

73rd MORSS CD Cover Page

UNCLASSIFIED DISCLOSURE FORM CD Presentation

712CD

For office use only 41205

21-23 June 2005, at US Military Academy, West Point, NY

Please complete this form 712CD as your cover page to your electronic briefing submission to the MORSS CD. Do not fax to the MORS office.

Author Request (To be completed by applicant) - The following author(s) request authority to disclose the following presentation in the MORSS Final Report, for inclusion on the MORSS CD and/or posting on the MORS web site.

Name of Principal Author and all other author(s):

Paul J. Sticha, Dennis M. Buede, and Richard L. Rees

Phone: (703) 706-5635

Principal Author's Organization and address:

Human Resources Research Organization (HumRRO)

66 Canal Center Plaza, Suite 400

Alexandria, VA 22314-1591

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

UNCLASSIFIED

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 01 JUN 2005	2. REPORT TYPE N/A	3. DATES COVERED -	
4. TITLE AND SUBTITLE Its the People, Stupid: The Role of Personality and Situational Variables in Predicting DecisionmakerBehavior		5a. CONTRACT NUMBER	
		5b. GRANT NUMBER	
		5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)		5d. PROJECT NUMBER	
		5e. TASK NUMBER	
		5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Human Resources Research Organization (HumRRO)66 Canal Center Plaza, Suite 400Alexandria, VA 22314-1591		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)	
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited			
13. SUPPLEMENTARY NOTES See also ADM201946, Military Operations Research Society Symposium (73rd) Held in West Point, NY on 21-23 June 2005. , The original document contains color images.			
14. ABSTRACT			
15. SUBJECT TERMS			
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	UU
			18. NUMBER OF PAGES 19
			19a. NAME OF RESPONSIBLE PERSON

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

Leader's Objective	
SelfPres	4.90
ClingPow	22.8
Revolution	69.3
SplLdr	2.00
CounterUS	1.00

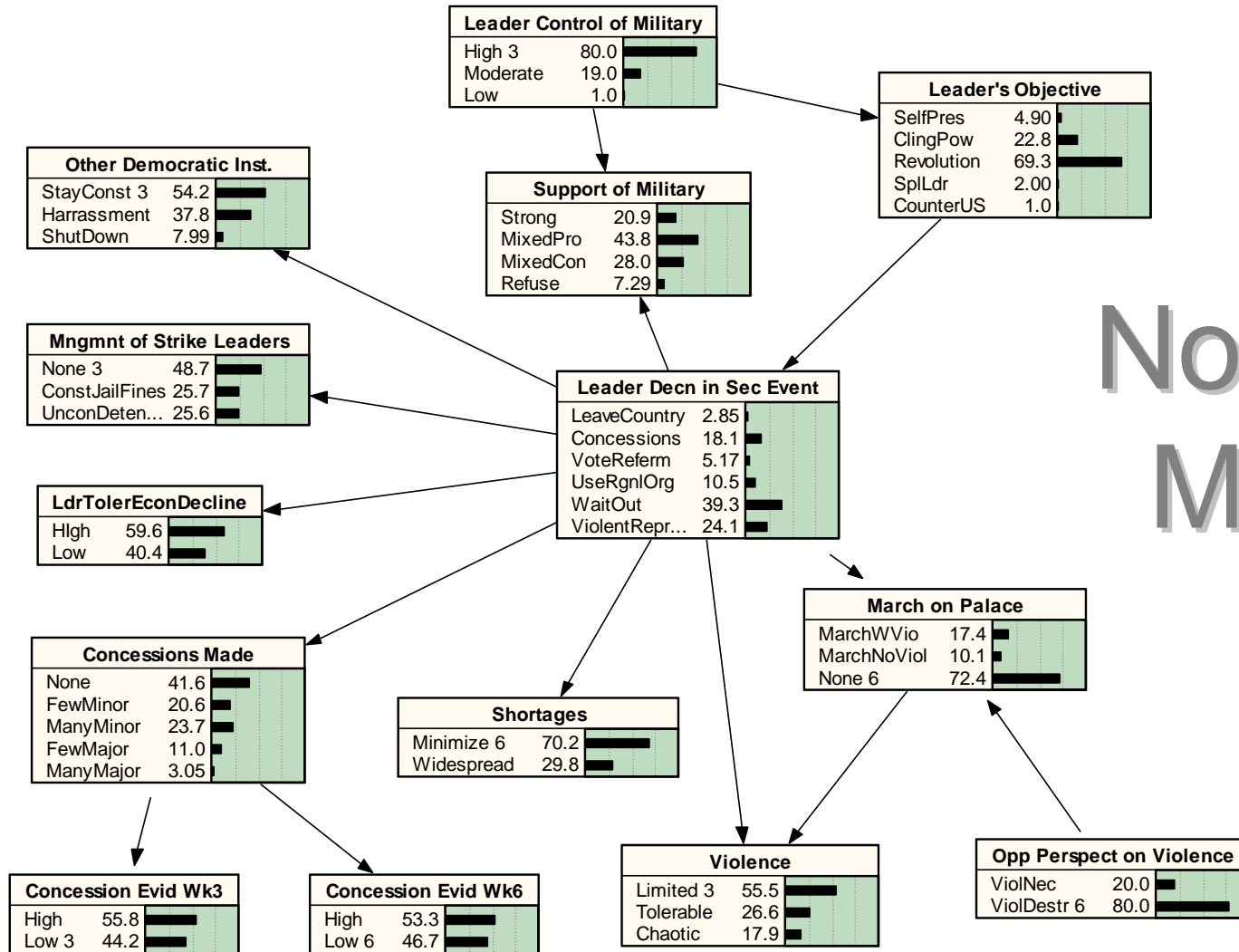


Leader Decn in Sec Event	
LeaveCountry	2.85
Concessions	18.1
Voteeferm	5.17
UseRgnlOrg	10.5
WaitOut	39.3
ViolentRepress	24.1

Conditional Probabilities of Leader Decisions Given Objective

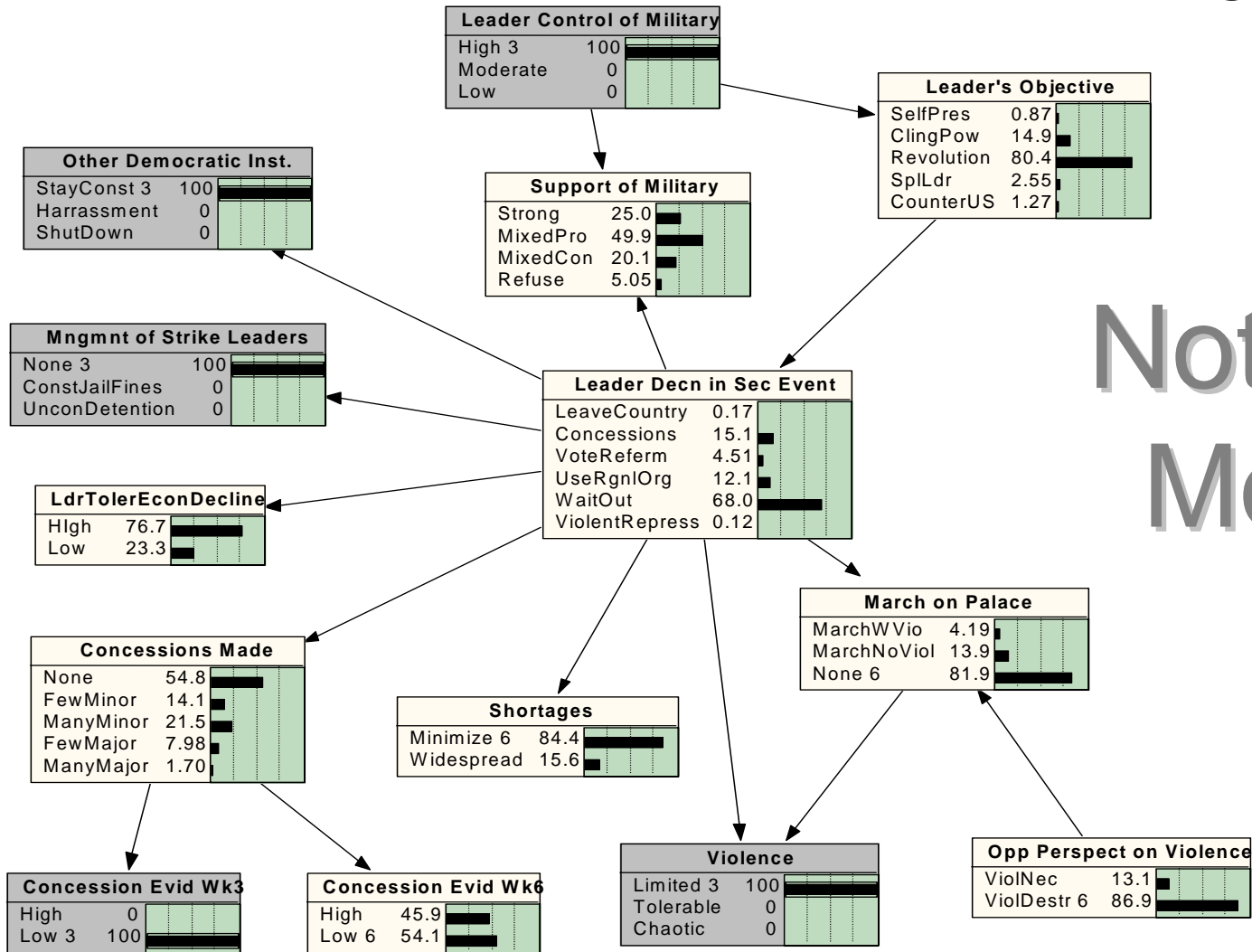
Leader's Objective	Leader Decision in Sec Event					
	Leave Country	Con-cessions	Voter Reform	Use Rgnl Org	Wait Out	Violent Repress
Self Pres	20	40	30	7	1	2
Cling Power	2	50	3	10	15	20
Revolution	2	6	4	10	50	28
Special Leader	1	20	8	30	40	1
Counter-US	1	20	8	30	40	1

Structure of Hypothesis and Situational Variables



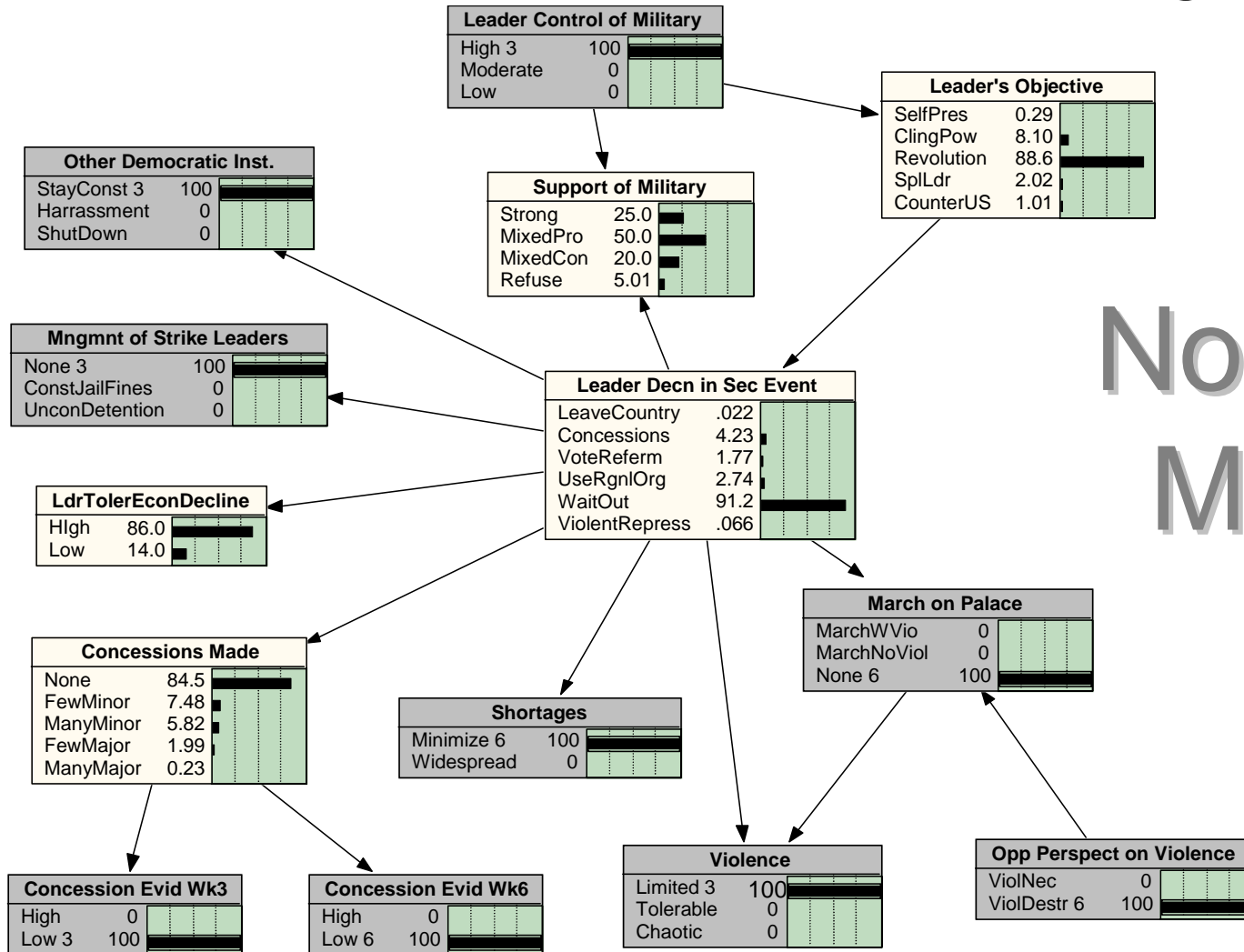
Notional Model

What if Analysis: Situational Variables Three Weeks after Strike Begins



Notional
Model

What if Analysis: Situational Variables Six Weeks after Strike Begins



Notional
Model

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

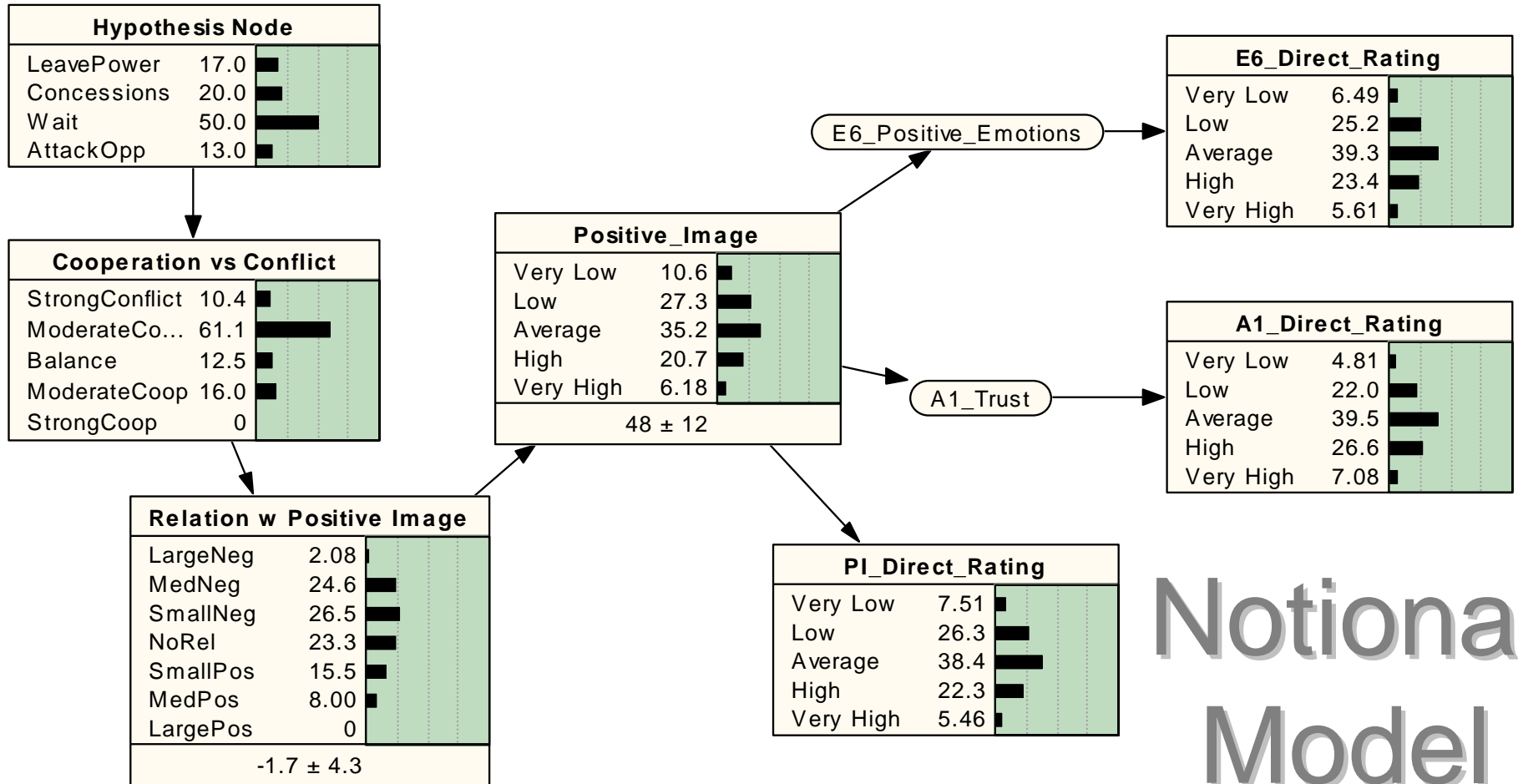
Links Between Personality Variables

Political Psychology	Facets from 5-Factor Model
Positive Image of Others	Positive Emotion (Extraversion) Trust (Agreeableness)
Internal Locus of Control	(-) Vulnerability (Neuroticism) (-) Depression (Neuroticism) Assertiveness (Extraversion) Competence (Consc.) Self-Discipline (Consc.)
Need for Power	(-) Compliance (Agreeableness) Achievement Striving (Consc.) Assertiveness (Extraversion)
Conceptual Complexity	Openness to Ideas (Openness) Openness to Values (Openness) Openness to Actions (Openness)
General Distrust & Suspicion	(-) Trust (Agreeableness) Angry Hostility (Neuroticism) (-) Warmth (Extraversion) (-) Compliance (Agreeableness)
Acceptance of Risk	Openness to Actions (Openness) (-) Anxiety (Neuroticism) (-) Deliberation (Consc.) Excitement Seeking (Extraversion) (-) Vulnerability (Neuroticism)

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



Notional Model

Effects of Adding Personal Variables

Leader Decision	Start		3 Weeks		6 Weeks	
	Situation	Situation/ Personal	Situation	Situation/ Personal	Situation	Situation/ Personal
Leave Country	2.9	0.5	0.2	0.04	0.02	0.004
Concessions	18.1	5.8	15.1	6.5	4.2	1.5
Vote Reform	5.2	1.6	4.5	1.9	1.8	0.6
Use Rgnl Org	10.5	3.0	12.1	4.7	2.7	0.9
Wait Out	39.3	37.4	68.0	86.6	91.2	96.8
Violent Repress	24.1	51.7	0.1	0.3	0.07	0.2

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