
Leadership, Shared Understanding and Trust in Geographically Distributed Teams

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The changing nature of work

1. Intellectual rather than physical
2. Innovative rather than routine
3. Culturally diverse rather than standard
4. Geographically distributed rather than co-located

In Distributed Teams, communication and coordination are predominantly done through electronic means (ICT) with minimal face-to-face interaction

Challenges for leadership in distributed teams include:

- Coordinating interdependent teamwork performed in different locations without face-to-face contact means supervisors cannot literally 'oversee' subordinates' efforts.
- Can we identify and trust fully at a distance?
- Leaders are often competing for team members' attention as many work in multiple teams at the same time and report to multiple leaders in multiple locations. Who determines priorities?
- Team membership may be fluid and duration of relationship may be limited in time as experts are brought in and taken out based on the needs of projects.



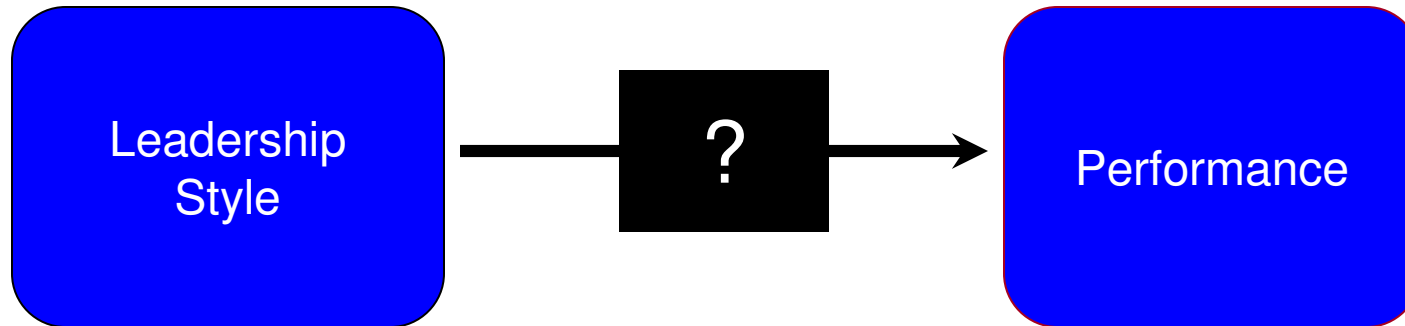
Objective

What particular leader behaviors and more general leadership styles are effective in the complex and rapid changing environment of geographically distributed teams?

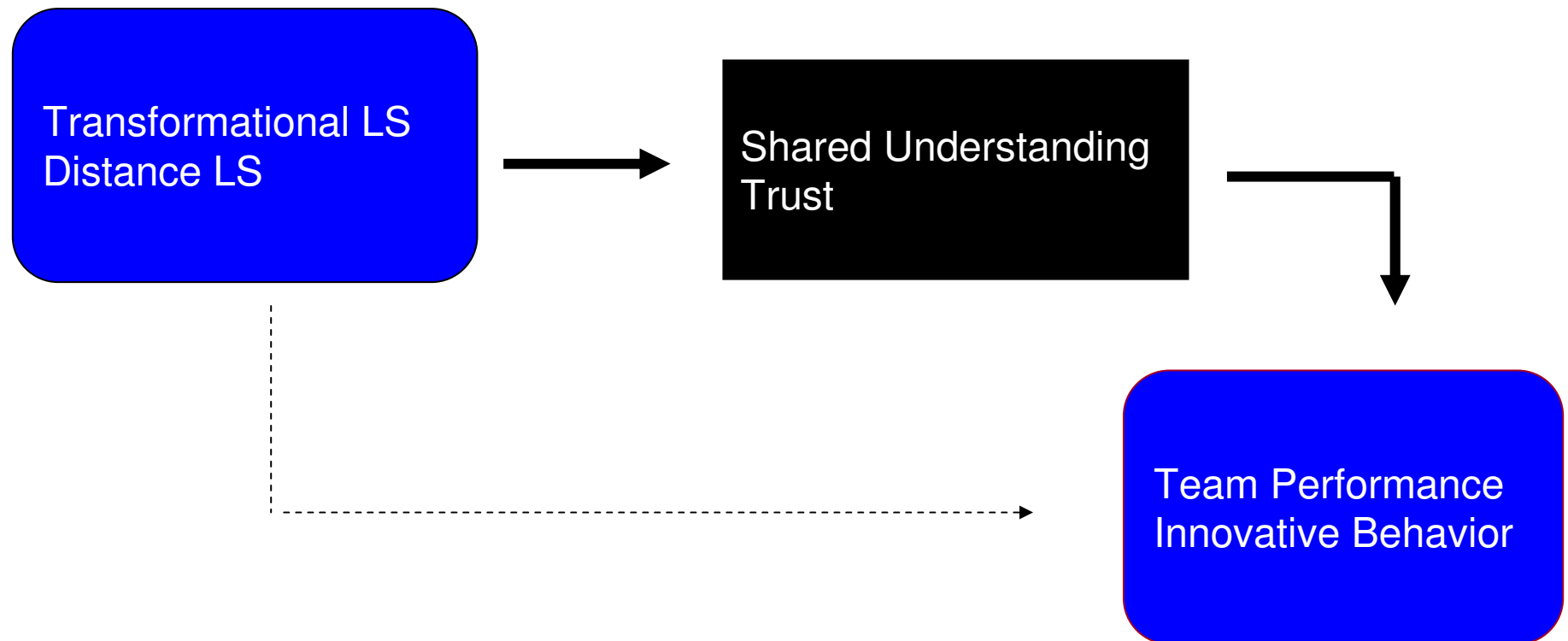
Leadership under the condition of

- the degree of geographic dispersion,
- the amount of face-to-face interaction,
- psychological states of workers in geographically distributed teams

General Research model



Links between leadership and performance



Hypotheses

1. **Shared understanding will be positively related to innovative behavior and geographically distributed team performance (H1).**
2. **The amount of trust geographically distributed team members have in each others' knowledge will be positively associated with innovative behavior and geographically distributed team performance (H2).**
3. **The relationship between transformational and distance leadership behaviors, innovative behavior and performance of geographically distributed teams, will be mediated by shared understanding (H3).**
4. **The relationship between transformational and distance leadership behaviors, innovative behavior and performance of geographically distributed teams will be mediated by trust in the knowledge of colleagues (H4).**

Methodology

- 8 organizations
- 35 geographically distributed teams
- 173 informants (81% male, average age 37.1 years)
- Web-based survey

Response rate: 38%.

Measures

		Cronbach's alpha
Transformational Leadership	Avolio & Bass, (2004)	<i>20 items: .93</i>
Distance leadership	Self developed	<i>14 items: .87</i>
Shared understanding	Self developed, Lurey & Raisinghani (2001) and Lewis (2003)	<i>8 items: .81</i>
Trust in the knowledge of team colleagues	Lewis (2003)	<i>5 items: .71</i>
Innovative behavior	Van der Vegt & Janssen (2003)	<i>3 items: .74</i>
Team performance	Lewis (2004)	<i>4 items: .83</i>

Results

Variable	Mean	s.d.	1	2	3	4	5	6	ICC1
1. Transformational LS	3.55	0.65	.93						0.24
2. Distance LS	3.38	0.62	.69**	.87					0.13
3. Shared understanding	3.68	0.63	.35**	.32**	.81				0.05
4. Trust in knowl. of coll.	3.80	0.46	.27**	.15	.48**	.71			-0.03
5. Innovative behavior	3.78	0.53	.42**	.32**	.44**	.27**	.74		-0.01
6. Team performance	3.64	0.57	.37**	.23**	.64**	.50**	.40**	.83	0.23

^a $n = 170$.

* $p < .05$

** $p < .01$

Results H1 and H2

H1 is confirmed

Shared understanding will be positively related to innovative behavior and geographically distributed team performance.

H2 is confirmed

The amount of trust geographically distributed team members have in each others' knowledge will be positively associated with innovative behavior and geographically distributed team performance.

Results H3

H3 is confirmed

The relationship between transformational and distance leadership behaviors, innovative behavior and performance of geographically distributed teams, will be mediated by shared understanding.

1. Shared understanding mediates the association of distance leadership with innovative behavior (38% mediated, $\beta=.37^{***}$; Sobel=3.28) and team performance (90%, $\beta=.63^{***}$; Sobel=3.94).
2. Shared understanding mediates the association of transformational leadership with innovative behavior (30% mediated, $\beta=.34^{***}$; Sobel=2.86) and team performance (57%, $\beta=.58^{***}$; Sobel=3.62).

* $p < .05$
** $p < .01$
*** $p < .001$

Results H4

H4 is partially confirmed

The relationship between transformational and distance leadership behaviors, innovative behavior and performance of geographically distributed teams, will be mediated by trust in the knowledge of team colleagues.

1. Trust in the knowledge of team colleagues mediates the association of transformational leadership with team performance (31% mediated, $\beta = .43^{***}$; Sobel=2.76).
2. Trust in the knowledge of team colleagues mediates the association of distance leadership with team performance (31% mediated, $\beta = .48^{***}$; Sobel=1.78).

* $p < .05$
** $p < .01$
*** $p < .001$

Conclusion

- Transformational leadership is strongest predictor of team performance and innovative behavior;
- Shared understanding mediates the relationship of transformational and distance leadership with team performance and innovative behavior;
- Trust in the knowledge of team colleagues mediates the relationship of transformational and distance leadership with team performance.

Limitations and strengths

Limitations

- Difficulties with data gathering (small sample)
- Cross sectional research design
- No objective performance measures

Strengths

- Applied setting (actual teams in practice)
- Multiple informants (both team leaders and group members)

Discussion

- Should data analyses be done on the individual level, the team level or both?
- How “teamy” are such globally distributed teams?
- How about trust and innovative behavior?

Is there perhaps an optimal level of trust after which an increase does not lead to more innovation?

For more information

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Thank you!