997) "Differences in Leadership Behavior between Expatriate and Local Bosses as Perceived by Their Host Country National Subordinates". This article employed the LBDQXII in assessing leader behavior preferences of working Chinese managers who were graduates of the Hong Kong Baptist University. The LBDQXII turned out to be the only reasonably priced vetted survey available at the time with a research record relating to Greater China. Littrell contacted Ohio State University and licensed the English-language version of the LBDQXII. Ohio State has subsequently placed the survey in the public domain.

### **FOCUS GROUP STUDIES ACROSS NATIONAL CULTURES**

Use of the LBDQXII in the CCCC project was first reported in Littrell (2002), who found the outcomes to produce appropriate information for developing the managerial leadership training program. In the initial stages of the research project, Littrell carried out focus group studies in Zhengzhou, China; Cluj, Romania; and Accra, Ghana, to validate the survey content and translations. Participants first completed the survey, the moderator scored the dimensions, returned them to the group, and then discussed through a local interpreter each item and dimension as to whether they reflected leader behavior in their societies.

Following the suggestions of Hinkin (1998), the authors of this research report have assessed the content, construct, and face validity of the survey across seven diverse national cultures: China, Ghana, Iceland, Iran, Lithuania, Romania, Russia, Syria, and Ghana. Subsequently, as colleagues joined the project, the consortium conducted LBDQXII studies in other locations in China, including Hangzhou, Guangzhou, Macau, and Zhengzhou (Littrell, Alon & Chan, 2012), and also in England and Germany (Schneider & Littrell 2005), in Romania (Littrell & Valentin, 2005), in Sub-Saharan Africa (Littrell & Baguma, 2005; Littrell & Nkomo, 2005; Littrell, Wu & Nkomo, 2009), and values and leader behavior studies in Mexico and Chile (Littrell, Cruz-Barba and Liberman-Yaconi, Leonardo, 2009 and Littrell & Cruz-Barba, 2013), and Turkey (Littrell et al., 2013).

#### **Focus Group Studies: China**

Two focus groups of twelve supervisors each, employed in a hotel in Zhengzhou, China, were organized to complete and then discuss their impressions of the LBDQXII. One group was bilingual and the other spoke only Mandarin Chinese. The second discussion was conducted through an interpreter. Both groups indicated that the items of the LBDQXII were related to leader behavior and described behavior that was common in their organizations in China.

#### **Focus Group Studies: Romania**

In Cluj, Romania, a focus group of ten university postgraduate students completed the survey in Romanian, scored the dimensions, and discussed the issues in English with the CCCC facilitator, Romanian country manager/interpreter, and amongst themselves. The group indicated the survey measured leader behavior common in their country. Several suggestions for improving the Romanian translation were made and implemented prior to large scale data collection in the country.



### **Focus Group Studies: Ghana**

In Accra, Ghana, a group of twelve businesspeople discussed the survey in English after completing it in English and reviewing their dimension scores. The group indicated the survey measured leader behavior common in their country.

### **Focus Group Studies: Iceland**

Snaebjornsson managed the translation to Icelandic per Brislin's (1970) recommendations. The translated version of the questionnaire was sent to six Icelandic native speakers. They were asked to answer the questionnaires and be prepared to give their general impression of it, mark specific questions they had difficulty in understanding, and provide other comments that could help researchers to improve the instrument. Then group met at an agreed place and time to discuss the questionnaire. In the focus group meetings, participants were asked to provide feedback. After providing the feedback, the English version of the questionnaire was presented, in order to help improve the items in question.

Subsequently, one more focus group with six participants was organized. This group received the same version of the questionnaire as the first group. As before, after giving feedback on the questionnaire, group members were presented with the English version, as well as the suggestions made by the previous group. Focus groups were conducted in Icelandic. Each focus group discussion was recorded by video camera and voice-recorded, with their consent, to ensure the ability to adequately analyze the material later. Two focus group reports were produced as a result.

Corrections were applied to translated versions according to the feedback received during focus group discussions. Then the improved versions of the questionnaires were sent to linguists for comments regarding style and grammar. The last phase of questionnaire preparation included five academics from business studies, who provided feedback regarding the text of the questionnaire.

### **Focus Group Studies: Iran**

Ahmadi assembled a group in Iran of ten experts in various fields of management, economics, sociology and psychology, who discussed the survey in Persian after completing it. (Additionally, they compared two version of questionnaire: English and Persian). All of them indicated the survey measured leader behavior common in their country. They emphasized the suitability of the translation. They also pointed out the suitability of items for assessment of the dimensions. Some participants mentioned that the survey is too long (too many items); some items indicate obviously highly desirable leader behaviors, and this could obscure differences amongst respondents from different job types and industries. number of items are too more ideal and also some of the items are similar. Participants in the focus group stated that due to the similarity of some items, the number of items can be reduced with little or no effect on construct validity.

### **Focus Group Studies: Lithuania**

Snaebjornsson managed the translation to Lithuanian, and that version of the questionnaire was sent to six Lithuanian native speakers. They were asked to answer the questionnaires and be prepared to give their general impression of it, mark specific questions they had difficulty in understanding, and provide other comments that could help researchers to improve the instrument. The group then met at an agreed place and time to discuss the questionnaire. In the focus group meetings, participants were asked to provide feedback. After providing the feedback, the English version of the questionnaire was presented, in order to help improve the translation of the items in question. Subsequently, one more focus group was organized with 5 Lithuanian native speakers. This group received the same version of the questionnaire as

the first group. As before, after giving feedback on the questionnaire, group members were presented with its English version, as well as the suggestions made by the previous group. Focus groups were conducted in Lithuanian. Each focus group discussion was recorded by video camera and voice-recorded, with their consent, to ensure the ability to adequately analyze the material later.

Two focus group reports were produced as a result. Corrections were applied to translated versions according to the feedback received during focus group discussions. Then the improved versions of the questionnaires were sent to linguists for comments regarding style and grammar for final revision prior to use.

### **Focus Group Studies: Russia**

Kuskova managed the production of two versions of questionnaire translations from English to Russian, prepared by bilingual professors whose native language was Russian. Then, a focus group consisting of seven university professors and master's degree students analyzed different translation versions to check for theoretical correspondence of each item to the intended meaning of the item. In an iterative fashion, requiring several in-person and e-mail communications, the focus group arrived at a Russian language version of the questionnaire that they thought matched the original English language version in the most precise manner.

### **Focus Group Studies: Syria**

Dalati translated the survey from English to Arabic, and a bilingual Arabic-English colleague translated it back to English. Between December 2015 and May 2016 two focus group discussions were conducted in Damascus, Syria. The purpose of the focus groups was to examine and validate translation of the LBDQXII questionnaire. The first focus group discussion was carried out at a local café, which is a social venue for undergraduate students to conduct their studies. It consisted of 4 individuals, 2 males, 2 females from the telecommunication industry. The second focus group consisted of 6 female participants working at Human resources department at a private higher education institution in Syria. The focus groups discussions were documented by voice recording. Participants' informed consent was obtained regarding recording of the focus groups. The focus groups' sessions were conducted in Arabic. The survey questionnaire was provided in standard Arabic. The results of the focus group indicated that with regard to the demographic section of the questionnaire, certain questions relating to religion and ethnicity required modification of wording. Ethnicity is not a common designation of an individual in Syria. Some changes were made to the questionnaire translation and to ensure clarity of questions. All participants indicated the survey described leader behavior common in their country.

### **Translation and Verification Process in Turkey**

The English version of the LBDQXII was initially translated to Turkish in a double-blind, back-translated process by several bilingual native-Turkish speakers at Izmir University of Economics, and the composite of the translation verified by a bilingual native-Turkish speaker. The translation has been verified and modified slightly after review by academics in teams managed by the Izmir University of Economics and Marmara University in Istanbul.<sup>2</sup>

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<sup>2</sup> Turkish academics involved in the translation project and their affiliation at the time of publication of study results: E. Serra Yurtkoru, Social Sciences Institute, Marmara University, Istanbul, Turkey; Handan Kepir Sinangil, Department of Psychology, Marmara University, Istanbul, Turkey; Beril Durmus, Faculty of Economics and Administrative Sciences, Marmara University, Istanbul, Turkey; Alev Katrinli, Department of Business Administration, Istanbul Aydın University, Istanbul, Turkey; Remziye Gulem Atabay, Faculty of Economics and Administrative Sciences, Izmir University of Economics, Izmir, Turkey; Gonca Günay, Department of Business

## **Further Demonstration of the Construct Validity of the LBDQXII**

An extensive meta-analysis of the survey instruments developed by the Ohio State studies has been carried out by Judge, Piccolo and Iles (2004). These authors found that all the survey instruments had significant predictive validity for leader success, and they found the LBDQXII to have the highest validities averaged across the overarching dimensions of Consideration and Initiating Structure of their exhaustive array of studies reviewed. Vecchio (1987) found the psychometric qualities of the LBDQXII, i.e., its reliability and construct validity, to have received considerable attention and that it was a widely accepted index of leader behavior. Schriesheim and Kerr (1974) in a review of reliability and validity concluded that for the LBDQXII, while not being a perfect set of measures, "Its contents appear reasonably valid, it has been subjected to experimental validation with successful results, and it does not confound frequency of behavior with magnitude".

## **Cross-Cultural Research with the LBDQXII**

The LBDQXII was developed in the USA to assess leader behavior there; our studies comprise a global project to develop and test multi-language versions of the questionnaire for use across societal cultures. The Leader Behavior Description Questionnaire XII has been used in several countries to study leadership behavior, and results indicate that preferred leader behavior differs for some dimensions across various kinds of societal cultures. Initial cross-cultural use by Black & Porter (1991) and Selmer (1996 & 1997) reported acceptable reliability and validity in cross-cultural use. Cross-cultural reliability and validity are difficult to define, as the instrument must measure both similarities and differences across cultures that are themselves inherently different, each consisting of individuals that also differ one from another within the culture. Those results and results of various studies are discussed below, using several national samples that from history and geography might be construed to have similar cultures and hence similar leader behavior preferences. Tyler, Newcombe and Barrett (2005) investigated Western-developed tests, translated into Chinese, which were shown to have greater internal consistency and criterion-related validity on a Chinese sample than a Chinese test developed specifically on a Chinese sample. Hence, we need to exercise caution concerning the expectation that a test developed locally is superior to well-researched Western-developed tests. Western-developed tests can be both reliable and valid when used in other societies. A well-constructed test based on a well-researched model that has been adequately translated locally may be just as good a measure of the local experience as a locally developed test.

## **Levels of Analysis**

That the ecological fallacy is closely related to levels of analysis is an important and widely debated issue of ontology, explanation, and causation in social science research (Klein, Dansereau and Hall, 1994). We must address underlying assumptions about (1) the individuals that compose a group, (2) the unique group components, and (3) the contingent environmental and contextual influences (industry, societal culture, profession). Above the level of the individual, specifications of levels of analysis become controversial. When we are studying the behavior of individuals in a group, then the levels matters need to be considered.

The levels represent phenomena that are ordered in a vertical dimension based upon some criterion. Levels are hierarchical, and for level analysis to be useful there must be some quantitative or qualitative differences between the different levels. Thus, individuals are qualitatively and quantitatively different from organizations of which they are voluntarily or involuntarily members (race, corporation, English-

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speakers, ethnic groups, etc.), industries are different from companies, and nations are different from industries. There are myriad methods of parsing levels.

### ***Individual Level of Analysis***

At the individual level of analysis, organizational behavior involves the study of such concepts, amongst many, as learning, perception, creativity, motivation, personality, turnover, task performance, cooperative behavior, deviant behavior, ethics, and cognition. At this level of analysis, organizational behavior draws heavily upon psychology and industrial engineering.

### ***Group Level of Analysis***

At the group level of analysis, studies involve group dynamics, intra- and inter-group conflict and cohesion, leadership, power, norms, interpersonal communication, networks, and roles. At this level of analysis, theorizing needs to draw from the study of group behavior and the sociological and social psychological sciences.

### ***Levels of Analysis Higher Than a Group***

At an organized group level of analysis, we study organizational behavior, which involves the study of topics such as organizational culture, organizational structure, diversity of organizational members, inter-organizational cooperation and conflict, change, technology, and external environmental forces. At this level of analysis, organizational behavior needs to draw upon anthropology and political science.

### ***Multi-Organizational Levels of Analysis***

When we reach the multi-organizational level of analysis we become involved with disciplines such as political science, international relations, and studies of “industries”, such as “financial institutions” or “the manufacturing industry”, information technology companies, retail sales companies, etc.

Within these group and multi-group organizations the level of analysis issue is the issue of *cultural* levels of analysis. When we speak of “national culture” we encounter a construct that can be applied to some nations, but not to others. Cross-cultural research studies have found that Japan has a highly homogeneous culture compared to other nations. China, on the other hand, has a heterogeneous culture.

### ***Level of Analysis of the LBDQXII***

The LBDQXII is designed to measure behavior concerning “group-oriented” leadership. This is its level of analysis (Schriesheim, Cogliser, & Neider, 1995).

### ***Within-Groups and Between-Groups Levels of Analysis***

Schriesheim, Cogliser & Neider (1995) provide theoretical and empirical evidence indicating substantive support for the viability of viewing leadership as both a within-groups and a between-groups phenomenon. It is unrealistic to suppose that leaders will tailor all of their behavior to each individual subordinate, especially as group size increases, or that they interact with all work group members on the basis of some generalized style. This view, of course, is not new; Cummings (1975, pp. 184) stated that the assumption of heterogeneity (all leader behavior is individually oriented) “is equally as unrealistic as homogeneity”. In other words, leaders’ behaviors will usually contain variance attributable to style (between-groups effects) and variance attributable to individual tailoring (within-groups effects). This perspective is shared by Campbell (1977, pp. 227), who suggested that dyadic approaches to leadership

“should be taken very seriously while at the same time remembering there is undoubtedly a main effect due to groups,” and it is directly supported by empirical evidence showing that, for example, LBDQXII initiating structure items have both meaningful within-and between-groups variance (Markham & Scott, 1983). In our studies the level of analysis will be measuring level of preference of aspects of group-orientated leader behavior, operationalized by the LBDQXII.

### ***Level of Analysis and Factor Structure***

The issue of levels of analysis relates to survey development in relation to survey use. In our studies, surveys employing 5-anchor Likert scales are used.

As we have noted, when a survey is designed, validated, and tested in relation to various populations, use of the survey outside that population raises questions of cross-population reliability and validity, and we note above that Tyler, Newcombe and Barrett (2005) place a requirement that the original version of a survey must be well-constructed and validated to support translation for cross-cultural use. The Leader Behavior Description Questionnaire XII was designed and validated in the United States (Stogdill, 1963, 1974) to assess preferred leader behavior sets on the part of leaders by the general population. Schriesheim and Stogdill (1975) undertook refactoring of the Supervisory Behavior Description Questionnaire (SBDQ), the Leader Behavior Description Questionnaire (LBDQ), and the LBDQXII. Varimax factor analysis was employed, and Varimax matrices were then subjected to Wherry's (1959) hierarchical factor method. In this method variables are assigned to clusters by the similarity of their loadings. The hierarchical analysis was employed to identify the basic patterns underlying employee responses and to remove the effects of rater bias, which sometimes makes the interpretation of primary Varimax factors difficult (due to the distribution of rater bias across factors). Hierarchical analysis has been shown to be helpful in interpreting other multidimensional areas usually affected by rater bias, such as morale surveys (Wherry, 1958), general corporate image surveys (Roach and Wherry, 1972), and performance appraisals (Klimoski and London, 1974; Roach and Wherry, 1970). The LBDQXII results were found to be the most coherent of the three, yielding one general third order factor, two second order sub-generals, and four primary Varimax group factors, discussed in the following section.

### ***LBDQXII Varimax Factors in the USA***

Factor 1 has its highest loadings on items 15 ("He treats all group members as his equals") and 16 ("He is willing to make changes"), and also has loadings on items showing emphasis on helpful, supportive, and friendly behaviors. It seems best identified as *Consideration*.

Items 6 ("He asks that group members follow standard rules and regulations") and 4 ("He maintains definite standards of performance") load on Factor 2, along with items relating to *Initiating Structure*.

Factor 3 has loadings similar to Factor 1, but has lower loadings on the helpful and supportive items and higher loadings on those concerned with arbitrary behavior, such as items 14 ("He acts without consulting the group") and 13 ("He refuses to explain his actions"). Thus, the name *Arbitrary vs. Considerate Behavior* seems to provide a suitable description of its content.

The last Varimax factor, Factor 4, contains friendly and supportive items, with some emphasis on role clarification also, as illustrated by its highest loadings on items 17 ("He is friendly and approachable") and 9 ("He makes sure that his part in the group is understood by the group members"). Thus, the name *Friendly vs. Impersonal Behavior* was chosen.

### ***LBDQXII Hierarchical Factors in the USA***

The first third order factor appears to be the commonly found general *rater bias* factor. It has loadings on four Structure and nine Consideration items.

The first second order factor has the highest loadings on items 15 ("He treats all group members as his equals") and 16 ("He is willing to make changes"). All but one of the Consideration items are loaded on this factor, along with four measuring Structure. However, the Structure items have the weakest loadings and thus the name *Consideration* would appear an acceptable label.

So we find in this study the initial 12 dimensions proposed for the LBDQXII to yield the factors, *Consideration, Initiating Structure, Arbitrary vs. Considerate Behavior, and Friendly vs. Impersonal Behavior*, in our sample from the USA. Second-order factors may be of interest in our project, and will be investigated in the future.

### ***Level of Analysis in This Project***

Our project studies the relationships of an individual's cultural values and an individual's preferred sets of leader behaviors amongst samples of businesspeople from several societies. The comparisons will relate relative rankings of importance of values and kinds of leader behavior amongst samples. The levels of analysis are the influence of individual values within cultures on preferred leader behavior in business organizations.

## **RELIABILITY STUDIES**

From Cronbach-alpha-based reliability analysis and item-to-scale correlational analyses, along with goodness-of-fit tests using Structural Equations Modelling (SEM). Using SEM and Exploratory Factor Analysis investigating both orthogonal and oblique processes, with a factor loading cut-off of 0.351, we find that a set of twelve identifiable factors similar to the LBDQXII dimensions, with at least 2 or 3 dimensions identical to the LBDQXII are observed in analyses from all regions other than Sub-Saharan Africa countries north of the Republic of South Africa and Namibia. That region requires further investigation. The SEM analyses are reported in the various publications discussing each country, or may be requested from the author.

In Cronbach item-to-scale reliability analyses there are some problematic items that vary across cultures, and the reverse-scored items are generally unreliable across cultures. We have embarked on a project to build a more valid and reliable cross-cultural version of the LBDQ, eliminating reversed items and ambiguous and idiomatic phraseology.

After investigating the fit of the data to the 12-factor model, we ran exploratory factor analyses using Varimax, Direct Oblique, and Promax oblique rotations on the samples in order to search for the existence of alternative leader behavior dimensional models amongst our cross-national and intra-national samples. In these exploratory analyses we observed that some samples, primarily in Varimax and Promax rotations, produce a first factor consisting of a general set of items with high factor loadings for multiple items from many, most, or all of the twelve LBDQXII factors. In the literature search investigating explanations for this outcome we found Ensari & Murphy's (2003) study comparing perceptions of charismatic leadership in the USA and Turkey, with implications that the perceptions appear to be strongly influenced by Holistic vs. Analytic thinking and cognitive processes. we investigated further and find this to be a fruitful source of future theoretical development, for details see Littrell (2012). This outcome raises serious theoretical and analytical questions far beyond this particular survey instrument and calls for extensive investigation on the effects of Holistic vs. Analytic thinking on original survey design.

## CONCLUSIONS

We conclude that the LBDQXII is a useful, reliable, and valid survey instrument that can be employed to prepare, educate, and develop expatriates and local managers as to what behaviors are expected in business organizations in different cultures.

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