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Name of Principal Author and all other author(s):
Paul J. Sticha, Dennis M. Buede, and Richard L. Rees

Principal Author’s Organization and address:
Human Resources Research Organization (HumRRO)
66 Canal Center Plaza, Suite 400
Alexandria, VA 22314-1591

Phone: (703) 706-5635
Fax: (703) 549-7854
Email: psticha@humrro.org

Original title on 712 A/B: It’s the People, Stupid: The Role of Personality and Situational Variables in Predicting Decisionmaker Behavior

Revised title: It’s the People, Stupid: The Role of Personality and Situational Variables in Predicting Decisionmaker Behavior

Presented in (input and Bold one): (WG 07, CG___, Special Session ____ , Poster, Demo, or Tutorial):

This presentation is believed to be:
UNCLASSIFIED AND APPROVED FOR PUBLIC RELEASE
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### Its the People, Stupid: The Role of Personality and Situational Variables in Predicting Decisionmaker Behavior

**Summary**: This report explores the role of personality and situational variables in predicting decision-making behavior. It draws on past research and introduces new insights into how individuals make decisions in complex organizational settings.

**Abstract**: This study examines how personality traits and situational factors influence decision-making processes within organizations. It contributes to the field by offering practical applications for improving decision-making efficiency.

**Keywords**: Personality, Situational Variables, Decision-making, Organizations

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### References

- Citation 1: [Link](#)
- Citation 2: [Link](#)

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**Appendix**: Additional data tables and graphs are provided for thorough analysis.

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**Endnotes**

1. [Note 1](#)
2. [Note 2](#)

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**Appendix**: Additional data tables and graphs are provided for thorough analysis.

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**Table**: Comparison of decision-making styles across different organizational levels.

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**Figure**: Graph illustrating the correlation between situational factors and decision outcomes.

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**Graph**: Bar chart showing the distribution of personality traits among decision-makers.

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**Figure**: Scatter plot depicting the relationship between situational variables and decision-making speed.

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**Graph**: Line graph comparing decision-making efficiency across different time periods.

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**Graph**: Area chart illustrating the impact of situational factors on decision-making accuracy.
It’s the People, Stupid: The Role of Personality and Situational Variables in Predicting Decisionmaker Behavior

Paul Sticha, Ph.D., HumRRO
Dennis Buede, Ph.D., Innovative Decisions, Inc.
Richard Rees, Ph.D., US Government

73rd MORS Symposium
21-23 June 2005
Description of the Problem

• Goal to predict foreign leaders’ decisions, explicitly considering uncertainty in the prediction

• Recognition that these decisions are influenced by many factors
  – Triggering events (e.g., provocations, opportunities)
  – Contextual variables (e.g., economy, military strength, popular support)
  – Leader objectives (e.g., maintain power, leave a legacy)
  – Leader personality (e.g., need for power, acceptance of risk, trust)
  – Cultural context (e.g., power distance, future orientation)

• Need for methodology to neutralize analytic biases and errors
  – E.g., confirmation biases, recency, halo, hindsight, personalization
  – Capture an auditable history of evolving evidence and analyses, triggering the attention of the analyst

• Desire for analysis context that neutralizes social biases
  – E.g., senior expert, party line, biggest fistful of cables, best orator
  – Surface assumptions, evidence and logic underlying predictions
Topics

• Modeling method and process
  – Bayesian networks
  – Model development process

• Illustrative model for a national strike
  – Defining the question
  – Modeling the situation
  – Adding leader personality variables
  – Performing “what if” analyses
  – Assessing the sensitivity of variables
  – Linking source reports to key variables

• Summary of Progress
  – Progress to date
  – Future research and development
Why Bayesian Nets?

• Problem requires dealing with uncertainty
• Solution must update uncertainty with new information
• Bayesian nets provide intuitive, graphical structure:
  – Variables
  – Relevance among variables
• What-ifs and sensitivities are easy to explore
• Mature commercial software exists
Model Development Process

- Two-day, facilitated meetings
- Attendees
  - Analysts
  - Model developers (facilitator and implementer)
  - External subject-matter experts
- General agenda for meetings
  - Define problem – hypothesized leader actions
  - Enumerate possible leader objectives
  - Identify situational variables – triggers, context, indicators
  - Link variables and estimate conditional probabilities
  - Link to leader personality variables
  - Perform “what if” and sensitivity analyses
  - Link to intelligence data sources
Notional Model Illustrating Method and Development Process

• Situation: leader responds to a national strike
• Variables and assessed probabilities based on judgments of knowledgeable consultants
Hypothesized Actions and Leader Objective

<table>
<thead>
<tr>
<th>Leader's Objective</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SelfPres</td>
<td>4.90</td>
</tr>
<tr>
<td>ClingPow</td>
<td>22.8</td>
</tr>
<tr>
<td>Revolution</td>
<td>69.3</td>
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<tr>
<td>SplLdr</td>
<td>2.00</td>
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<tr>
<td>CounterUS</td>
<td>1.00</td>
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</table>

<table>
<thead>
<tr>
<th>Leader Decn in Sec Event</th>
<th></th>
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<tbody>
<tr>
<td>LeaveCountry</td>
<td>2.85</td>
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<tr>
<td>Concessions</td>
<td>18.1</td>
</tr>
<tr>
<td>Voteeferm</td>
<td>5.17</td>
</tr>
<tr>
<td>UseRgnlOrg</td>
<td>10.5</td>
</tr>
<tr>
<td>WaitOut</td>
<td>39.3</td>
</tr>
<tr>
<td>ViolentRepress</td>
<td>24.1</td>
</tr>
</tbody>
</table>
## Conditional Probabilities of Leader Decisions Given Objective

<table>
<thead>
<tr>
<th>Leader’s Objective</th>
<th>Leader Decision in Sec Event</th>
<th>Leave Country</th>
<th>Concessions</th>
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<th>Use Rgnl Org</th>
<th>Wait Out</th>
<th>Violent Repress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Pres</td>
<td></td>
<td>20</td>
<td>40</td>
<td>30</td>
<td>7</td>
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<td>2</td>
</tr>
<tr>
<td>Cling Power</td>
<td></td>
<td>2</td>
<td>50</td>
<td>3</td>
<td>10</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Revolution</td>
<td></td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>50</td>
<td>28</td>
</tr>
<tr>
<td>Special Leader</td>
<td></td>
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<td>20</td>
<td>8</td>
<td>30</td>
<td>40</td>
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<tr>
<td>Counter-US</td>
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<td>20</td>
<td>8</td>
<td>30</td>
<td>40</td>
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</tr>
</tbody>
</table>
Structure of Hypothesis and Situational Variables

Notional Model

UNCLASSIFIED
What if Analysis: Situational Variables Three Weeks after Strike Begins
What if Analysis: Situational Variables
Six Weeks after Strike Begins
Incorporating Leader Personality to Predict Decisions

• Personality variables combined from two sources
  – Political leadership variables
  – Five-factor personality model

• Personality effects represented in Bayesian network

• Leader personality affects action tendencies

• Relevant leader personality variables depends on characteristics of potential actions

• Impact of leader personality affected by situational constraints
## Links Between Personality Variables

<table>
<thead>
<tr>
<th>Political Psychology</th>
<th>Facets from 5-Factor Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Image of Others</td>
<td>Positive Emotion (Extraversion)</td>
</tr>
<tr>
<td></td>
<td>Trust (Agreeableness)</td>
</tr>
<tr>
<td>Internal Locus of Control</td>
<td>(-) Vulnerability (Neuroticism)</td>
</tr>
<tr>
<td></td>
<td>(-) Depression (Neuroticism)</td>
</tr>
<tr>
<td></td>
<td>Assertiveness (Extraversion)</td>
</tr>
<tr>
<td></td>
<td>Competence (Consc.)</td>
</tr>
<tr>
<td></td>
<td>Self-Discipline (Consc.)</td>
</tr>
<tr>
<td>Need for Power</td>
<td>(-) Compliance (Agreeableness)</td>
</tr>
<tr>
<td></td>
<td>Achievement Striving (Consc.)</td>
</tr>
<tr>
<td></td>
<td>Assertiveness (Extraversion)</td>
</tr>
<tr>
<td>Conceptual Complexity</td>
<td>Openness to Ideas (Openness)</td>
</tr>
<tr>
<td></td>
<td>Openness to Values (Openness)</td>
</tr>
<tr>
<td></td>
<td>Openness to Actions (Openness)</td>
</tr>
<tr>
<td>General Distrust &amp; Suspicion</td>
<td>(-) Trust (Agreeableness)</td>
</tr>
<tr>
<td></td>
<td>Angry Hostility (Neuroticism)</td>
</tr>
<tr>
<td></td>
<td>(-) Warmth (Extraversion)</td>
</tr>
<tr>
<td></td>
<td>(-) Compliance (Agreeableness)</td>
</tr>
<tr>
<td>Acceptance of Risk</td>
<td>Openness to Actions (Openness)</td>
</tr>
<tr>
<td></td>
<td>(-) Anxiety (Neuroticism)</td>
</tr>
<tr>
<td></td>
<td>(-) Deliberation (Consc.)</td>
</tr>
<tr>
<td></td>
<td>Excitement Seeking (Extraversion)</td>
</tr>
<tr>
<td></td>
<td>(-) Vulnerability (Neuroticism)</td>
</tr>
</tbody>
</table>
Current Action Categories/Behavioral Proclivities

- Conflict versus cooperation (regarding opponents)
- Follow through required versus not required
- Consistent with position versus not consistent
- Unilateral versus collaborative (regarding colleagues)
- Substantive versus protocol
- Challenges constraints versus no challenges
Linkage of Personality Variables to Leader’s Actions

**Hypothesis Node**
- LeavePower: 17.0
- Concessions: 20.0
- Wait: 50.0
- AttackOpp: 13.0

**Cooperation vs Conflict**
- StrongConflict: 10.4
- ModerateCoop: 61.1
- Balance: 12.5
- ModerateCoop: 16.0
- StrongCoop: 0

**Relation w Positive Image**
- LargeNeg: 2.08
- MedNeg: 24.6
- SmallNeg: 26.5
- NoRel: 23.3
- SmallPos: 15.5
- MedPos: 8.00
- LargePos: 0

**Positive Image**
- Very Low: 10.6
- Low: 27.3
- Average: 35.2
- High: 20.7
- Very High: 6.18

**E6_Positive_Emotions**
- Very Low: 4.81
- Low: 22.0
- Average: 39.5
- High: 26.6
- Very High: 7.08

**E6_Direct_Rating**
- Very Low: 6.49
- Low: 25.2
- Average: 39.3
- High: 23.4
- Very High: 5.61

**A1_Direct_Rating**
- Very Low: 4.81
- Low: 22.0
- Average: 39.3
- High: 23.4
- Very High: 5.61

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**Notional Model**
## Effects of Adding Personal Variables

<table>
<thead>
<tr>
<th>Leader Decision</th>
<th>Start</th>
<th>3 Weeks</th>
<th>6 Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Situation</td>
<td>Situation/Personal</td>
<td>Situation</td>
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<tr>
<td>Leave Country</td>
<td>2.9</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Concessions</td>
<td>18.1</td>
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<tr>
<td>Violent Repress</td>
<td>24.1</td>
<td>51.7</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Status of the Project

• Apollo software-based analysis tool soon to be delivered
  – Embody the Bayesian networking and model development procedures
  – Include library of models and abstracted model templates

• About one dozen models developed
  – Combination of historical and prospective analyses
  – Models will provide templates for future users

• Enhancements to model capability underway
  – Personality and cultural research
  – Analytical research and evaluation of methodology
  – Develop and incorporate new visualization concepts
Future Research and Development

- Improvements in the links between personality and leader actions
  - Expert judgment study to estimate relationships between personality and behavioral proclivities
  - Evaluation of assessment instruments and investigation of personality assessments at a distance
- Incorporation of leader culture in the modeling and analysis process
  - Determination of appropriate cultural framework and variables
  - Specify and estimate links between cultural variables and behavior (e.g., culture-personality or culture-behavior links)
- Examination of methodological issues of personality modeling
- Enhanced analysis of intelligence documents to update model probabilities
  - Associates intelligence reports and web documents with model variables
  - Ranks reports based on salience using variable profiles written by user
  - Future version will suggest a probabilistic impact for variable