



Measuring Servant Leadership: Tests of Discriminant and Convergent Validity of the Servant Leadership Survey

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ABSTRACT

The purpose of this study was to analyze the internal reliability, convergent and discriminant validity of the Servant Leadership Survey (SLS). Exploratory factor analysis of the SLS found that 5 of the 9 servant leadership scales were supported. Additional exploratory factor and correlational analyses were performed using the Servant Leadership Survey, Multifactor Leadership Questionnaire (MLQ) and the Leader Behavior Description Questionnaire (LBDQ). The participants in this study consisted of 128 graduate students enrolled in a leadership program in San Antonio, Houston, and Harlingen, Texas who completed the MLQ, LBDQ and the SLS. All participants were employed full time in a variety of organizations including for profit, non-profit and government organizations. Overall findings indicate that although all three instruments likely share an overarching leadership factor, the courage, forgiveness, humility and authenticity scales from the SLS are likely measuring a different aspect of leadership than those of the MLQ and LBDQ.

Keywords: Multifactor Leadership Questionnaire; Leader Behavior Description Questionnaire; Servant Leadership Survey; Convergent Validity, Discriminant Validity

1. INTRODUCTION

Servant leadership is becoming an increasingly popular philosophy in the field of leadership styles. As society demands an increase in ethical practices in organizations, servant leadership has come forth as an advantageous form of leadership because it focuses on supporting others, fostering honesty, and emphasizes bringing out the best in followers (Liden, et al., 2015).

Robert Greenleaf (1970) first explained the concept of servant leadership in his essay of *The Servant as Leader*. Greenleaf (1970) stated that: “The servant leader is servant first... It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead.” (p.6). He also noted that unlike other leaders whom lead first, servant leaders are not driven by the need of material possessions, or the satisfaction of attaining power (Greenleaf, 1970). Later, he provided two more additional written works to support his philosophy of servant leadership called *The Institution as Servant* (1972) and *Trustees as Servants* (1972).

Up until the mid-2000’s, servant leadership was a popular philosophy but generally lacked a testable set of constructs. A step toward a more concrete definition occurred in 1995 with Spears’ 10 aspects of servant leadership. In the 2000’s, several researchers have built on those aspects and the writings of others to develop models and instruments to measure servant leadership.

Table 1 contains six models of servant leadership found in the peer-reviewed literature. Spears (1995, 1998) created a conceptual model, but no instrument to measure the 10 constructs he purports. Laub (1999) created an instrument called the *Organizational Leadership Assessment (OLA)*. Some details about the development are included in his doctoral dissertation, but insufficient information seems to exist in the peer-reviewed literature about the psychometric properties of the *OLA*. Consequently, the models advanced by Spears and by Laub are shown shaded. The four instruments in the non-shaded area of Table 1 have peer-reviewed articles that describe the development of the instruments.

Table 1. Models of Servant Leadership

Spears (1995, 1998)	Liden, Wayne, Zhao and Henderson (2008) <i>SLS*</i>	van Dierendonck and Nuijten (2011) <i>SLS**</i>
Awareness Community Building Conceptualization Empathy Foresight Healing Helping People Grow Listening Persuasion Stewardship	Emotional Healing Creating Value for the Community Helping Subordinates Grow and Succeed Conceptual Skills Putting Subordinates First Behaving Ethically Empowering	Empowerment Standing Back Authenticity Interpersonal Acceptance Accountability Humility Courage Stewardship
Laub (1999) ¹ <i>OLA</i>	Sendjaya, Sarros and Santora (2008) <i>SLBS</i>	Barbuto and Wheeler (2006) <i>SLQ</i>
Building Community Developing People	Voluntary Subordination Authentic Self	Altruistic Calling Wisdom

¹ There is an instrument associated with Laub’s model. Laub developed the Organizational Leadership Assessment for his doctoral dissertation. He first developed a pool of questions based on his review of the literature on servant leadership. He then had between 14 and 25 experts who had written on or taught servant leadership at the university level participate in a three step Delphi process in order to add to the original pool of items and then rate those items on their importance. At the conclusion of the third iteration of the Delphi process, 74 potential items had been developed. Eighty items were then tested with 828 participants. Laub performed a series of exploratory factor analyses (EFA) on this data. Laub found that 27 items loaded on a single component called Organizational Assessment and 53 items loaded on a single component called Leadership Assessment. The eigenvalues from the exploratory factor analysis were not provided. The 23 items that loaded on Organizational Assessment had factor loadings between .40 and .71. The 57 items that loaded on Leadership Assessment had factor loadings between .46 and .73. No factor analytic evidence was provided to support unique subscales (first order) within the factor called Leadership Assessment. It is unclear how the items for each first order scale were assigned to each scale. After the EFA, the instrument was reduced from 74 to 60 questions to decrease the time it took to complete the instrument. No additional details were provided on how the 60 questions were selected.

Displaying Authenticity Providing Leadership Sharing Leadership Valuing People	Covenantal Relationship Responsible Morality Transcendental Spirituality Transforming Influence	Emotional Healing Organizational Stewardship Persuasive Mapping
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OLA - Organizational Leadership Assessment, SLQ - Servant Leadership Questionnaire

SLS* - Servant Leadership Scale, SLBS - Servant Leadership Behavior Scale

SLS** - Servant Leadership Survey

As theories develop, often instruments to measure the constructs that comprise those theories are also developed. Two of the psychometric properties that gradually become clearer with increased reporting on an instrument are convergent and discriminant validity.

Convergent and discriminant validity are considered subcategories of construct validity. In order to establish the construct validity, we need to show that both convergent and discriminant validity are demonstrated. Convergent validity means two measures of constructs that theoretically should be related, are in fact related. Convergent validity can be established if two similar measures of a construct correspond with one another by calculating correlation coefficient. Correlations between theoretically similar measures should be high, while correlations between theoretically dissimilar measures should be low.

Discriminant validity tests whether measures of constructs that theoretically should not be related to each other are, in fact not related. Discriminant validity applies to two dissimilar constructs that are easily differentiated. A successful evaluation of discriminant validity shows that a test of a concept is not highly correlated with other tests designed to measure theoretically different constructs.

The introduction and history of the servant leadership models were discussed in section one of this paper. Section two provides a literature review, and the methodology used in this study will be examined in section three. After those sections have been noted, the results and the conclusion will be addressed in sections four and five.

2. REVIEW OF THE LITERATURE

The Full Range Model

While there have been many contributions to the idea of transformational leadership, the theory was first fully described by Burns in 1978. In his seminal book, *Leadership*, Burns contrasted leaders who helped transform those they lead to those who tended to engage in quid pro quo relationships.² Burns envisioned transformational and transactional leadership as separate entities. He also tended to write more about political leaders than organizational leaders.³ Burn's theory is thus a theory of political leadership defined by the properties of leader and followers but not by tasks (Anderson, 2016).

Nonetheless, his work formed an important foundation for the development of proceeding theories. Burns (1978) identified two types of leadership (transformative and transactional) on the basis of a qualitative analysis of the biographies of political leaders. Burns (1978) viewed the transformational leader as one who "engages with others in such a way that the leader and the follower raise one another to a higher level of motivation and morality" (p.20).

Bass (1985) built on the work of Burns. Bass moved the discussion of transformational leadership to comprise of a variety of organizational settings. Bass also envisioned transformational and transactional leadership on a continuum consisting of nine components, rather than as two separate entities. Furthermore, these components could also be broken down

² Burns, J. M. (1978). *Leadership*. New York: Harper and Row.

³ The information from this summary primarily comes from Bass, B. M., and Bass, R. (2008). *The Bass handbook of leadership: Theory, research, and managerial applications*. New York: Free Press; and from Stogdill, R. M. (1963). *Manual for the Leader Behavior Description Questionnaire Form XII*. Columbus: Ohio State University, Bureau of Business Research.

into three categories on a continuum. Bass and Avolio operationalized this research by formulating the Full Range Model (FRL). Bass (1995) and his colleagues presented transformational leadership to encompass inspirational motivation (IM), idealized influence (II), intellectual stimulation (IS), and individualized consideration (IC), while transactional leadership contains contingent reward (CRW), and active management by exception (MBEA) (Hinkin et al., 2008). Passive- avoidant contains management by exception passive (MBEP) and laissez-faire (LF). Essentially the absence of leadership was conceptualized as being called laissez-faire (Hinkin et al., 2008).

Normally conceptualized as four dimensions, transformational leadership includes charisma or idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1990). Leader attributes and behaviors that cause followers to relate to the leader can be referred to as idealized influence (Mathieu, et al., 2015). It can be further broken down into idealized influence attributed and idealized influence behavioral. Green (2013) defined idealized influence attributed as “related to believing that someone is a role model based on her or his credentials or reputation” (p.213). Whereas, idealized influence behavioral is more based upon observing the leader as a role model and wanting to emulate them. Individualized consideration is when the leader is giving specialized attention to the needs of the followers, providing unique treatment, and lending support when necessary so that the followers can realize their full potential (Bass, 1990, 1997). Intellectual stimulation calls for the analysis of problems in new ways, use of actions that challenge followers to comprehend, and conceptualize (Bass, 1990, 1997). Inspirational motivation is the clear communication of appealing goals through the use of enthusiasm, optimism, and setting of high expectations (Bass,1990,1997).

Transactional leadership lies in the middle of the FRL continuum and is more inclusive of task oriented behaviors with the aspects of contingent reward and management-by-exception active. Contingent reward is based upon a reward provided to the follower when successfully completing a given task. Task-oriented behaviors are primarily concerned with executing tasks in a dependable and organized fashion (Michael, et. al., 2011). However, MBEA is more built upon the follower being “micromanaged” by their leader.

Passive avoidant leadership unfortunately falls on the opposite end of the continuum, and can be seen as the opposite of transformational leadership. Unlike MBEA, Northouse (2010) describes management-by-exception passive (or MBEP) as an approach where the leader intervenes only after issues emerge, or expectations have not been met. In their FRL model, which contains transformational, transactional, and laissez-faire forms of leadership, Bass and Avolio (1994) define laissez-faire leadership as: “... the avoidance or absence of leadership and is, by definition, the most inactive – as well as the most ineffective according to almost all research on the style” (p. 4). As opposed to transactional leadership, laissez-faire represents a non-transaction between the leader and the follower (Skogstad, et. al. 2014). Both transformational and transactional leadership can be regarded as an antithesis of laissez-faire leadership on an active-passive continuum for leader-follower exchanges (Bass & Avolio, 1994, p. 6).

Unlike transactional and transformational forms of leadership, laissez-faire leadership is recognized as leaders’ volitional and purposeful avoidance of subordinates when they are in need of support (Skogstad, et. al. 2014). Hence, laissez-faire leadership is readily distinguishable from transactional and transformational forms of leadership and composes a unique leadership form that should be further researched in its own right (Skogstad, et. al. 2014).

Over the past 15–20 years, transformational leadership has taken a commanding presence in leadership studies (Balwant, 2016). This style of leadership is often referred to as “the new leadership” theory or the “new paradigm” approach (Bryman, 1992). The term transformational is often used interchangeably with some of its dimensions, such as visionary, charismatic, or value-based in the literature (Anderson, Ones, Sinangil, & Viswesvaran, 2001). Charisma, derived from the Greek word meaning “favored” or “gifted” (Johns & Saks, 2007), can be defined as a leader that emphasizes trust, cultivates commitment to success, gains respect, earns trust, and articulates a sense of mission (Bass, 1990, 1997). A transformational leader can be described as an individual who “articulates a realistic vision of the future that can be shared, stimulates subordinates intellectually, and pays attention to the differences among the subordinates” (Yammarino & Bass, 1988, p. 2).

Both transformational and transactional have been argued by Bass and colleagues as being the most effective leaders (Avolio, Bass, & Jung, 1999; Bass, 1998). Intrinsic motivation is a subordinate outcome that has been shown to be positively related to transformational leadership (Bono & Judge, 2003). Moreover, leader effectiveness and organizational performance has also been shown to be related to transformational leadership (Judge & Piccolo, 2004). Furthermore, various subordinate outcomes such as managerial satisfaction and effectiveness, extra effort, and organizational commitment are also positively related to contingent reward behaviors (Bass, 1998; Bycio et al., 1995; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). However, typically both MBEA and MBEP have a negative relationship with the previously noted outcomes (Bycio et al., 1995; Judge & Piccolo, 2004).

2.1 The Multifactor Leadership Questionnaire

The study of transformational leadership has continued and, in fact, has increased substantially in recent years since the development of these constructs (Dumdum, Lowe, & Avolio, 2002). Developed by Bass and his associates, the *Multifactor Leadership Questionnaire (MLQ)* has been utilized by the vast majority of published empirical research on the topic (Bass, 1990; Bass & Avolio, 1990, 1994; Seltzer & Bass, 1990).

Additional improvements were made on the continuum of leader behaviors between 1985 and 1990 (Hater and Bass, 1988; Avolio and Bass, 1991; Avolio, Waldman, and Yammarino, 1991). By 1991, a nine-component model was developed and was supported by the *Multifactor Leadership Questionnaire 5X*. The *MLQ 5X* quantifies transformational, transactional, and avoidant leadership styles (Bagheri, et al. 2015). Consisting of 45 items in total, the first 36 items of the *MLQ 5X* measure the type of leadership style, and the remaining 9 items examine the effectiveness of the manager (Bagheri, et al. 2015). The model began to experience widespread use following Bass and Avolio’s 1994 book, *Improving Organizational Effectiveness through Transformational Leadership*.

Task and Relationship

The style approach to leadership emerged during the 1950s. Unlike the FRL model that focuses on transforming the follower to greater heights, the style approach highlights the importance of the leader and his/her behaviors. According to Northouse (2010) researchers determined that this approach consisted of two aspects: task behaviors and relationship behaviors (p. 69). Task behaviors are considered those that focus on accomplishing goals, while relationship behaviors are centered on the level of comfort the followers have with themselves,

others within the organization and also with the situations that may arise (Northouse, 2010, p. 69.)

A lot of research has been done pertaining to the style approach. Ohio State University in the 1940s were one of the first to investigate this form of leadership. Green (2013) revealed that, “both the Ohio State and Michigan streams of research conceived of dimensions of leadership related to Taking Care of Business (Initiating Structure, Production Orientation) and Taking Care of Followers (Consideration, Employee Orientation)” (p. 81). As far as the potential performance of employees is concerned, leadership effectiveness is vital (Morrison, 2010). Leaders should place significance on the capacity of followers to adapt to the external competitive surroundings and changing their form of leadership (Hersey, Blanchard, & Johnson, 2001).

2.2 The Leader Behavior Description Questionnaire XII

The instrument used to measure initiation of structure and consideration is the *Leader Behavior Questionnaire XII*. The *Leader Behavior Description Questionnaire XII* which was developed as a result of research conducted by researchers at Ohio State, consists of 100 questions and measures two types of leader behaviors: initiating structure and consideration (Northouse, 2010, p. 70). Green (2013) notes that the most recent version, the *LBDQ-XII*, consists of 100 questions that measure 12 dimensions and “has been used in over 30 peer-reviewed articles and over 600 dissertations” (p. 76). A search of databases such as Academic Search Premier or Business Source Complete will return over 270 peer reviewed articles that have used the instrument.

Hemphill and colleagues at The Ohio State University brainstormed 1,800 possible leader behaviors, and then selected 150 behaviors they believed could be uniquely assigned to subscales.⁴ Factor Analyses indicated that the questions loaded on two main components: consideration and initiation of structure. This produced the original *Leader Behavior Description Questionnaire* that had 40 questions and measured these two leader dimensions.

Additional work continued to develop more subscales that were related to initiation of structure and consideration, yet were also different. Through additional factor analyses, this research produced the twelve scales of the *LBDQ-XII*. Nine different reliability studies were conducted on groups of army members, highway patrol members, aircraft executives, ministers, community leaders, corporation presidents, labor presidents, college presidents and senators. The Kuder-Richardson measure of internal reliability was calculated for each of these nine samples. Similar to a Cronbach Alpha score, the Kuder-Richardson score ranges from 0 to 1. The closer the score is to 1, the more internally consistent the questions. The Kuder-Richardson scores for each of the 12 subscales for each of the nine samples generally fell between 0.54 and 0.8⁵.

2.3 The Servant Leadership Survey

Using expert acumen and an extensive literature review, the *Servant Leadership Survey* underwent three steps and eight samples in its development, and 99 items were generated (van Dierendonck and Nuijten, 2010). The 1,571 participants used were employed with a variety of occupational experiences. Dirk van Dierendonck and Inge Nuijten (2010) conducted their

⁴ The information from this summary primarily comes from Bass, B. M., and Bass, R. (2008). *The Bass handbook of leadership: Theory, research, and managerial applications*. New York: Free Press; and from Stogdill, R. M. (1963). *Manual for the Leader Behavior Description Questionnaire Form XII*. Columbus: Ohio State University, Bureau of Business Research.

⁵ *LBDQ User's Manual* (1963).

3	IM	.64**	.63**													
4	IS	.50*	.47**	.56**												
5	IC	.55*	.46**	.48**	.53**											
6	CR	.58*	.60**	.53**	.48**	.55**										
7	MBEA	.04	.14	-.03	.16	.06	.30**									
8	MBEP	-.12	-.08	-.44**	-.28**	-.17	-.07	.05								
9	LF	-.11	-.12	-.34**	-.18*	-.13	-.11	.13	.55**							
10	Consideration	.15	.29**	.11	.28**	.28**	.18*	.10	.08	-.05						
11	Init. Structure	.09	.22*	.10	.20*	.16	.19*	.13	.09	-.05	.59**					
12	Empowerment	.37**	.28**	.39**	.24**	.35**	.46**	.08	-.11	-.05	.11	.11				
13	Humility	.16	.05	.20*	.13	.19*	.15	.06	-.07	-.11	-.03	-.03	.29**			
14	Authenticity	.10	.12	.06	.00	.07	.20*	.08	-.04	.03	-.09	.01	.24**	.28**		
15	Courage	.22*	.13	.20*	.15	.02	.10	-.02	-.07	.09	-.02	.08	.20*	.08	.29**	
16	Forgiveness	-.01	-.06	.15	.08	.14	-.02	-.13	-.27**	-.33**	-.03	-.19*	-.02	.08	-.10	.29**

Note. *p<.05. **p<.01.

3.2 Initial Exploratory Factor Analysis of the Servant Leadership Scale (SLS)

An initial exploratory factor analysis of the SLS was conducted using the principle components method and varimax rotation. Nine components were found with eigenvalues greater than 1. Table 3 contains the factor loadings for each scale. Factor loadings greater than .4 are shown in bold.

Components 1 - Empowerment, 3 - Humility, 5 - Authenticity, 7 - Courage, and 8 - Forgiveness loaded approximately as the scoring directions indicate. The other questions' loading on components 2 and 4 were a mix of questions, priori-theorized to load on accountability, stepping back and stewardship. Those questions failed to load on a component that approximated the theory.

Table 3. Components Found in Exploratory Factor Analysis

Question Type	(1) Emp1	(2) Mix	(3) Hum	(4) Mix	(5) Auth	(6) Emp2	(7) Cour	(8) Forg	(9) None
Empowerment	0.84	-0.06	0.09	0.10	0.12	0.11	0.07	-0.07	0.06
Empowerment	0.81	0.16	0.05	0.09	0.12	0.11	0.03	-0.07	-0.01
Empowerment	0.73	0.23	0.25	0.30	0.08	0.12	-0.01	0.00	-0.07
Empowerment	0.55	0.23	0.02	0.15	0.25	0.02	0.18	0.12	-0.41
Accountability	0.11	0.84	-0.05	0.09	0.07	0.02	0.07	0.02	-0.04
Humility	0.03	0.65	0.09	-0.02	0.29	0.16	-0.14	0.11	0.00
Accountability	0.05	0.62	0.28	0.12	-0.10	0.12	0.39	-0.06	0.23

Stepping Back	0.22	0.48	0.14	0.27	-0.09	0.42	-0.18	0.02	-0.30
Stewardship	0.21	0.44	0.14	0.39	0.27	-0.20	0.17	-0.07	-0.24
Humility	0.09	-0.04	0.85	0.13	0.16	0.06	0.06	-0.05	0.10
Humility	0.27	0.11	0.81	-0.05	0.02	-0.03	0.04	-0.07	-0.08
Humility	-0.02	0.13	0.80	0.06	0.13	0.07	0.04	0.08	-0.06
Stepping Back	-0.08	0.19	0.40	0.41	-0.03	0.36	-0.27	-0.21	-0.02
Stewardship	0.17	0.06	0.05	0.77	-0.01	0.07	0.13	-0.13	0.08
Authenticity	0.15	0.08	0.03	0.73	0.22	0.03	0.10	0.13	-0.13
Empowerment	0.39	0.41	0.21	0.47	-0.03	0.04	-0.05	-0.07	0.20
Authenticity	0.24	0.07	0.10	-0.08	0.71	0.06	0.08	-0.10	0.10
Authenticity	0.06	0.12	0.06	0.20	0.66	0.19	0.05	0.06	-0.10
Humility	0.12	0.10	0.37	0.24	0.53	0.04	0.16	-0.14	0.06
Authenticity	-0.35	0.03	0.03	-0.01	0.41	0.28	0.16	0.42	0.18
Stepping Back	0.05	0.00	0.07	0.05	0.17	0.81	0.04	0.10	-0.20
Empowerment	0.36	0.36	0.07	-0.03	0.05	0.61	0.24	-0.18	0.10
Empowerment	0.21	0.08	-0.05	0.07	0.17	0.59	0.32	-0.17	0.30
Courage	0.07	-0.01	0.02	0.01	0.11	0.06	0.80	0.17	-0.15
Courage	0.04	0.09	0.09	0.17	0.08	0.11	0.78	0.03	0.08
Forgiveness	0.02	0.09	-0.03	-0.08	-0.02	-0.13	0.07	0.83	0.05
Forgiveness	-0.17	-0.11	-0.07	0.11	-0.35	0.14	0.26	0.56	0.24
Forgiveness	-0.02	0.04	0.00	-0.01	0.11	-0.09	-0.05	0.46	0.73
Stewardship	0.28	0.37	0.05	0.31	0.17	0.16	0.25	0.17	-0.15
Accountability	0.22	0.39	0.28	0.26	0.36	-0.10	0.07	-0.30	0.03

Note. Rotated component matrix. Empl – Empowerment, Mix -Mix of Scales, Hum – Humility, Mix -Mix of Scales, Auth – Authenticity, Emp – Empowerment, Cour – Courage, Forg – Forgiveness, None – Questions failed to load with factor loading > .39

3.3 Definitions of SLS

There are eight dimensions or scales used to assess an individual taking the *SLS*, which were aforementioned in this article. Empowering is the first dimension, it can be defined as a motivational concept focused on enabling people and encouraging personal development (Conger, 2000). The second dimension or scale is accountability, which can be defined as people being held accountable or responsible for the actions that are within their control. Standing back is the third dimension or scale used. With this dimension, leaders give their followers/others priority while also seeing that they receive credit for their work that they perform. They also take a step back with their followers' work so it can be successfully completed.

Humility is the ability of the leader to place their abilities in proper perspective without allowing for one to focus on their inability to make errors, or perform poorly at their work. Authenticity is about being true to oneself by being able to illustrate a genuine nature to others

professionally, publicly, and privately. Courage can be seen as the ability to take risks and to be innovative and execute those newly developed approaches rather than continuing with antiquated ones. The ability to understand and experience the feelings of others, and the perspective that people are coming from can be identified as interpersonal acceptance (George, 2000). When one practices service instead of self-control and self-interest, and the willingness to take responsibility for the larger institution can be labeled as stewardship (Block, 1993).

The question in component 3 theorized to measure stepping back entailed a belief that one doesn't seek rewards for their behaviors toward others. This could well be interpreted as either a humility or stepping back question. The humility question that loaded with the authenticity questions in component 5 involved learning from another's viewpoint. A central part of the theory of authentic leadership involves balanced processing. Balanced processing involves listening to the ideas of others when making decisions, and possibly challenging your own beliefs because of this new found knowledge. The humor question in component 5 could also be interpreted as an authenticity question.

Based on the initial factor analysis, composite scores were created for empowerment, humility, authenticity, courage and forgiveness. These five components were included in an exploratory factor analysis that also included the nine components from the *Multifactor Leadership Questionnaire* and *Leader Behavior Description Questionnaire*. Table 4 provides the reliability estimates for the five component scores. Removing one question from the three questions that measure forgiveness improved the reliability from .35 to .50. For the factor analysis using the three instruments, the third forgiveness question was included in the forgiveness composite score.

Table 4. Reliability of Revised Scales

Variable	Cronbach Alpha	Revised Cronbach Alpha	Question Removed
Empowerment	.83		
Humility	.75		
Courage	.72		
Authenticity	.55		
Forgiveness	.35	.50	Forget past mistakes

4 RESULTS

A second exploratory factor analysis was run with the nine components measured by the *Multifactor Leadership Questionnaire (MLQ)*, *Leader Behavior Description Questionnaire (LBDQ)* and the revised components from the *Servant Leadership Survey (SLS)*.

4.1 Convergent Validity

The empowerment scale of the *SLS* loaded with the elements of transformational leadership in the exploratory factor analysis and was correlated in the range of .24 to .39 with these five aspects of transformational leadership. Interestingly, the empowerment scale was also moderately correlated with contingent reward, $r = .46$.

The empowerment questions combined into the empowerment scale in this study focused on leader behaviors to assist followers in growth and development. The contingent reward questions from the *MLQ* all include some sort of reward for the follower achieving results and meeting

performance goals. These broad constructs, assisting followers in growth and development from the *SLS* and rewarding followers for meeting goals seem to be interrelated.

The courage scale from the *SLS* didn't load with any of the leadership scores in the factor analysis. The courage scale was weakly correlated with the idealized influence attributed, idealized influence behavioral and inspirational motivation scores of the *MLQ*. In earlier versions of the *MLQ* these three scores were often combined to create a charisma score. The idea of leader courage and leader charisma being correlated makes conceptual sense.

The forgiveness questions from the *SLS* illustrated a weak negative correlation with the questions from the *MLQ*. Those questions in the *MLQ* made reference to management by exception, laissez-faire, and intellectual stimulation. Forgiveness and courage from the *SLS* also had a weak positive correlation with each other.

Humility questions from the *SLS* developed a weak positive correlation with individual consideration, individual stimulation, and contingent reward questions from the *MLQ*. The humility scale also had a weak positive correlation with another dimension on the same assessment of the *SLS* called empowerment.

Authenticity questions shared a weak positive correlation with contingent reward and intellectual stimulation from the *MLQ*. A weak positive correlation of authenticity scale on the *SLS* can also be seen as additional items on the same assessment with scales such as empowerment and humility. Table 5 below is the Exploratory Factor Analysis for multiple instruments.

Table 5. Multiple Instrument Exploratory Factor Analysis

	TF	PA	LBDQ	Auth-Hum	Cour-Forg
IIA	0.83	-0.03	-0.05	0.05	0.15
IIB	0.79	0.03	0.16	-0.01	0.11
CR	0.79	0.13	0.09	0.26	-0.06
IM	0.78	-0.41	-0.02	0.08	0.11
IC	0.72	-0.07	0.14	0.14	-0.18
IS	0.70	-0.18	0.20	0.01	-0.01
Empowerment	0.44	-0.01	0.04	0.52	0.10
LF	-0.11	0.80	-0.13	-0.07	0.17
MBEP	-0.18	0.79	0.08	-0.09	0.00
MBEA	0.17	0.43	0.18	0.29	-0.25
Initiation of Structure	0.10	0.03	0.88	0.02	0.13
Consideration	0.20	0.03	0.85	-0.07	-0.07
Humility	0.08	-0.11	-0.04	0.77	-0.11

Authenticity	0.01	0.02	-0.05	0.70	0.34
Courage	0.14	-0.06	-0.01	0.18	0.83
Forgiveness	0.04	-0.47	-0.15	0.04	0.61

Note. TF – elements of transformational leadership plus contingent reward and empowerment, PA – passive avoidant behaviors, *LBDQ* initiation of structure and consideration from the *LBDQ*, Auth-Hum, questions from the hypothesized authentic and humility scales, Cour-Forg, questions from the hypothesized courage and forgiveness scales, Cour-Forg.

4.2 Discriminant Validity, SLS, MLQ and LBDQ

In the exploratory factor analysis, the humility, authenticity, courage and forgiveness sales loaded on different components than any of the *MLQ* or *LBDQ* scales. None of the correlations between the *SLS* scales and the *MLQ* or *LBDQ* scales were strongly correlated. This provides some sense that while there is likely an overarching leadership factor shared by all three instruments, the courage, forgiveness, humility and authenticity scales appear sufficiently unique from the *MLQ* and *LBDQ* scales that they are, indeed likely measuring a different aspect of leadership than either of those instruments.

4.3 SLS

As mentioned above, to establish convergent validity, we need to show that measures that should be related are indeed related. In above Table 3, we see, for instance, four empowerment measures (each is a question/item of *SLS*) that all purport to reflect the same construct—Empowerment (Component 1). We see the correlations of the four empowerment scale items are very high with the construct of Empowerment (in bold). This provides evidence that our theory that all four empowerment items are related to the same construct (Component 1) is supported.

To establish discriminant validity, we need to show that measures that should not be related are in reality not related. If we have discriminant validity, the relationship between measures from different constructs should be very low. In above Table 3, we again see that the four empowerment measures (each is a question/item of *SLS*) cross-construct (Component 2-8) correlations are very low (in light grey). This provides evidence of discriminant validity.

Convergent and discriminant validity can also be illustrated in Table 6. It shows in Table 6 for instance, elements of transformational leadership plus contingent reward and empowerment that all purport to reflect the construct of Transformation (Component 1 TF). We see the correlations of those items are very high (in bold) with the construct of TF (Component 1). This provides evidence that our theory that all elements of transformational leadership plus contingent reward and empowerment items are related to the same construct TF (Component 1) is supported.

For discriminant validity, in Table 6 it shows that measures that should not be related are in reality not related. If we have discriminant validity, the relationship between measures from different constructs should be very low. In addition, we again see elements of transformational leadership plus contingent reward and empowerment cross-construct (component 2-5) correlations are very low (in light grey) which provides evidence of discriminant validity.

The empowerment scale of the *SLS* loaded with the transformational leadership and contingent reward scales of the *MLQ*. Conceptually, this makes sense, as the nature of transformational leadership is to assist followers with growth and development. The second component of the factor analysis was three “ineffective” scales of the *MLQ*. Over its 30-year history there were

iterations of the *MLQ* that combined these same three scales into a second order scale called *Laissez-Faire*. The third component consisted of the scales from the *LBDQ*.

The fourth component consisted of the authenticity and humility scales from the *SLS*. Two questions from the authenticity scale concerned learning from others and expressing limitations. Three of the humility questions were related to learning from criticism.

Both components seem to be capturing a sense of communicating openly with others, and learning from criticism. These are likely conceptually related as others are often unwilling to provide constructive criticism to someone if she/he is unwilling to be open to those critiques. The final component consisted of courage and forgiveness. Both courage questions focus on risk taking. The forgiveness questions focused on restraining from criticism of workers' mistakes and forgiving and forgetting others' mistakes.

Table 6. Convergent and Discriminant Validity from Correlation Matrix

Scale	IIA	IIB	IM	IS	IC	CR	MP	LF	IS	Emp	Cou	For	Hum	Aut
Empowerment	■	■	■	■	■	■							■	
Courage			■	■	■									
Forgiveness							▨	▨	▨		■			
Humility				■	■	■			■	■				
Authenticity						■			■	■			■	

Note. Dark squares are moderate, positive correlations. Light grey squares are weak positive correlations. Diagonal squares are weak negative correlations.

5 CONCLUSION

The servant leadership survey appears to be measuring something different from the other assessments. Being that there appears to be convergent validity, this instrument can be definitely used for an organization or as a leader to assess the dimensions of servant leadership.

Perhaps this convergent validity is due partially to the sample of this study being a convenience sample. This sample was primarily taken from PhD students. As a result, these findings could have been somewhat skewed. However, a rebuttal to this argument can also be made that these PhD students varied in occupations that were profit and non-profit organizations, professional specializations, and other demographics. Therefore, this initial argument cannot necessarily be negated, but it can be somewhat weakened.

Unfortunately, researchers may not be able to use the *SLS* interchangeably with the *MLQ* and *LBDQ*, or use the *MLQ* to test for the *SLS*. By taking these assessments separately, an individual utilizing these instruments will gain far more knowledge about themselves as a leader or another person that is being assessed. This additional understanding can be used to develop the leadership style of that individual taking the instrument. By having this insight, a leader can modify his or her leadership style to better suit the needs of his or her followers.

In conclusion, overall findings indicate that although all three instruments likely share an overarching leadership factor, the *SLS* scales of courage, forgiveness, humility and authenticity are likely measuring a different aspect of leadership than those of the *MLQ* and *LBDQ*.

REFERENCES

- [1] Andersen, J. A., *An Old Man and The "Sea of Leadership"*. JOURNAL OF LEADERSHIP STUDIES, Vol.9, No. 4, pp. 70–81, 2016, DOI: 10.1002/jls.21422.
- [2] Anderson, N., Ones, D. S., Sinangil, H. K., & Viswesvaran, C., *Handbook of industrial, work & organizational psychology* (Vol. 2). Sage, Thousand Oaks, CA, 2001.
- [3] Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72, 441-462.
- [4] Bagheri R, Sohrabi Z, & Moradi E., *Psychometric properties of Persian version of the multifactor leadership questionnaire (MLQ)*. MEDICAL JOURNAL OF THE ISLAMIC OF IRAN, Vol. 29, p. 256, 2015.
- [5] Balwant, P. T., *Transformational Instructor-Leadership in Higher Education Teaching: A Meta-Analytic Review and Research Agenda*. JOURNAL OF LEADERSHIP STUDIES, Vol. 9, No.4, pp. 20–42, 2016, DOI: 10.1002/jls.21423.
- [6] Barbuto Jr., J. E., & Wheeler, D. W., *Scale development and construct clarification of servant leadership*. GROUP & ORGANIZATION MANAGEMENT, Vol. 31, No. 3, pp. 300-326, 2006.
- [7] Bass, B. M. (1985). *Leadership and performance beyond expectation*. New York: Free Press.
- [8] Bass, B. M., *From transactional to transformational leader-ship: Learning to share the vision*. ORGANIZATIONAL DYNAMICS, Vol. 18, No. 3, pp. 19 – 31, 1990, DOI: 10.1016/0090-2616(90)90061-S.
- [9] Bass, B. M., & Avolio, B. J., *Multifactor leadership questionnaire*, Consulting Psychologists Press, Palo Alto, 1990.
- [10] Bass, B. M., & Avolio, B. J., *Improving Organizational Effectiveness Through Transformational Leadership*, Sage, Thousand Oaks, CA, 1994.
- [11] Bass, B. M., & Avolio, B. J. (1995). *The multifactor leadership questionnaire – 5x short form*. Redwood: Mind Garden.
- [12] Bass, B. M. (1998). *Transformational leadership: Industrial, military, and educational impact*. Mahwah, NJ: Lawrence Erlbaum.

- [13] Bass, B. M., *Does the transactional–transformational leadership paradigm transcend organizational and national boundaries?* AMERICAN PSYCHOLOGIST, Vol. 52, No. 2, pp. 130 – 139, 1997, DOI: 10.1037/0003-066X.52.2.130
- [14] Block, P., *Stewardship: Choosing Service over Self-Interest*, Barrett-Koehler, San Francisco, 1993.
- [15] Bono, J. E., & Judge, T. A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46, 554-571.
- Processes, 97, 117-134.
- [16] Brown, M. E., Treviño, L. K., & Harrison, D., *Ethical leadership: A social learning perspective for construct development and testing*. ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES, Vol. 97, pp. 117-134, 2005.
- [17] Bryman, A., *Charisma and Leadership in Organizations*, Sage, England, 1992.
- [18] Burns, J. M. G., *Leadership*, Harper & Row, New York, 1978.
- [19] Bycio, P., Hackett, R. D., & Allen, J. S. (1995). Further assessments of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology*, 80, 468-478.
- [20] Conger, J. A., *Motivate performance through empowerment*. In E. A. Locke (ed.), *The Blackwell Handbook of Principals of Organizational Behavior*, pp. 137-149. Oxford: Blackwell Publishing, 1989.
- [21] Dierendonck, D. V., & Nuijten, I., *The Servant Leadership Survey: Development and Validation of a Multidimensional Measure*. JOURNAL OF BUSINESS AND PSYCHOLOGY, Vol. 26, No. 3, pp. 249-267, 2010, DOI:10.1007/s10869-010-9194-1.
- [22] Dumdum, U. R., Lowe, K. B., & Avolio, B. J., A meta-analysis of transformational and transactional leadership. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and charismatic leadership: The road ahead*, Oxford, UK, Elsevier Science, 2002.
- [23] George, J. M., *Emotions and Leadership: The role of emotional intelligence*. HUMAN RELATIONS, Vol. 53, pp. 1027-1055, 2000.
- [24] Green, M.T., *Graduate leadership*, Create Space and Leadership Studies, South Carolina, 2013.

- [25] Greenleaf, R. K., *The servant as leader*. In L. C. Spears (Ed.) Robert K. Greenleaf, *Servant leadership: A journey into the nature of legitimate power and greatness*, p.21- 61, Mahwah NJ, Paulist Press, 1970
- [26] Greenleaf, R. K., *The institution as servant*. In L. C. Spears (Ed.) Robert K. Greenleaf, *Servant leadership: A journey into the nature of legitimate power and greatness*, p.62-103, Mahwah NJ, Paulist Press, 1972.
- [27] Greenleaf, R. K., *Trustees as servants*. In L. C. Spears (Ed.) Robert K. Greenleaf, *Servant leadership: A journey into the nature of legitimate power and greatness*, p. 104- 146, Mahwah, NJ: Paulist Press, 1972.
- [28] Haibin, L., & Shanshi, L., *Effect of Situational Leadership and Employee Readiness Match on Organizational Citizenship Behavior in China*. SOCIAL BEHAVIOR & PERSONALITY: AN INTERNATIONAL JOURNAL, Vol. 42, No. 10, pp. 1725-1732, 2014.
- [29] Hater, J. J., & Bass, B. M., *Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership*. JOURNAL OF APPLIED PSYCHOLOGY, Vol. 73, No. 4, pp. 695-702, 1988.
- [30] Hersey, P., Blanchard, K. H., & Johnson, D. E., *Management of Organizational Behavior: Utilizing Human Resources* (8th ed.), Prentice Hall, Englewood Cliffs, New Jersey, 2001.
- [31] Hinkin, T. R., & Schriesheim, C. A., *A theoretical and empirical examination of the transactional and non-leadership dimensions of the Multifactor Leadership Questionnaire (MLQ)*, THE LEADERSHIP QUARTERLY, Vol. 19, No. 5, pp. 501-513, 2008.
- [32] Johns, G., & Saks, A. M., *Organizational Behaviour: Under-standing and Managing Life at Work* (7th ed.), Prentice Hall, Canada, 2007.
- [33] Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology*, 89, 36-51.
- [34] Laub, J. A., *Assessing the servant organization: development of the Servant Organizational Leadership Assessment (SOLA) instrument*, Dissertation Abstracts International, 1999.
- [35] Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D., *Servant leadership: Development of a multidimensional measure and multi-level assessment*. THE LEADERSHIP QUARTERLY, Vol. 19, No. 2, pp. 161-177, 2008, DOI: 10.1016/j.leaqua.2008.01.006.

- [36] Liden, R. C., Wayne, S. J., Meuser, J. D., Hu, J., Wu, J., & Liao, C. (2015). Servant leadership: Validation of a short form of the SL-28. *The Leadership Quarterly*, 26(2), 254-269. doi: 10.1016/j.leaqua.2014.12.002
- [37] Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 7, 385-425.
- [38] Mathieu, C., Neumann, C., Babiak, P., & Hare, R. D. (2015). Corporate Psychopathy and the Full-Range Leadership Model. *Assessment*, 22(3), 267-278. doi:10.1177/1073191114545490.
- [39] Michel, J., Lyons, B., & Cho, J. (2011). Is the Full-Range Model of Leadership Really a Full-Range Model of Effective Leader Behavior? *Journal of Leadership & Organizational Studies*, 18(4), 493-507.
- [40] Morrison, E., *OB in AMJ: What is hot and what is not?* ACADEMY OF MANAGEMENT JOURNAL, Vol. 53, No. 5, pp. 932-936, 2010, <http://doi.org/dqrdv5>.
- [41] Northouse, P., *Leadership: Theory and Practice*. Sage Publications, California, 2010.
- [42] Rafferty, A. E., & Griffin, M. A., *Dimensions of transformational leadership: Conceptual and empirical extensions*. THE LEADERSHIP QUARTERLY, Vol. 15, No. 3, pp. 329-354, 2004.
- [43] Seltzer, J., & Bass, B. M., *Transformational leadership: Beyond initiation and structure*. JOURNAL OF MANAGEMENT, Vol. 16, pp. 693-704, 1990.
- [44] Sendjaya, S., Sarros, J., & Santora, J., *Defining and measuring servant leadership behavior in organizations*. JOURNAL OF MANAGEMENT STUDIES, Vol. 45, No. 2, pp. 402-424, 2008.
- [45] Skogstad, A., Hetland, J., Glasø, L., & Einarsen, S. (2014). *Is avoidant leadership a root cause of subordinate stress? Longitudinal relationships between laissez-faire leadership and role ambiguity*, WORK & STRESS, Vol. 28, No. 4, pp. 323-341, 2014.
- [46] Spears, L. C., *Reflections on Leadership: How Robert K. Greenleaf's Theory of Servant-Leadership Influenced Today's Top Management Thinkers*, John Wiley, New York, NY, 1995.
- [47] Spears, L.C. (Ed.), *An Insights on Leadership: Service, Stewardship, Spirit and Servant-Leadership*, John Wiley & Sons, New York, NY, 1998.

[48] Yammarino, F. J., & Bass, B. M., *Long-term Forecasting of Transformational Leadership and its Effects Among Naval Officers: Some Preliminary Findings*, Binghamton, NY, Center for Leadership Studies, 1988.