Nonlinearity in Personality-Performance Relationships: An Examination of Source Effects

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Study Overview and Background

- Source Effects in 360-ratings
  - Sources disagree about target performance
  - Most explanations lack theoretical grounding
    - Differential opportunity to observe
    - Psychometric shortcomings with rating instruments
    - Variability of behavior across situations
  - Relevance of social cognition literature
    - Impression formation
    - Motivated reasoning
Study Overview and Background

- **Impression Formation** (Gilbert, 1988; 1998)
  - Spontaneous trait inferences
  - Perceivers as “cognitive misers”
  - Correction (elaboration) only with effort

- **Motivated Reasoning** (Kunda, 1990)
  - Accuracy versus directional goals
  - Differential motivation for accuracy in impressions
  - Sources vary in their respective accuracy needs
  - Direct reports have strongest need for accuracy
Study Overview and Background

- **Personality Inferences**
  - Misinterpretations due to tendency to oversimplify people (Ichheiser, 1949; Vernon, 1964)
  - Tend to exaggerate consistencies or invariance
  - One result is an implicit assumption of linearity
  - Nonlinearity evident when motivation for accuracy is high, leading to more complex impressions

- **General Research Proposition**
  - Direct report ratings show non-linear relations with target personality
Methods

- **Participants**
  - Target managers ($N=2,505$), participants in a formal leadership development program
  - Direct reports ($N=10,044$, $n=2,279$)
  - Peers ($N=11,651$; $n=2,426$)
  - Superiors ($N=2,505$; $n=2,242$)
Measures

Personality

California Psychological Inventory

- Gough’s 3-vector model (Gough & Bradley, 1996)
  - Orientation Toward People (V1; Interpersonal Vector)
  - Orientation Toward Societal Values and Social Norms (V2; Intrapersonal Vector)
  - Orientation Toward Self (V3; Self-realization Vector)
- Completed by target managers
Measures

- **Performance**
  - **Benchmarks® 360-degree feedback instrument**
    - Meeting Job Challenges \((k=4)\)
      - Alpha = .87 (DR), .85 (PEER), .82 (SUP)
    - Leading People \((k=5)\)
      - Alpha = .85 (DR), .86 (PEER), .83 (SUP)
    - Respecting Self and Others \((k=7)\)
      - Alpha = .90 (DR), .90 (PEER), .84 (SUP)
Results

- Linear Relationships
  - Direct Reports: 7/9
  - Peers: 8/9
  - Superiors: 7/9

- Non-linear (quadratic) Relationships
  - Direct Reports: 4/9
  - Peers: 1/9
  - Superiors: 0/9
Results

- Nonlinear (quadratic) Relationships (DR)
  - Nonlinear effects for:
    - Meeting Job Challenges (V1, V3)
    - Leading People (V1, V3)
    - No higher order (e.g., cubic) effects
  - No nonlinear effects for:
    - Respecting Self and Others
    - V2 – Orientation Toward Societal Values and Social Norms
General Interaction Form

360-Factor
- Meeting Job Challenges
- Leading People

CPI Vector
- V1: Orientation Towards People
- V3: Orientation Towards Self
Discussion

- **Guiding Assumptions:**
  - Default is relatively simple impression formation
  - Elaboration occurs with motivation for accuracy
  - Direct Reports have highest motivation to understand the target manager

- **General Findings:**
  - Target personality consistently related to performance ratings (linear)
  - Curvilinear relationships found mainly for Direct Reports
  - One personality vector (V2) and one performance factor (Respect) had no curvilinear relations
Discussion

- **Implications**
  - Evidence that Direct Reports hold more complex impressions of their manager than Peers or Superiors
  - Interaction form suggests “minimum” threshold
  - No correlation with performance correlation at low levels of personality vectors

- **Limitations**
  - Small effect sizes
  - Implied motives not directly tested
  - Need for experimental studies