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RESEARCH ARTICLE

Construct Validity of the Ideal Implicit Leadership Theories and Implicit Followership Theories

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Abstract

This study provides preliminary evidence for the construct validity of the ideal implicit leadership theories (ILTs) and implicit followership theories (IFTs), measured with two largely used instruments. Due to the fact that two alternative conceptualizations of the ILTs and IFTs have been used in the literature, there are confusing findings and interpretations. One conceptualization covers the ideal leader and the ideal follower profiles (i.e., extreme members of their categories), while the other covers the typical leader and the typical follower profiles (i.e., average members of their categories). Nevertheless, the construct validity of the ideal alternatives has not been assessed so far. Based on data collected from a sample of 269 Romanian employees in various industries, the results support adequate fit with the original, central-tendency version factor structure. However, limited support for convergent validity indicates that future studies should consider alternative measures of ideal ILTs and IFTs. Limitations, contributions and future directions are discussed.

Keywords

ideal implicit leadership theories, ideal implicit followership theories

Introduction

Implicit Leadership Theories (ILTs) and Implicit Followership Theories (IFTs) are two strands of a social-cognitive approach to leadership (Dinh et al., 2014; Epitropaki, Sy, Martin, Tram-Quon, & Topakas, 2013; Junker & van Dick, 2014). The approach views leadership as a social influence process, which is partly determined by the perceivers' prior schemas about leaders (ILTs) and followers (IFTs) (Foti, Hansbrough, Epitropaki, & Coyle, 2017). These cognitive schemas function as benchmarks during organizational encounters, when perceivers compare target individuals against the benchmarks and categorize them as good or bad leaders, or good or bad followers, accordingly (Eden & Leviatan, 1975; Lord, Foti, & De Vaders, 1984; Lord & Maher, 1993). The closer the target individuals are to the perceivers' cognitive schemas, the higher the targets' probability to be assigned to the category of the schemas (Shondrick, Dinh, & Lord, 2010). Consequently, the fit with the cognitive schemas function as antecedents to various organizational outcomes, such as leader-member exchange, organizational commitment and job satisfaction (Epitropaki & Martin, 2005; Sy, 2010). Additionally, people's ILTs and IFTs elicit specific behavioral scripts during organizational encounters (Lord & Maher, 1993; van Gils, van Quaquebeke & Van Knippenberg, 2010), which affect outcomes related to the dyadic partner, such as performance, trust and relationship quality. This dyadic influence is explained by the Pygmalion effect (Whiteley, Sy, & Johnson, 2012). From a practical

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perspective, ILTs and IFTs are important because they bias the performance ratings (Hansbrough, Lord & Schyns, 2015; Shondrik et al., 2010), which impact most of the personnel decisions, such as promotions or compensations. Previous findings indicate that followers' ILTs explain up to 40% of the variance in leaders' ratings given by followers (Bass, 1990) while leaders' IFTs explain up to 62% of the variance in employees' ratings given by leaders (Scullen, Mount & Goff, 2000). This suggests that a significant inter-rater variation of the performance is due to personal interpretative frames, rather than actual interactions and behaviors that are assessed (Junker & van Dick, 2014).

Despite being the central elements of the second most studied line in leadership (Dinh et al., 2014), ILTs and IFTs entail some conceptual inconsistencies. Junker and Van Dick (2014) reviewed the literature and concluded that ILTs and IFTs had been operationalized either as central tendency prototypes (i.e., averages) or as ideal-based prototypes (i.e., extremes), terms coined by Barsalou (1985). These alternative forms have created confusion. Some authors mixed the two forms, collapsing them into a single construct (e.g., Offerman, Kenedy, & Wirtz, 1994; Sy, 2010). Other authors assessed one form, but interpreted the findings as if the other form was assessed (Epitropaki & Martin, 2005), while others did not even mention which form they had used (Junker & van Dick, 2014). The distinction between the two alternatives has substantive relevance, because the way the ILTs and IFTs are conceptualized yields to different outcomes (Barsalou, 1985). For example, Quaquebeke, Graf and Eckloff (2014) contrasted the two forms and showed that only the fit with the ideal leader prototype, not with the average leader prototype was predictive for subordinates' identification and satisfaction with leaders, respect for leaders and affective commitment towards their leaders. The researchers also posited that previous findings which had linked average prototypes to various outcomes might have been due to the covariation between average and ideal prototypes. The covariation can be explained by the fact that actual leaders in organizations, whose attributes shape typical leadership prototypes, are recruited and selected based on ideal prototypes.

Taking into consideration previous findings and the fact that most of the research has been conducted or interpreted regarding ideals (Junker & van Dick, 2014), evidence on the construct validity of the ideal ILTs and IFTs is needed. Therefore, the current study aims to investigate the factor structure of the ideal ILTs and IFTs for two extensively used instruments, measuring ILTs (Epitropaki & Martin, 2004) and IFTs (Sy, 2010) and tackling them from an ideal perspective. Both instruments were developed under the same framework, as central-tendency forms, but occasionally have been misinterpreted as ideals.

Development of ILTs and IFTs as Central-Tendency Prototypes

Eden and Leviatan (1975) coined the term Implicit Leadership Theories. They provided empirical evidence for the existence of ILTs, positing that because the factor structure of the Leadership Behavior Description Questionnaire, developed at Ohio State University, was replicated under implicit conditions (i.e., participants were provided with minimal details about an imaginary organization, with no details about leaders), then the ILTs could have explained the factors. Later on, based on the general theory of cognitive categorization proposed by Rosch (1978), Lord, Foti and Phillips (1982) developed the theory of leadership categorization, which assumes that there are specific cognitive categories that differentiate leaders from non-leaders. Building on it, Lord, Foti and De Vader (1984) conceptualized ILTs regarding typical characteristics shared by particular category members (e.g., business leaders, political leaders, education leaders, military leaders). In their empirical study, they concluded that "person-in-situation" categories are the most informative for predicting specific outcomes, such as behavioral ratings. Subsequently, Offerman, Kennedy and Wirtz (1994) concluded that the images of the typical leaders, effective leaders and supervisors do not differ significantly and

therefore they collapse the ILTs attributes into a single set explained by an eight-factor structure. The construct was initially developed on undergraduate samples, but then it was replicated on working adults, without providing specific details about the category of the leader to be assessed. Based on Offerman and her colleagues' work, Epitropaki and Martin (2004) validated the instrument for business leaders and reduced the set of ILTs attributes to 21. The items are explained by two second-order factors (Prototypic ILTs and Antiprototypic ILTs), the first having four dimensions (Sensitivity, Intelligence, Dedication and Dynamism) and the second with two dimensions (Tyranny and Masculinity). The factor structure remained consistent across different employee groups and time (Epitropaki & Martin, 2004). Although the researchers collected data for typical business leaders (i.e., participants were asked to rate how characteristic each of the 41 traits were for a business leader), they used the findings in a later study (Epitropaki & Martin, 2005), misinterpreting that they had assessed ideal business leaders prototypes. Moreover, they used the same central tendency approach to measure ILTs in the new study and concluded that the fit with the ideal leader's profile is predictive for the quality of leader-member exchange, job satisfaction and well-being (Epitropaki & Martin, 2005), committing the same confusion again.

Sy (2010) used the same methodology as Offerman and colleagues (1994) and developed the IFTs scale. The scale comprises 18 items, which are explained by two second-order factors (Prototypic IFTs and Antiprototypic IFTs), each having three dimensions: Industry, Enthusiasm and Good Citizen for prototypic traits and Conformity, Insubordination and Incompetence for antiprotrotypic ones.

ILTs as Ideals

The second stream of research has focused on ideal-based prototypes. Barsalou (1985) posited that ideals (i.e., extreme values) predict the representativeness of a member to a category — when the representativeness is assessed in relation to a specific goal (e.g., teachers for a special course — while typical attributes are predictive only when common taxonomic categories are targeted (e.g., teachers). He concluded that the ideals might be more critical for determining representativeness to a category than the central tendency prototypes.

The ideals approach was undertaken by House and colleagues (1999). Under the Global Leadership and Organizational Behavior Effectiveness Research Program (GLOBE), the team coordinated by House collected data on ideal leaders in 62 countries. The following six dimensions of Culturally Endorsed Implicit Leadership Theories (CLT) emerged, each explaining specific primary attributes:

- *Charismatic/ Value-Based Leadership* (visionary, inspirational, self-sacrifice, integrity, decisive and performance-oriented),
- *Team-Oriented Leadership* (collaborative team orientation, team integrator, diplomatic, malevolent and administratively competent),
- *Participative Leadership* (non-participative and autocratic), *Human-Oriented Leadership* (modesty and humane orientation),
- *Autonomous Leadership* (measured by a single scale) and
- *Self-Protective Leadership* (self-centered, status conscious, conflict inducer, face saver and procedural).

The Present Study

Although Epitropaki and Martin's ILTs scale and Sy's IFTs scale have been used in many studies addressing typical leader and follower attributes, nothing is known about their factor structures when the ideal alternatives are employed. The present study aims to fill this gap by investigating whether the same factor structure explains the ideal ILTs and IFTs as for the typical ILTs and IFTs. Additionally, we want to explore the differences between the two frameworks. We expect mean differences between typical and ideal scores. Since the ideals deal with the extreme members of their categories, we expect the attributes' means to be higher for prototypic traits and lower for antiprototypic traits than those reported for

typical leaders and followers. A second goal of the current study is to provide preliminary support for the convergent and discriminant validity of the ideal ILTs and IFTs. Particularly, the associations between ILTs and IFTs are targeted.

Method

Participants

The study sample consists of 269 Romanian employees, with an age between 21 to 65 years old (M = 36.96, SD = 8.31), from a wide range of industries (e.g., banking and finance, telecom, real estate, IT, education). Female respondents accounted for 68% of the sample. Education level range as follows: 4.4% completed secondary education, 10.8% high school, 68.8% were graduates and 16% were postgraduates. Tenure varies as follows: 21.1% of the participants had less than five years of experience, 21.6% had between six and ten years of experience, 39.8% between 11 and 20 years of experience and 17.5% had more than 20 years of experience.

Data were collected online, through snowball sampling and by promoting the study on a social media page. By clicking the link to the research, the participants could access the first page of the online survey. The participants were given relevant information about the objective of the study, the inclusion criterion of being an active employee, the subjective nature of the answers (i.e., perceptions), the lack of negative consequences and the contact details of the researchers. They were also provided with the informed consent, coverings aspects related to autonomy, confidentiality, anonymity, and voluntariness.

Measures

ILTs were measured with the short version of Offerman and colleagues scale (1994), revised by Epitropaki and Martin (2004). The questionnaire consists of 21 items, grouped into 4 prototypic dimensions, Sensitivity (3 items, e.g., *understanding*), Intelligence (4 items, e.g., *knowledgeable*), Dedication (3 items, e.g., *hard-working*), and Dynamism (3 items, e.g. *energetic*), and 2 anti-prototypic dimensions, Tyranny (6 items, e.g., *domineering*) and Masculinity (2 items, e.g., *masculine*). Participants were asked to indicate to what extent each of the traits is characteristic to an ideal organizational leader. Each item was rated on a nine-point scale, ranging from 1 (*not at all characteristic*) to 9 (*extremely characteristic*).

IFTs were measured with the 18 items scale developed by Sy (2010), consisting of 6 dimensions, namely Industry (3 items, e.g., *hardworking*), Enthusiasm (3 items, e.g., *excited*), Good Citizen (3 items, e.g., *loyal*), Conformity (3 items, e.g., *easily influenced*), Insubordination (3 items, e.g., *arrogant*) and Incompetence (3 items, e.g., *uneducated*). The six dimensions are grouped in prototypic dimensions (Industry, Enthusiasm and Good Citizen) and anti-prototypic dimensions (Conformity, Insubordination and Incompetence). Participants were asked to indicate to what extent each of the traits is characteristic to an ideal organizational leader. Each item was rated on a ten-point scale, ranging from 1 (*not at all characteristic*) to 10 (*extremely characteristic*).

Demographics. Relevant information on demographics, such as gender, age, industry, work tenure and leadership experience were also collected.

Analytical Strategy

For the validation of the ideal ILTs and IFTs scales a dual statistical strategy was employed: factor analysis and specific indicators derived from it for assessing the construct validity and network analysis for providing preliminary information on nomological validity.

Confirmatory factor analysis deployed initially for the two constructs in Mplus (Version 7; Muthén & Muthén, 2012) produced suboptimal fit indices (CFI < .90, SRMR > .10, as presented in Table 2). Therefore, because the exact replicability of the typical factor model is in doubt and in order to overcome extensive post-hoc model modifications, we followed the recommendations proposed by Asparauhov and Muthen (2009) and used an Exploratory Structure Equation Modeling (ESEM) framework, conducted with Mplus (Version 7;

Muthen & Muthen, 2012). We assumed that the same underlying factor structure that explain central tendency ILTs and IFTs will replicate to a certain degree to ideal ILTs and IFTs. We employed a simple ESEM, as well as a two-steps hierarchical ESEM (Morin, Arens, & Marsh, 2015), since we had to capture both the second-order and the first-order factors: in the first step, we estimated the non-standardized factor loadings and cross-loadings for the first-order ESEM solution and in the second step, we used those loadings for employing a CFA with second-order factors.

Network analysis was employed in R (R Core Team, 2016). We used *qgraph* package to estimate a joint ILTs and IFTs network. Under a network framework, ILTs and IFTs are seen as "stable patterns of connections in a neural-like network" (Schondrick et al, 2010, p. 964), consisting of nodes, representing observed variables (i.e., ILTs and IFTs traits), linked by edges, representing statistical relationships between them (Epskamp, Borsboom, & Fried, 2017). The advantage of the network analysis is that it provides a visual representation in which we can spot the most critical nodes in the network (i.e., those depicted in the center of the representation) and patterns of interconnections between them.

Results

Means, standard deviations, reliabilities and zero-order correlations of the ILTs and IFTs dimensions are presented in Table 1.

Due to the self-report nature of the data, we analyzed the common method variance, using Harman's single factor method. The exploratory factor analysis, deployed for all thirty-nine observed variables, with one-factor extraction and an unrotated solution shows that the single factor explains 19% of the variance. Thus, we can conclude that the common method variance does not bias the results.

Table 1. *Means, standard deviations, reliabilities, average variance extracted and intercorrelations between ilts and ifts dimensions*

Factor	*M*	*SD*	Alpha (95% CI)	CR	AVE	1	2	3	4	5	6	7	8	9	10	11
ILTs dimensions																
1. Sensitivity	7.42	3.58	.72 (.66-.78)	.78	.64											
2. Intelligence	8.46	2.80	.75 (.70-.80)	.43	.35	.21*										
3. Dedication	8.13	2.91	.77 (.72-.82)	.58	.45	.22*	.36**									
4. Dynamism	7.71	3.45	.73 (.66-.78)	.58	.44	.18*	.39**	.58**								
5. Tyranny	3.75	3.72	.78 (.73-.81)	.43	.30	-.06	-.01	-.05	.12							
6. Masculinity	3.58	5.04	.94 (.92-.95)	1	1.03	.09	.07	-.04	.07	.23**						
IFTs dimensions																
7. Industry	8.62	3.56	.64 (.56-.71)	.58	.45	.34**	.35**	.36**	.33**	.16**	.08					
8. Enthusiasm	8.18	4.47	.75 (.68-.79)	.92	1.23	.36**	.38**	.36**	.39**	.05	.15*	.26				
9. Good Citizen	8.86	3.51	.66 (.57-.71)	.55	.43	.22**	.37**	.35**	.31**	.03	.01	.47**	.23			
10. Conformity	4.46	5.51	.56 (.45-.64)	.06	.08	.02	.07	-.07	.12*	.38**	.21**	-19*	-.07	-.18*		
11. Insubordination	1.85	3.27	.62 (.52-.68)	.45	.36	-.12	-.13*	-.14*	-.15*	.27**	.26**	-.01	-.02	-.06	.26*	
12. Incompetence	2.45	3.90	.54 (.43-.62)	.10	.12	-.11	-.20**	-.17*	-.15*	.13*	-.01	-.13	-.06	-.01	.29*	.29*

Note. AVE = Average Variance Extracted; CR = Composite Reliability
* $p < .05$. ** $p < .01$

Tables 2 summarizes the results for the measurement models, for both ILTs and IFTs. The two second-order factors solutions for the two constructs provided an unsatisfactory fit. But all four ESEM models, one capturing a second-order factor solution and one a first-order factor solution for each of the two constructs, achieved adequate fit indices, according to the recommendations summarized by Brown (2015). However, the results show that the first-order ESEM solution and the second-order one are comparable in case of ILTs (χ^2 = 246.32, p < .001, CFI = .93, TLI = .86, RMSEA = .07, SRMR = .03 for the first-factor solution and χ^2 = 259.51, p < .001, CFI = .93, TLI = .87, RMSEA = .07, SRMR = .04 for the second-order solution), while the second-order factor solution is better than the first-order factor one, in case of IFT (χ^2 = 119.49, p < .001, CFI = .96, TLI = .91, RMSEA = .05, SRMR = .03). These results provide support for the existence of the same underlying factor structure for the ideal ILTs and IFTs as for their central-tendency alternative.

Table 2. *Fit Indices for Measurement Models (N = 269)*

Model	χ^2	*df*	RMSEA (90% CI)	CFI	TLI	SRMR
ILTs - CFA - 2nd order with two correlated factors	558.77***	183	.09 (.08-.10)	.83	.81	.09
ILTs - ESEM - six 1st order factors	246.32***	99	.07 (.06-.09)	.93	.86	.03
ILTs - hierarchical ESEM - two 2nd order factors and six 1st order factors	259.51***	108	.07 (.06-.08)	.93	.87	.04
IFTs - CFA - 2nd order with two correlated factors	323.32***	130	.07 (.06-.09)	.84	.82	.10
IFTs - ESEM - six 1st order factors	116.13***	60	.06 (.04-.08)	.95	.88	.03
IFTs - hierarchical ESEM - two 2nd order factors and six 1st order factors	119.49***	68	.05 (.04-.07)	.96	.91	.03

Note. CFI = Comparative Fit Index TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of the Approximation; SRMR = Standardized Root Mean Square Residual
*** p < .001

Inspection of the factor loadings, depicted in Table 3 for ILTs and in Table 4 for IFTs, reveals multiple cross-loadings, most of them having substantive meaning. For example, in case of the ILTs, the item *sincere* loads both Sensitivity factor, as in the original solution, and Dedication factor. Also, the item *knowledgeable* loads two factors: Intelligence and Dedication. It is likely that a dedicated leader has the motivation to improve his or her competence, and thus becoming enlightened and to be interested in developing a good relationship with his or her followers, through interacting sincerely. The item *pushy*, which in the original model loads the factor Domineering, in the present study loads also the factor Dynamism. Again, it is conceivable that only an energetic, dynamic leader has the necessary energy to push the others to do something.

About IFTs' item loadings, some findings derail from the original solution. For example, the item *reliable* loads both the original factor Good Citizen and the factor Industry, having a higher loading for the last one. Again, this has a substantive significance, one plausible explanation being that an industrious employee finishes his or her work in due time thus being an employee on which one can rely. The item *soft-spoken* loads the initial factor Conformity, but also the factor Enthusiasm. The word *soft-spoken* carries the idea of a

person who speaks pleasantly and thus the person might be perceived as being enthusiastic. The item *uneducated* loads both the original factor Incompetence and the factor Insubordination. The explanation in this case comes from the fact that in Romanian, the word *uneducated* conveys a double meaning: unschooled, which can lead to incompetence and ill-mannered, which might come across as insubordination. The item *slow*, which originally loads on Incompetence, in the present study loads also on Insubordination. It is well-known that one aspect of the counterproductive work behaviors refers to the intentional slowdown of the production (Spector, 1998).

Table 3. *Item means, standard deviations and standardized factor loadings for the 21-item ILTs scale, under hierarchical ESEM*

Factors / Items	*M*	*SD*	1. Sensitivity	2. Intelligence	3. Dedication	4. Dynamism	5. Tyranny	6. Masculinity
1. Understanding	7.41	1.44	1.28**	.01	-.02	-.03	-.01	-.02
2. Helpful	6.91	1.64	.44**	.01	.13	.17*	.02	.01
3. Sincere	7.93	1.36	.28*	-.05	.35**	.02	-.12	-.01
4. Intelligent	8.56	.76	-.01	.84**	.05	.01	.01	-.03
5. Knowledgeable	8.60	.76	-.01	.36**	.38**	-.06	-.19*	-.04
6. Clever	8.30	1.01	.07	.48**	.03	.28**	.07	-.04
7. Educated	8.37	1.09	.03	.59**	.03	.18*	-.02	.01
8. Dedicated	8.22	1.06	.04	-.01	.79**	.06	.04	-.11
9. Motivated	8.24	1.11	-.04	.11	.46**	.25**	-.04	-.10
10. Hard-working	7.91	1.32	.01	-.05	.71**	.10	.04	-.05
11. Energetic	7.81	1.26	.01	-.07	.10	.72**	-.15	.09
12. Strong	7.59	1.61	.03	.04	.09	.58**	.19*	.01
13. Dynamic	7.71	1.41	-.05	.11	-.01	.69**	-.01	-.01
14. Domineering	5.43	2.36	-.05	.02	.10	.44**	.42**	.10**
15. Pushy	5.22	2.29	-.04	-.01	.09	.39**	.51**	.04
16. Manipulative	3.35	2.34	.02	.04	-.02	.18*	.56**	.09
17. Loud	4.65	2.44	-.06	.05	.06	.11	.55**	-.04
18. Selfish	1.83	1.51	-.10*	-.05	-.15	-.03	.67**	.11
19. Conceited	1.99	1.63	-.04	-.02	-.14	.08	.72**	.05
20. Masculine	3.65	2.65	-.01	.02	.05	-.04	-.02	1.27**
21. Male	3.50	2.55	-.02	-.01	-.07	.14*	.14*	.67**

Given all the findings discussed above, we can say that we achieved only acceptable construct validity for the ideal ILTs and IFTs scales and a good structure invariance with the original, central-tendency alternatives. There is no justification to test stronger forms of invariance, since the ideal and central-tendency forms are conceptually different. However, it is worth inspecting the average values for the items and their underlying factors. We compared the current study values with those reported in the original studies: ILTs (Epitropaki & Martin, 2004) and IFTs (Sy, 2010). As expected, since the current research tackles the ideal versions of ILTs and IFTs, means are higher for prototypic traits and lower for antiprototypic traits. The only exception is the item *soft-spoken* which has a mean of 6.13 in the current study and a mean of 6.01 in the original one. As discussed previously, the phrase *soft-spoken* might convey a desirable trait.

Table 4. *Item means, standard deviations and standardized factor loadings for the 18-item IFTs scale, under hierarchical ESEM*

Items \ Factors	*M*	*SD*	1. Industry	2. Enthusiasm	3. Good Citizen	4. Conformity	5. Insubordination	6. Incompetence
1. Hardworking	8.92	1.31	.63**	.03	.04	-.02	-.02	-.12
2. Productive	9.26	1.10	.87**	.03	-.03	.01	-.04	.01
3. Goes above and beyond	7.69	2.08	.46**	.05	.07	.10	.16	-.02
4. Excited	8.37	1.80	.25	.41**	.00	.01	-.16	.21
5. Outgoing	8.32	1.73	.10	.88**	.14	.05	.03	.05
6. Happy	7.86	1.96	.26	.60**	.15	-.01	.02	.02
7. Loyal	8.34	1.84	-.01	-.30	1.90**	.01	.01	-.01
8. Reliable	9.36	1.20	.26**	.16	.22**	-.05	-.24*	.02
9. Team player	8.89	1.47	.20	.36**	.11	-.05	-.04	.01
10. Easily influenced	2.72	2.12	-.02	-.03	.01	.59**	.41*	.29
11. Follows trends	4.55	2.73	.02	.11	.02	.68**	.22	.07
12. Soft spoken	6.13	2.69	.04	.34**	.09	.30**	.09	.08
13. Arrogant	1.96	1.55	.16	-.10	-.01	.19	.53**	.13
14. Rude	1.31	.90	-.01	.07	.02	-.05	.75**	-.03
15. Bad tempered	2.28	1.77	-.10	.01	.03	-.10	.47**	.25
16. Uneducated	1.75	1.74	-.02	-.02	-.01	.02	.46**	.09
17. Slow	1.89	1.51	-.07	-.05	-.01	.17	.37**	.27*
18. Inexperienced	3.72	2.12	.03	.10	.05	.22	.07	.80**

Convergent and discriminant validities

We analyzed the convergent and discriminant validity for each of the two constructs. Convergent validity reflects whether measures of the same construct are substantially interrelated, while divergent validity shows whether the dimensions are distinct (Hair, Black, Babin, & Anderson, 2010). When both types of validity are achieved, observed variables load more substantively to their factors than to others.

Convergent validity can be assessed by 1) investigating factor loadings to see whether variables load significantly to their own factors (i.e., standardized loading estimates should exceed .5); 2) computing the Average Variance Extracted (AVE), the mean variance of the variables loadings on a factor (values exceeding .5 would mean that at least half of the variable variance is explained by the factor); and 3) investigating the Construct Reliability (CR), which is an alternative estimate for reliability, showing the degree to which variables reflect the same underlying construct (values higher than .6 are acceptable, while higher than .7 would show a good internal consistency). Factor loadings for ILTs, depicted in Table 3, show that only variables measuring two dimensions, namely Tyranny and Masculinity achieved satisfactory value. Factor loadings for IFTs, described in Table 4, indicate that none of the IFTs dimensions are consistently measured. AVE, presented in Table 1, shows again that only two ILTs dimensions, Sensitivity and Masculinity, and one IFTs dimension, namely Enthusiasm, achieved recommended cutoff values. CR, presented in Table 1, also shows that only Sensitivity and Enthusiasm have a proper consistency. Moreover, analyzing the descriptive statistics of IFTs, we can notice that in case of three factors, Conformity, Insubordination and Incompetence, their standard deviations exceed their means, which once again indicates that the measures generate data that are too spread and such lack consistency. In sum, convergent validity is only scarcely supported by the data.

Discriminant validity can be investigated by comparing AVE for any two dimensions with the squared correlation between them, thus testing whether each latent factor explains more variance for its variables than it shares with another factor. Comparing AVE values and squared correlations, based on data presented in Table 1, we can conclude that the discriminant validity achieved good empirical support.

Corroborating evidence for convergent and discriminant validities, the data shows that the factors are distinct, but their specific measures are not the most relevant for assessing the ideal versions of ILTs and IFTs.

Nomological validity

Nomological validity reflects whether two theoretically related constructs are linked.

Since ILTs and IFTs are complementary cognitive schemas, for leaders and followers, we consider they are tangled in a coherent narrative about dyadic partners, facilitating sensemaking (Weick, 1995). Table 1 depicts the correlations between ILTs and IFTs factors. As expected, prototypic ILTs factors are positively associated with prototypic IFTs factors and antiprototypic ILTs factors are positively associated with IFTs factors they are associates. The only exception is that Masculinity, an antiprototypic ILTs factor has a non-significant correlation with the Incompetence, an antiprototypic IFTs factor. Even though Masculinity loads the Antiprototypic ILTs second-order factor, it is undesirable in the sense that people do not consider it to be a criterion for a good leader. But it does not convey the same undesirability as the incompetence of the follower. The moderate associations between ILTs and IFTs provide preliminary evidence for their nomological validity.

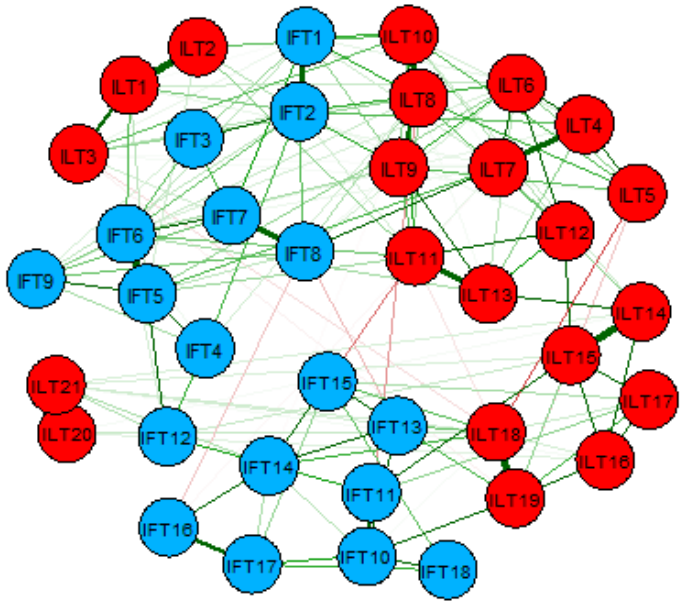

Figure 1. *Estimated joint networks of 39 ILTs traits (red nodes) and IFTs traits (blue nodes)*

Note. Green edges indicate positive correlations and red edges indicate negative correlations. Thickness of the edges reflect the strength of associations. ILTs traits are: ILT1 = Helpful; ILT2 = Understanding; ILT3 = Sincere; ILT4 = Intelligent; ILT5 = Educated; ILT6 = Clever; ILT7 = Knowledgeable; ILT8 = Dedicated; ILT9 = Motivated; ILT10 = Hard-working; ILT11 = Energetic; ILT12 = Strong; ILT13 = Dynamic; ILT14 = Domineering; ILT15 = Pushy; ILT16 = Manipulative; ILT17 = Loud; ILT18 = Conceited; ILT19 = Selfish; ILT20 = Male; ILT21 = Masculine. IFTs traits are: IFT1 = Hardworking; IFT2 = Productive; IFT3 = Goes above and beyond; IFT4 = Excited; IFT5 = Outgoing; IFT6 = Happy; IFT7 = Loyal; IFT8 = Reliable; IFT9 = Team player; IFT10 = Easily influenced; IFT11 = Follows trends; IFT12 = Soft spoken; IFT13 = Arrogant; IFT14 = Rude; IFT15 = Bad tempered; IFT16 = Uneducated; IFT17 = Slow; IFT18 = Inexperienced.

Further investigation of the joint network depicted in Figure 1, provide additional support for the nomological validity. The figure shows that the ILTs and IFTs are well delimited. They are meaningful connections between nodes belonging to the two constructs: prototypic ILTs traits (from ILT1 to ILT13) have positive associations with prototypic IFTs traits (from IFT1 to IFT9), whereas antiproprotypic ILTs traits (from ILT14 to ILT 21) have positive associations with antiprototypic IFTs traits (from IFT10 to IFT18). Moreover, all prototypic traits cluster together in the upper part of the figure, while antiprototypic traits cluster in the lower part.

Discussions and conclusion

The present study is the first attempt to assess the construct validity of the ideal version of ILTs and IFTs. While there is a confusing interpretation in the literature on ILTs and IFTs (Junker & van Dick, 2014), this study provides the first evidence for the existence of the ideal ILTs and IFTs. We employed a hierarchical ESEM analysis, after showing that the CFA would not be the appropriate approach, and explained that the fit indices offer adequate support to claim that the ideal ILTs and ideal IFTs have the same underlying factor structure as their central-tendency versions. Nevertheless, further examinations of the convergent and discriminant validity indicate that, while ideal ILTs and IFTs dimensions are distinct, their explicit measures are not optimal. Most probably this finding is explained by the fact that the two initial constructs were developed under the central-tendency framework, based on a bottom-up approach, integrating items which convey the typical characteristics of leaders and followers met by participants. Furthermore, both constructs display various cross-loadings, which again support the idea that the items are not the most precise measures for their underlying factors. The common method to overcome the caveat of unfit measures obtained throughout a confirmatory analysis is to drop vague items indicated by the post-hoc modification diagnostic. We considered that such a solution was not appropriate for the current constructs, because the scales are short, almost all factors being measured by three items, so that item dropping would has jeopardized their conceptual consistency. As such, we consider that the current findings are provisional, further replications being necessary for clarifying whether the typical measures of ILTs and IFTs are optimal for also measuring ideal ILTs and IFTs. Junker, Stegmann, Braun and Van Dick (2016) noticed that there might be a conceptual distinction between typical and ideal versions of IFTs and developed a new scale covering the ideal alternative. They took a top-down approach, building on Ohio and Michigan leadership research traditions and assumed that the specific dimensions of the ideal follower cover aspects related to task mastering and relationships building. Their findings revealed that even though ideal IFTs, measured with their newly developed scale and typical IFTs, measured with Sy's scale (2010) are correlated, the individuals' images of ideal followers are distinguished from those of typical followers.

Since we used the original measures for ILTs and IFTs in the ideal version, we could compare the two forms. We noticed that ideal versions capture extreme values (i.e., higher averages for prototypic traits and lower averages for antiprototypic traits). These findings were expected, since ideals refer to outliers or inspirational models, whereas typical versions integrate traits displayed by the majority of leaders or followers (Barsalou, 1985).

As ideal versions are more useful when specific outcomes are investigated (Barsalou, 1985), current findings support future research that may substantiate contextual-sensitivity of the ILTs and IFTs. So far, even though contextual sensitivity was theoretically assumed, it was not proofed through empirical studies (Foti, Hansbrough, Epitropaki, & Coyle, 2017). It may be fruitful to examine ideal ILTs and IFTs under specific circumstances, such as an organization exposed to external threats (i.e., a highly competitive market) or internal risks (i.e., a toxic organizational climate).

Also identifying the factor structure of the ideal ILTs and IFTs, the current study provides preliminary evidence for

nomological validity, by employing a newly developed method (i.e., estimated network structure).

The current study has several limitations. First, it focuses on the psychological equivalence between ideal ILTs and IFTs and central-tendency ILTs and IFTs, but differences between the original, English, central-tendency version of ILTs and IFTs and the Romanian, ideal versions might carry linguistic meaning, which was not addressed by the current study. Second, the present study assessed ideal ILTs and IFTs at the superordinate level (i.e., ideal organizational leaders and followers, in general, Lord & Maher, 1993). Therefore, additional insights could be gained by studying the factor structure for specific contexts (e.g., military, business, politics etc.). Third, because the results could not fully support the convergent validity for the two constructs, we consider that using the ILTs scale developed by Epitropaki and Martin (2004) and Sy's IFTs scale in the ideal framework in future studies might create challenges for meaningful interpretations of the results.

To conclude, the current study indicates that the ideal ILTs and IFTs are stand-alone constructs, suggesting that they are real interpretative schemas held by individuals. ESEM analysis replicated the factor structures of the typical versions of the construct. However, since the convergent validity did not receive enough support, using the existing scales in an ideal framework would be challenging and therefore alternative versions for the ideal ILTs and IFTs should be considered.

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