
Leadership Measurement and Performance:
What Do We Know and
Why Don't We Know More?

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Key issue in leadership

- Practical interest in leadership is often motivated by desire to improve performance
 - Kaiser, Hogan, & Craig (2008) maintain we know much more about leadership perceptions than how leaders affect performance
 - Such research can help leaders manage their image
 - Not much help guiding them to improve organizational performance
 - (Performance focus of < 20% of studies)
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Why is $L \rightarrow P$ relation poorly understood?

- Performance is the result of highly complex system dynamics
 - Most research is focused on simple heroic views that emphasize effects of a specific person
 - Leadership constructs come from layperson's knowledge of leadership (Calder, 1977)
 - Emphasizes leader behaviors & traits
 - Leaders seen as directly causing outcomes
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Plan

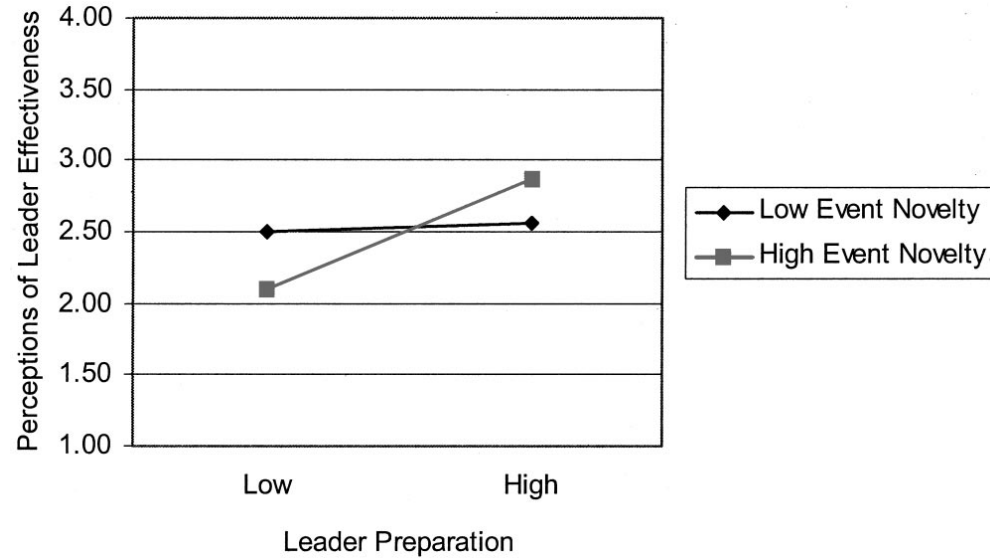
- 1. Discuss two conceptual problems
 - Typical research focuses on person level
 - Underemphasis on events within persons, or more aggregate levels
 - Leadership research slights
 - Indirect effects occurring through others
 - Implicit processes
 - 2. Measurement problems
 - Measures need different foci, alternative conceptualizations of leadership, and different techniques
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Focus of Leadership Research

- Typical analysis is at person (leader) level
 - Pattern of traits → leadership perception & promotion (Foti & Hauenstein, 2007)
 - Leader character → trust (Dirks & Ferrin, 2002)
 - Leader intelligence → task performance (Judge, Colbert, & Ilies (2004)
 - Alternative Approaches also make sense
 - Events within leaders
 - Groups
 - Networks or Organizations
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Events within Leaders (Parts)

- Little research at event level (Morgeson, 2005)
- Nature of event moderates LB→P relationship
- Coaching behavior of leaders (preparation) was perceived as effective only for novel events



- Aggregation across different events (parts) to person level (wholes) obscures L→P effects

Leadership as Group Process

- Carson, Tesluk & Marrone (2007) -- shared leadership in teams is emergent quality of group
 - Leadership is a group network property
 - Defined as: the proportion of relations characterized by influence
 - Shared leadership strongly predicted team performance ($r = .46$, beta in regression $= .65$)
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Leadership as an Organizational Process

- Complexity theory
 - Leadership intertwined with bottom-up emergent processes
 - Continual adaptation is key criterion
 - Leadership is shared and effects are distributed over time
 - Point: Leadership can be a group or organizational as well as individual process
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More typical research at alternative levels

Events	Leaders	Group	Organization
Direct Effects of Leaders			
Functional Leadership (Morgeson, 2005)	<ul style="list-style-type: none">■ Behaviors (LBDQ, MLQ)■ Traits (Big 5)	<ul style="list-style-type: none">■ Sensegiving (Weick, 1995)■ Coaching & support (Carson, Tesluk & Marrone, 2007)	<ul style="list-style-type: none">■ Strategic leadership & vision■ Network management (Hooijberg, 1996)

Second problem: Conceptualization of L Process

- Oversimplified view of leadership
 - LB → Outcomes
 - Leadership may operate through other entities and through indirect processes
 - LB → Followers → Outcomes
 - LB → Networks & Emergent Structures → Outcomes
 - What are the critical indirect processes?
 - Implicit as well as explicit processes may be important
 - Implicit attitudes predict behavior across domains more consistently than explicit attitudes, but with similar effect sizes (Greenwald, Uhlmann, Poehlman, & Banaji, in press)
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Leadership Constructs at Different Levels

Events	Leaders	Group	Organization
Direct Effects of Leaders			
Functional Leadership	<ul style="list-style-type: none"> ■ Behaviors ■ Traits 	<ul style="list-style-type: none"> ■ Sensegiving ■ Coaching 	<ul style="list-style-type: none"> ■ Strategic leadership & vision ■ Management of social networks
Indirect & Implicit Effects of Leaders			
<ul style="list-style-type: none"> ■ Color affective events ■ Convey social justice 	<ul style="list-style-type: none"> ■ Prime affect, identities, values & regulatory focus 	<ul style="list-style-type: none"> ■ Foster group affective tone 	<ul style="list-style-type: none"> ■ Catalysts in complex systems

Critical Measurement Issues

- How do you measure events or implicit processes?
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Measurement depends on human observer

- Rater actively contributes to measurement, not passive repository of knowledge
 - Brain/body is highly differentiated system with different types of processes & memories
 - Key Memory distinctions
 - Episodic versus Semantic Memory
 - Explicit versus Implicit Memory
 - Conceptualization of Knowledge
 - Symbolic
 - Embodied
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Alternative types of Memory (Tulving, 1972)

Semantic

- Context independent
(Do you like meatloaf?)
- Stores meaning & relations among entities
(causality)
- ILTs affect ratings
 - PCE
 - Category matching

Episodic

- Context specific (How did lunch taste today?)
 - Spatial, temporal, affective & somatic components bound together in event-specific representation
 - Memory not affected by general knowledge
(no PCE)
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Measurement of Leadership Constructs

Events	Leaders
<ul style="list-style-type: none">■ Episodic memory<ul style="list-style-type: none">□ Event sampling□ Critical Incident□ Enhanced by strong emotions	<ul style="list-style-type: none">■ Semantic memory<ul style="list-style-type: none">□ Behavioral or trait ratings

Explicit versus Implicit Memory

(Johnson, Tolentino, Rodopman, & Cho, in press)

Explicit

- Requires attention, motivation, & time
- Symbols connected by semantic relations (e.g. x causes y)
- Evaluation of memory contents
- Self-report questionnaire

Implicit

- Outside of awareness, control, & intention
 - Connectionist neural network & spreading activation process
 - Strength of association and accessibility in associative network
 - RT or Word fragment completion
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Explicit versus Implicit Memory

(Johnson, Tolentino, Rodopman, & Cho, in press)

Word Fragment Completion

■ F E _ _

■ _ U I L T

■ P R O _ _

■ _ _ A D

Explicit versus Implicit Memory

(Johnson, Tolentino, Rodopman, & Cho, in press)

Word Fragment	Positive Affectivity	Negative Affectivity	Other
FE __		FEAR	Feel, Feed
PRO __	PROUD		Prowl, Prone
_ UILT		GUILT	Built, Quilt
__ AD	GLAD		Read, Dead

Use of Implicit Measures

- Supervisor-rated job performance and OCBs better predicted by implicit than explicit affect measures
 - Johnson et al in press
 - Implicit measures better mediators than explicit measures for injustice effects on attitudes, helping behavior, and theft
 - Johnson & Lord (2009)
 - Leader's priming effect on others could be measured by implicit measures of
 - Identity (individual, relational, collective)
 - Affect (positive, negative)
 - Regulatory Focus (promotion/prevention)
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Current Project: Role of implicit values in ethical decision making

	BEHAVIOR GENERATING PROCESS	
VALUE MEASURE	<i>Automatic, habitual</i>	<i>Conscious, deliberate</i>
<i>Implicit</i>	<u>Enhanced prediction</u>	Reduced prediction
<i>Explicit</i>	Reduced prediction	<u>Enhanced prediction</u>

Final Measurement Issue

- How we conceptualize knowledge helps determine what we should measure
 - Abstract, symbols (e.g., language) not the only way to represent knowledge
 - Increasing interest in embodied, embedded knowledge
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Embodied, Embedded Cognition

(Niedenthal et al., 2005; Wheeler, 2005)

- Knowledge generated through complex interaction of dynamic, brain-body-environment system
 - Could involve multiple people (Hutchins, 1996)
 - Increased biological sensitivity & most knowledge is grounded in a specific modality
 - Perceptual systems
 - Action & Motor systems
 - Introspective systems
 - Knowledge is experienced *on-line* in context but it can later be simulated *off-line* by relevant brain systems
 - Remembering is re-experiencing
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Embodied Cognitions & Leadership (Perception)

- Vocal as well as Visual quality affects interview judgments (DeGroot & Motowidlo, 1999)
 - Pitch, pauses, amplitude variability, pitch variability, speech rate → vocal cue index
 - $r = .21$ with interview judgment
 - Visual salience and configuration affect leadership
 - Phillips & Lord (1981): centrality → leadership & CA
 - Giessner & Schubert (2007): height → perceived power
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Embodied Cognitions & Leadership (Motor System)

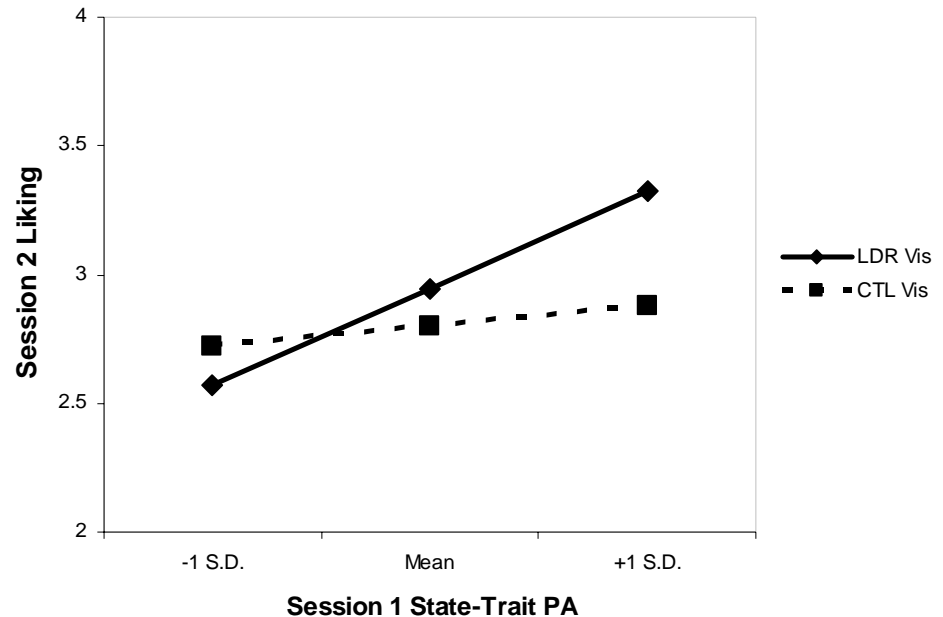
- Empathy predicts leadership emergence
 - (Kellett, Humphrey, & Sleeth, 2002; 2006)
 - Mirror neurons: our own motor system is activated when we observe actions of others
 - Enhances understanding
 - Facilitates interaction -- effects greater for close (arm's length) than distant (across the room) stimuli in monkey studies
 - Can lead to
 - Activation of similar goal structures
 - Mimicry of affect and emotional contagion
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Measurement of Leadership Constructs

	Events	
Direct (Explicit)	<ul style="list-style-type: none">■ Episodic memory (symbolic, embodied)■ Event sampling■ Critical Incident■ Facilitated by strong affect	
Indirect (Implicit)	<p>Embodied, embedded</p> <ul style="list-style-type: none">■ Off-line simulation required to retrieve (re-experience) event■ Visualization may be helpful to facilitate re-experience	

Naidoo, Kohari, Lord & Dubois (in press)

- Showed Ps dramatic video of military event
- Got initial ratings and ratings 1-3 weeks later
- Session 2 ratings made after visualizing
 - Leader
 - Control
- Initial affect better predictor after visualization



- Episodic memory more accurate in leader visualization condition

Measurement of Leadership Constructs

	Events	Leaders
Direct (Explicit)	Episodic memory <ul style="list-style-type: none">■ Event sampling■ Critical Incident■ Facilitated by strong affect	Semantic memory <ul style="list-style-type: none">■ Behavioral or trait ratings
Indirect (Implicit)	Embodied, embedded <ul style="list-style-type: none">■ Off-line simulation required to retrieve (re-experience) event■ Visualization may be helpful to facilitate re-experience)	Priming or Contagion effects <ul style="list-style-type: none">■ Accessibility of alternative emotions, identities or regulatory focus<ul style="list-style-type: none">□ Word fragment completion□ RT measures

Measurement of Leadership Constructs

	Group	Organization
Direct (Explicit)	<ul style="list-style-type: none">■ Sensegiving■ Coaching	<ul style="list-style-type: none">■ Strategy & Vision■ Network Management
Indirect (Implicit)	<p>Affective tone</p> <ul style="list-style-type: none">■ Better measured with implicit measures	<p>Catalytic leadership processes</p> <ul style="list-style-type: none">■ Result from bias in emergent processes (affect, reg. focus, identity) (Lord, 2007)■ Can be implicitly measured (Johnson & Lord, 2009)

Conclusions

- Conceptual issues are partly responsible for limited knowledge of how leaders affect performance
 - Focus on leader rather than other levels
 - Focus on direct rather than indirect effects
 - Focus on explicit rather than implicit processes
 - Measurement can be improved by considering
 - Various Types of Memory
 - Episodic versus Semantic
 - Explicit versus Implicit
 - Type of Knowledge
 - Embodied as well as symbolic
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