

# The Effects of Units' Leadership Credibility Climate on Innovation Performance

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# Introduction

- ◆ Providing feedback seems to be an important aspect of maintaining and increasing motivation, satisfaction (Lam, Yik, & Schaubroeck, 2002) or OCB (Norris-Watts & Levy, 2004)
- ◆ Relation of leaders' feedback with innovation performance has not been sufficiently investigated
- ◆ Research on psychological mechanisms in the feedback-outcome relationship are rare (Rosen et al., 2006)
- ◆ Giving accurate feedback, however, has been demonstrated to be problematic and is associated with many issues (Longenecker & Nykodym, 1996)

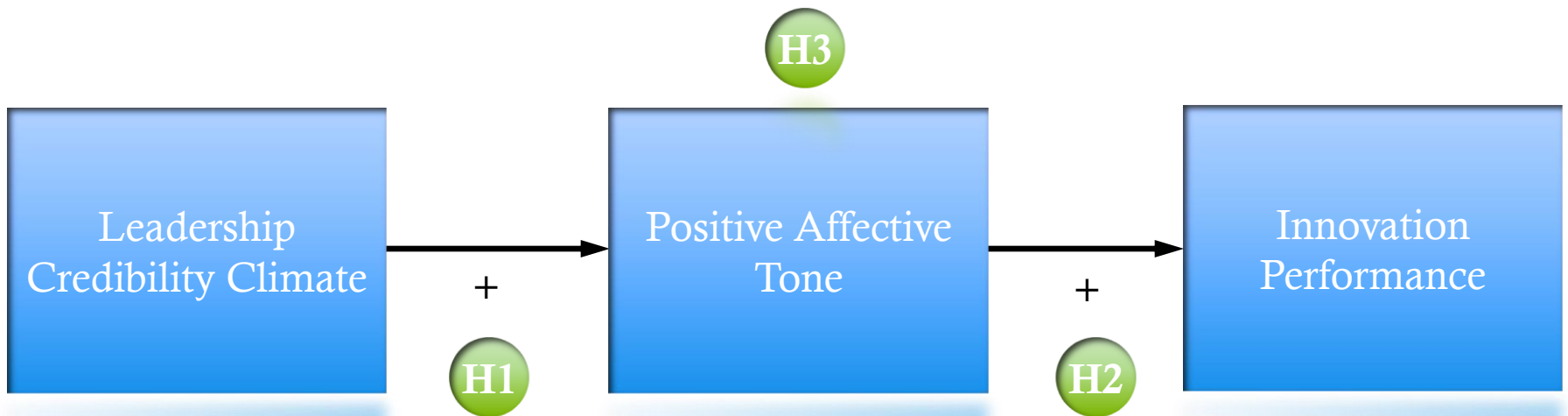
# Theoretical Background and Definitions

- ◆ One of the most named employees' suggestions for improving feedback processes were (Longenecker & Nykodym, 1996):
  - ◆ Increase their (leaders') knowledge of actual performance
- ◆ Investigation of leadership credibility climate (Ilgen, Fisher, Taylor, 1979) on innovation performance seems particularly important
- ◆ Leadership credibility climate
  - ◆ “Extent to which employees trust their leaders to provide accurate performance information”
- ◆ Innovation performance
  - ◆ “Extent to which employees collectively contribute to improving existing procedures or to finding and implementing new ideas”

# Theoretical Background and Definitions

- ◆ Frederickson's (2001) broaden and build theory emphasizes "that positive affect expands our action repertoires and encourages creativity and search, facilitating approach rather than avoidant behavior, and widens the array of behaviors that come to mind".
- ◆ Due to the close connection between trust and affect in the workplace (Kiefer, 2005), positive affective tone might function as a mediation mechanism between leadership credibility climate and innovation performance
- ◆ Positive affective tone
  - ◆ "Employees' homogenous, positive affective reactions within a unit"

# Research Design: Simple Mediation Model



# Method: Research Setting and Sample


- ◆ Research setting
  - ◆ United States Military
- ◆ Respondents
  - ◆ 9,399 respondents working in 350 units
  - ◆ Number of respondents ranged per unit from 2 to 477
  - ◆ Median of 62 and 101 average unit members (SD=112,4)
- ◆ Gender: 81,2 % male; 18,8 % female
- ◆ Age: 71% were between the ages of 22 and 40
- ◆ Military Functions: Air Force 1,6%; Army 28,1%; Coast Guard 1,9%; Marine Corps 9,8%; Navy 47,5%

# Method: Measures

- ◆ Leadership Credibility Climate (Steelman, Paul, & Andrea, 2004)
  - ◆ Cronbach's alpha: .48,  $r_{wg}$ : .70, ICC1: .02 ( $p < .001$ ); 3 items
  - ◆ Sample Items: "Leaders in our unit are fair when evaluating their subordinates' job performance."; "Subordinates in our unit have confidence in the feedback of their leader."
- ◆ Positive Affective Tone (Katwky, Fox, Spector, & Kelloway, 2000)
  - ◆ Cronbach's alpha: .91,  $r_{wg}$ : .49, ICC1: .03 ( $p < .001$ ); 4 items
  - ◆ Sample Items: "In the last three months, members of our unit have been cheerful."; "... members of our unit have been content."
- ◆ Innovation Performance (Bono & Judge, 2003)
  - ◆ Cronbach's alpha: .90,  $r_{wg}$ : .63, ICC1: .01 ( $p < .01$ ); 4 items
  - ◆ Sample Items: "Members of our unit find improved ways to do things"; "Members of our unit create better processes and routines."



# Results: Mediation Model

Variable	<i>B</i>	<i>SE</i>	<i>T</i>	<i>p</i>		
Direct and total effects						
Unit innovation performance regressed on leadership credibility climate:	0.50	0.05	10.01	0.000		
Positive affective tone regressed on leadership credibility climate:	0.72	0.06	11.20	0.000		
Unit innovation performance regressed on positive affective tone:	0.24	0.55	5.90	0.000		
Unit innovation performance regressed on leadership credibility climate controlling for positive affective tone:	0.32	0.04	5.98	0.000		
	Value	<i>SE</i>	LL 99% CI	UL 99% CI	<i>z</i>	<i>p</i>
Indirect effect and significance using normal distribution						
Sobel	0.16	0.03	0.08	0.23	5.64	0.000
	Value	<i>SE</i>	LL 99% CI	UL 99% CI		Partial Mediation
Bootstrap results for indirect effect						
Effect	0.17	0.04	0.07	0.30		

H1

H2

H3

Note. *n* = 350 units. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. Controls: age, group size, organizational trust, job satisfaction, unit cohesion.

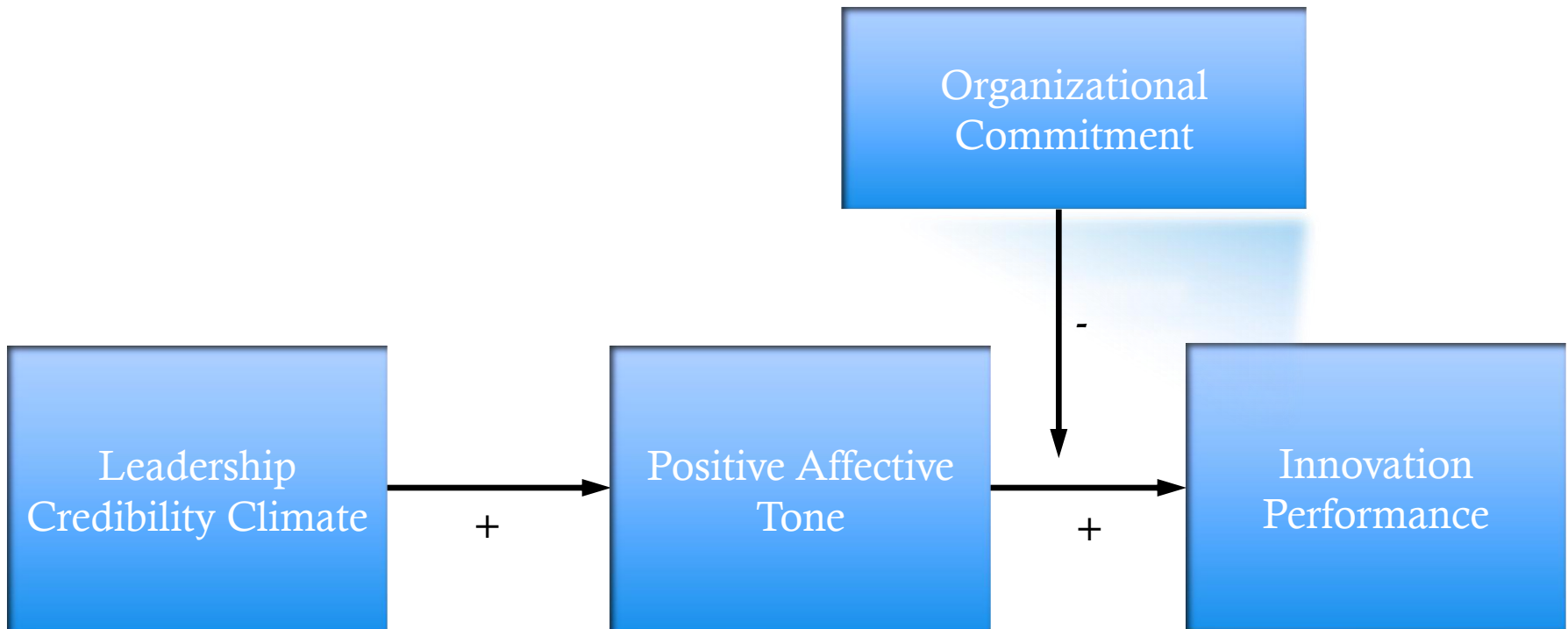
# Additional Mediation Model



- ◆ Organizational commitment regressed on leadership credibility climate ( $p = .073$ )
- ◆ Unit innovation performance regressed on organizational commitment ( $p = .445$ )

*Note.*  $n = 350$  units. Controls: age, group size, organizational trust, job satisfaction, unit cohesion.

# Explorative Analysis: Moderated Mediation Model



# Results: Moderated Mediation Model

Predictor	<i>B</i>	<i>SE</i>	<i>T</i>	<i>p</i>
Positive affective tone				
Constant	0.10	0.06	1.70	0.090
Leadership credibility climate	0.72	0.06	11.20	0.000
Unit Innovation Performance				
Constant	0.08	0.05	1.71	0.089
Positive affective tone (PA tone)	0.22	0.04	5.37	0.000
Organizational commitment	-0.08	0.05	-1.60	0.111
PA tone X Organizational commitment	-0.15	0.06	-2.36	0.019
Organizational commitment	Boot indirect effect	Boot <i>SE</i>	Boot <i>z</i>	Boot <i>p</i>
Conditional indirect effect at Organizational commitment = $M \pm 1 SD$				
-1 <i>SD</i> (-0.55)	0.22	0.06	3.82	0.000
<i>M</i> (0.00)	0.16	0.04	3.54	0.000
+ 1 <i>SD</i> (0.55)	0.10	0.06	1.70	0.090

Note.  $n = 350$  units. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. Controls: age, group size, organizational trust, job satisfaction, unit cohesion.

# Conclusion

- ◆ Leaders' accurate knowledge of employees' job performance positively related with units' positive affective tone and innovation performance
- ◆ Positive affective tone functions as a group -level mediator between leadership credibility climate and innovation performance
- ◆ Leaders collective knowledge and accurate performance feedback spread positive moods and emotions through the unit enhancing thereby units' innovation performance
- ◆ Strengthen theoretical perspectives by Weiss & Cropanzano (1996) that “affect operates as an important mediator in organizational settings” and by Frederickson (2001) that “positive affect expands our action repertoires and encourages creativity... and widens the array of behaviors that come to mind”.

# Practical Implications

- ◆ Accurate performance feedback seems to be a key leverage point for enhancing unit effectiveness
- ◆ Units' positive affective tone and innovation performance may be enhanced when leaders throughout a unit collectively provide accurate performance feedback
- ◆ Organizations may want to recruit and train leaders in providing accurate performance feedback
- ◆ Develop and conduct systematic interventions to strengthen units' leadership credibility climate

# Limitations and Future Research

- ◆ Assessed performance with a perceptual measure and are unable to show that this measure is a valid predictor of “objective” units’ innovation performance
- ◆ Future research might include additional and more objective innovation performance measures to provide confidence in the robustness of our results (e.g. supervisor ratings, operating figures)
- ◆ All data were collected utilizing a non-experimental field-study design, so alternative model paths remain
- ◆ Followed recommendations by various scholars (e.g. Cole et al., 2008) and tested alternative models
- ◆ Evidence based longitudinal or experimental research is needed before our proposed path of causality can unambiguously be deduced

# Limitations and Future Research

- ◆ Internal consistency estimate for the three-item leadership credibility climate measure was low (.49)
- ◆ Original five item-scale had a internal consistency estimate of .88
- ◆ Followed procedures outlined by Drewes (2000), estimating the maximal reliability of the three-item measure to be .90
- ◆ Omitted the “poorest” performing item and recomputed our mediation analysis
- ◆ Findings are based on a sample of military employees performing military missions
- ◆ Previous leadership studies reported resemblance between civilian and military contexts (Dvir et al., 2002; Shamir, Zakay, Breinin, & Popper, 1998)



# THANK YOU!

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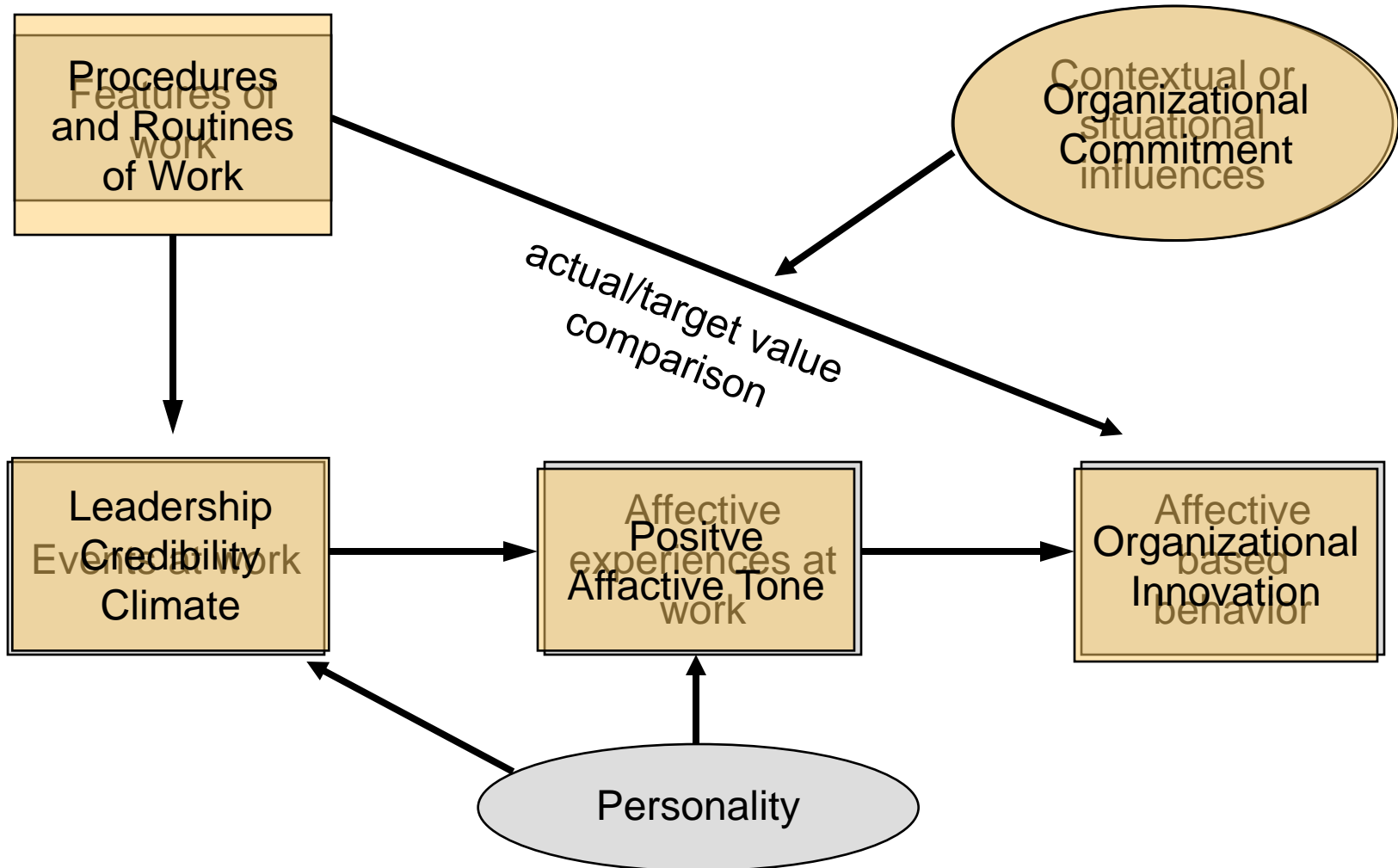
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# Conclusion: Post - hoc explanation

- ◆ Low levels of organizational commitment provide basis for questioning the status quo
- ◆ Innovation always goes along with insecurity and change
- ◆ Positive affective tone helps to conquer employees' insecurity leading to higher levels of innovation performance
- ◆ High levels of organizational commitment create employees persisting on status quo
- ◆ Positive affective tone does not unfold its positive influence on innovation performance

# Back Up

# Affective Events Theory (AET, Weiss & Cropanzano, 1996)



# Theoretical Deliberations and Definitions

- ◆ Employees' with a mismatch between organizational values and policies and their desired ones are rather willing to change the status quo
- ◆ Organizational innovation always occurs in conjunction with changing status quo
- ◆ Organizational innovation will emerge if employees perceive a high level of discrepancy
- ◆ Organizational commitment as a moderator seems particularly interesting in the context of organizational innovation
- ◆ Organizational commitment
  - ◆ “Extent to which employees in a work-unit identify with the organization”

# Method: Measures

- ◆ Organizational Commitment (Dansby & Landis, 1991):
  - ◆ Cronbach's alpha: .81,  $r_{wg}$ : .64, ICC1: .18 ( $p < .001$ ), 5 items
  - ◆ Sample Item: "I find that my values and the organization's values are very similar."

# Limitations and Future Research

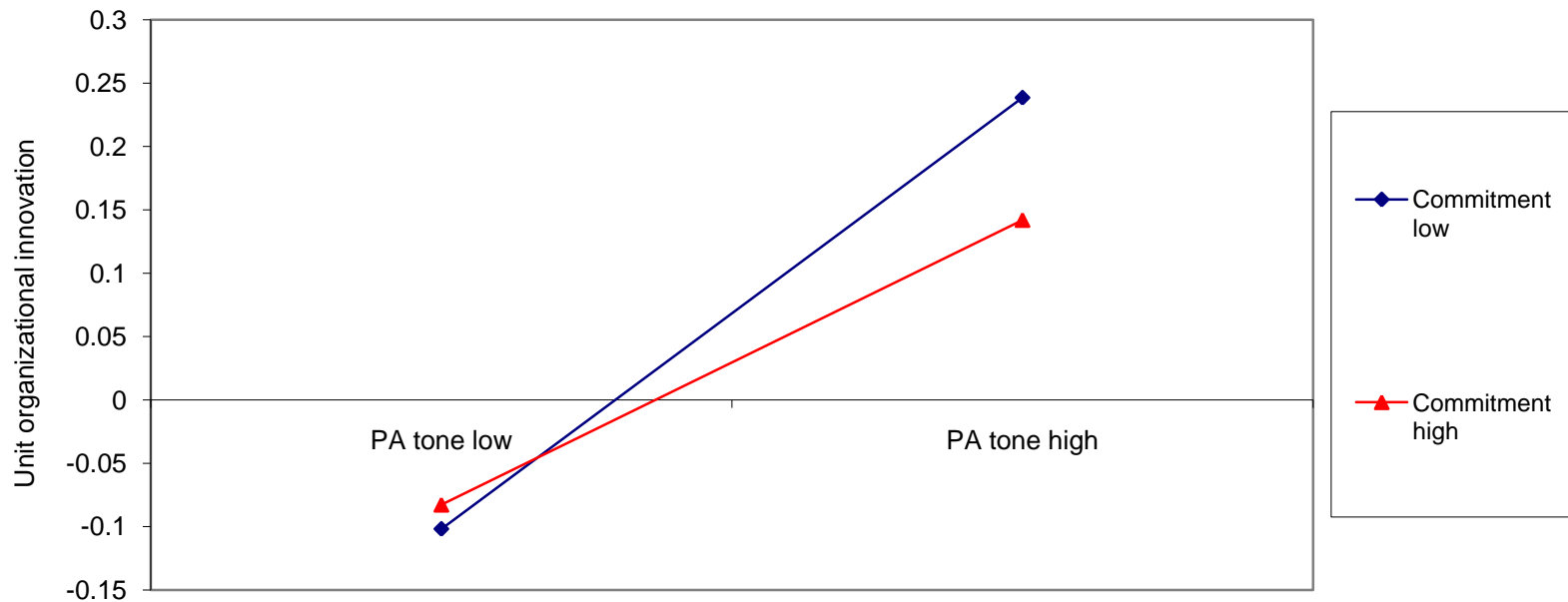
- ◆ ICC(1) values are relatively low (leadership credibility climate: .02 ; positive affective tone: .03, innovation performance: .01) indicating that there is considerable individual-level variability in the scores
- ◆ For instance, only 2% of the variability in any one respondent's rating of leadership credibility climate is a function of the group to which the individual belongs
- ◆ The positive affective tone rwg value (.49) suggest low within-group agreement
- ◆ In contrast, there appears to be higher agreement in terms of perceptions of leadership credibility climate (rwg :.70) and innovation performance (rwg: .63)

# Limitations and Future Research

- ◆ Finally, group membership was significantly related to any of the variables in the study (F-Values)
- ◆ Repeated analysis on the individual level of analysis and demonstrated same mediating effect
- ◆ Exploration of other types of innovation (e.g. product/market innovation)



# Results: Interaction between Positive affective tone and Organizational commitment



# Correlations

**TABLE 1**  
Means, Standard Deviations, and Intercorrelations among All Variables<sup>a</sup>

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Leadership credibility climate	2.07	0.34	(.48)								
2. Positive affective tone	2.68	0.42	.49**	(.91)							
3. Organizational commitment	2.41	0.55	.35**	.02	(.83)						
4. Work unit innovation performance	2.24	0.32	.43**	.48**	.00	(.90)					
5. Age <sup>b</sup>	2.86	1.09	.02	-.07	-.06	-.08					
6. Unit size	26.93	44.74	.07	.00	.17**	.01	-.07				
7. Organizational trust	2.44	0.55	.34**	.03	.84**	.02	.06	.14**	(.87)		
8. Job satisfaction	2.03	0.38	.33**	.06	.72**	-.02	-.01	.33**	.00	(.80)	
9. Unit cohesion	1.97	0.44	.41**	.06	.61**	.03	-.04	.41**	.68**	.61**	(.91)

*Note.*  $n = 350$  units. <sup>a</sup>Internal consistency reliabilities (Cronbach's alpha) are on the diagonal, in parentheses. <sup>b</sup>Age was assessed using a 5-point scale with 1 = 18-21 years, 2 = 22-30 years, 3 = 31-40 years, 4 = 41-50 years, 5 = 51 or over.

\*  $p < .05$

\*\*  $p < .01$

# Removed LCC item

Item Leader Credibility Climate:

„Leaders in our unit are generally familiar with the performance on the job of their subordinates.“

# Feedback Environment Scale (FES)

- feedback source credibility
- Feedback quality
- feedback delivery
- Frequency of both diagnostic favorable and unfavorable feedback
- source availability
- Extent to which feedback seeking is encouraged