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U.S. AIR FORCE

Planning and Assessing Stability Operations: A Proposed VFT Approach

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AFIT/GOR/ENS/07M**

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Reader: Dr. Richard Deckro**

22 May 2007

Integrity - Service - Excellence



Outline



- Stability Operations
- Value-Focused Thinking
- Scope
- Assumptions
- Using VFT to Create Stability Model
- Results and Analysis
- Conclusion



Stability Operations (SOPS)



- Basic definition: Military and civilian activities conducted across the spectrum from peace to conflict to establish or maintain order in States and regions
- SOPS have existed since 1846 with US occupation of Mexico City
- Generally accepted “successful” implementations of SOPS in history: post-WWII Germany and Japan (RAND 2003)
- Most SOPS since 1980’s either failed or have yet to be proven successful (RAND 2003)



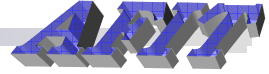
Improving SOPS Capability



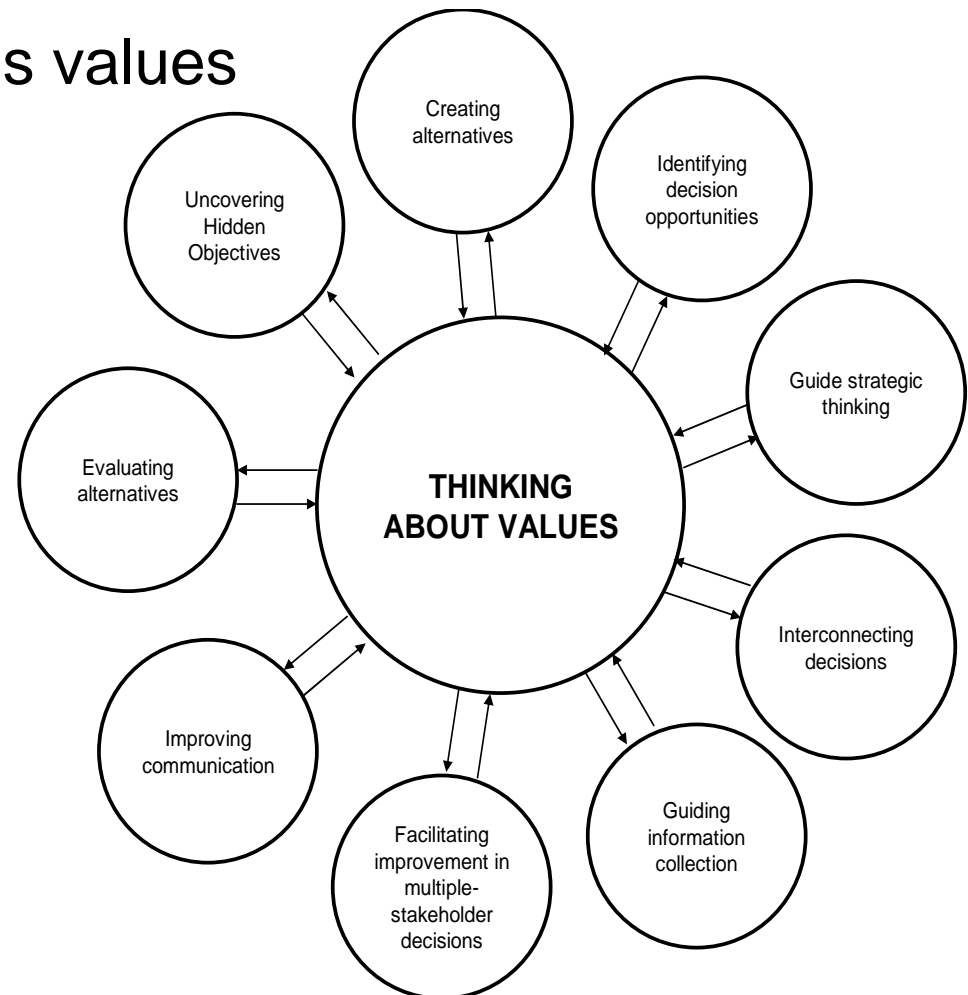
- 2006 NSS calls for improving capability to plan for and respond to post-conflict and failed-state situations
- DoD Directive 3000.05 calls for new methodology for planning and prioritizing SOPS and evaluating stability in failing/failed states



Value-Focused Thinking



- Values: “Principles for evaluating the desirability of any possible alternatives or consequences” (Keeney 1996:537)
- Critically thinking about one’s values when faced with a decision
 - Identify Values
 - Structure Values
- Comparison to AFT
 - VFT More Complete
 - VFT More Operational
 - Both Equally Concise
 - VFT More Understandable (Leon 1999:213-227)



Keeney 1992:92



Why Use VFT?



- Guidance from both high-level documents like Directive 3000.05 and SOJOC, and experts in the field like Covey, Dobbins, Manwaring, and Orr all suggest the importance of making SOPS decisions from a strategic level
 - Decisions faced when conducting SOPS have many multiple competing conflicting objectives
 - SOPS decisions must be made from a strategic viewpoint
- VFT methodology is specifically used for decision problems with these needs



Thesis Scope



- Focus: Assessment of SOPS at strategic level
 - Planning and assessment of tactical operations not considered
- Objective: provide VFT model that supports SOPS through prioritizing and assessment capabilities
 - Flexible to changes in weighting criteria
 - Analytically rigorous to provide accurate information
 - Transparent, traceable, and documented for ease of understanding and use
 - Effective for quick analysis and decision making



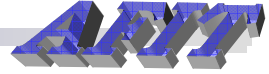
Assumptions



- Conditions for SOPS defined by Directive 3000.05 and other national guidance are dependent on political, interagency, and financial support
 - Current struggles for this support in DoD and DoS
 - Assume that this support in place
- Additive value function (AVF) can be used due to robustness to preferential independence
- All data necessary to measure the objectives are available



Creation of a SOPS Value Hierarchy



- Problem Definition
- Determine Values and Objectives
 - Value: What is important to decision maker (DM) about a decision (Keeney 1994)
 - Objective: What one desires to achieve defined by decision context, an object, and a direction of preference (Keeney 1992)
- Develop Attributes and Single Dimensional Value Functions (SDVF)
 - Attribute: Measuring scale for degree of attainment of an objective (Kirkwood 1997)
 - SVDF: Mathematical function defining the scale for each attribute
- Weighting the VH



Problem Definition



- Decision context established through 2002 NSS
 - US is threatened by failing and failed states.
- Problem
 - How does one bring stability to failing state?
 - SOPS are the operations conducted to establish stability



Obtaining Values



- No senior decision maker (DM) available, so use Parnell et al Platinum, Gold, Silver Standards
 - Platinum: interviews with the senior stakeholders and DMs to help formulate the VH
 - Gold: high level policy or strategic planning documents approved by the decision maker to formulate the VH
 - Silver: subject matter experts and representatives of the DMs to formulate the VH



Values and Objectives



- Directive 3000.05 provides SOPS objectives
- Affinity groupings organize objectives of Directive 3000.05 and derive values for first tier of VH

Table 1: Objectives from Directive 3000.05 Paragraph 4.2

Help establish order	Develop viable market economy
Advance U.S. interests and values	Develop rule of law
Provide security	Develop democratic institutions
Restore essential services	Develop robust civil society
Meet humanitarian needs	

Table 2: Objectives from Directive 3000.05

Rebuild indigenous institutions	Construct necessary infrastructure
Rebuild security forces	Develop representative governmental institutions
Rebuild correctional facilities	Ensure security
Rebuild judicial systems	Develop local governance structures
Secure and stabilize environment	Promote bottom-up economic activity
Revive or build private sector	Rebuild infrastructure
Encourage citizen-driven, bottom-up economic activity	Build indigenous capacity



Values and Objectives



- Values extracted from objectives asking, “Why is that important” (WITI test).

Table 3: Values from Directive 3000.05 Values

Order	Infrastructure
Security	Essential Services
Humanitarian needs	Democracy
Economy	Justice
Rule of Law	Private sector
Government	Environment
Civil society	Economic activity
Peace	Governmental Institutions
Indigenous capacity for tasks	



Values and Objectives



- Affinity group values and subobjectives into like terms and by “theme”

Table 4: First Grouping of Directive 3000.05 Values and Objectives

Security	Democracy
Humanitarian Needs	Governmental Institutions
Civil Society	Citizen-Driven
Essential Services	Indigenous
Infrastructure	Government
Environment	Economic Activity
Rule of Law	Private Sector
Justice	Economy
Order	

Table 5: Second Grouping of Directive 3000.05 Values and Objectives

Security	Governance
Humanitarian/Social Well-Being	Economy
Rule of Law and Order	



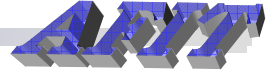
Values and Objectives



- Directive 3000.05 lacks detail to determine sub-objective tiers and definitions of fundamental objectives
- Use Silver Standard Documents to confirm top-tier objectives and lower-level tier objectives
 - *Beyond Declaring Victory and Coming Home: The Challenges of Peace and Stability Operations* by M. Manwaring and J. Joes
 - *Winning the Peace: An American Strategy for Post-Conflict Reconstruction* by Center for Strategic and International Studies, edited by R. Orr
 - *The Quest for Viable Peace: International Intervention and Strategies for Conflict Transformation* by J. Covey et al



Definitions of SOPS Objectives



- **Security:** Protecting lives of citizens from immediate and large-scale violence and restoring the state's ability to maintain territorial integrity
- **Social Well-Being:** Sustenance of life and relieving of suffering by way of humanitarian aid, best practices, essential services, and emergency response systems
- **Rule of Law:** Comprehensive, six-element justice and reconciliation effort that involves law enforcement, judicial system, constitution and body of law, corrections system, and past abuse reconciliation mechanisms
- **Governance:** Public management process that involves a constituting process, governmental capabilities, participation of citizens, and administrative structures
- **Economy:** System comprised of policy, macroeconomic fundamentals, free market, and international trade that exchanges wealth, goods, and resources in an environment mostly free of economic criminal activity



Manwaring and Joes Objectives Example



Manwaring and Joes VH



Table 6: Manwaring and Joes' Objectives for Establishment of Order and Rule of Law

Restore public order	Allow local political involvement
Detain enemies of state	Establish leaders
Try enemies in court	Establish elections
Regulate any aspect of civil life	Gain international authorization
Achieve status as privileged combatant to protect intervention force	

Table 7: Manwaring and Joes' Objectives for Isolating the Belligerents

Physically isolate insurgents	Create village militias
Separate insurgents from civilian population	Create small group of regular army in charge of defense
Erect fortified lines	Close sanctuaries used by insurgents
Erect impassable barriers	Develop military means
Clear and hold areas	Develop diplomatic means
Saturate areas with troops	Impede outside aid to insurgents
Establish policing units	Construct intelligence service
Establish reliable communication	Provide movement of troops and supplies
Establish sanctions on insurgent helpers	Establish storage and sale of food
Create blockhouse barriers and barbed wire	Establish amnesty
Use electrified fence	Publicize criminal acts done by insurgent leaders
Use minefields	Establish resettlement programs for long-time insurgents taking amnesty
Erect watchtowers	Pay cash or release prisoners for guns
Establish civilian resettlement	Separate insurgency from leaders
Morally isolate insurgents	Establish reforms
Maintain legitimate government	Divide and conquer based on ethnicity
Establish military tactics to do least damage to society and keep casualties low	Formalize rectitude
Secure government base areas	
Provide security for civilians	



Manwaring and Joes VH



Table 8: Manwaring and Joes' Objectives for Intelligence

Monitor and surveil enemies of state	Transition to indigenous capability
Professionalize and modernize indigenous Intel ops	Transition International/foreign military to domestic
	Transition International/foreign civilian control to domestic

Table 9: Manwaring and Joes' Objectives for Sustaining Life, Relieving Suffering, and Regenerating Economy

Establish emergency relief (ER)	Understand how unity of effort is jointly forged between military/civilian orgs
Establish international orgs and structures for ER	Understand economic implications and responses for victims
Follow money	Rehab and develop community
Assure money follows mandate	Establish self-reliance
Hold agencies to accountability	Provide economic opportunity
Know, use, support ER systems	Transition socialist to market economies
Provide water	Create human rights accountability
Develop water purification	Develop human rights monitoring teams
Provide water delivery	Investigate abuses
Provide medical services	Create neighborhood watch
Provide immunization	Develop human rights laws at all levels
Provide preventative medicine	Teach human rights
Provide needs of women	Disseminate human rights
Provide needs of children	Administer justice
Provide food	Provide material
Mobilize food	Encourage professional cooperation
Distribute food	Establish economic intervention
Transport food	
Apply best practices from successful ER	



Manwaring and Joes VH



- According to Directive 3000.05 stability VH, some sub-objectives address fundamental objectives other than those they are listed under and must be reorganized

Table 10: Reorganized Objectives under Rule of Law

<ul style="list-style-type: none">• Policing System<ul style="list-style-type: none">○ Restore public order• Detention<ul style="list-style-type: none">○ Detain enemies• Judicial System<ul style="list-style-type: none">○ Try enemies in court○ Material○ Professional cooperation• Civil Law<ul style="list-style-type: none">○ Regulation of any aspect of civil life	<ul style="list-style-type: none">• Wartime Law<ul style="list-style-type: none">○ Protect intervention force• Human rights laws at all levels• Governance<ul style="list-style-type: none">○ Local political involvement○ Establish leaders○ Elections○ International authorization
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Table 11: Reorganized Objectives under Economy

<ul style="list-style-type: none">• Rehab and development• Self-reliance• Economic opportunity	<ul style="list-style-type: none">• Socialist to market economies• Economic intervention
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Manwaring and Joes VH



Table 12: Reorganized Objectives under Social Well-Being

<ul style="list-style-type: none">•Emergency Relief•International orgs and structures for ER<ul style="list-style-type: none">○Follow money○Assure money follows mandate○Hold agencies to accountability•Water<ul style="list-style-type: none">○Purification○Delivery•Medical services<ul style="list-style-type: none">○Immunization○Preventative medicine•Minority needs<ul style="list-style-type: none">○Needs of women○Needs of children•Neighborhood watch	<ul style="list-style-type: none">•Food<ul style="list-style-type: none">○Mobilize○Distribute○Transport•Successful ER ops<ul style="list-style-type: none">○Applying best practices from successful ER ops○Understand how unity of effort is Jointly forged between mil/civ orgs•Human Rights<ul style="list-style-type: none">○Human Rights accountability○Human rights monitoring teams○Investigate abuses○Teach○Disseminate
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Manwaring and Joes VH



Table 13: Reorganized Objectives under Security

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| <ul style="list-style-type: none">•Separate insurgents from civilian population<ul style="list-style-type: none">○Clear and hold area○Erect fortified lines○Impassable barriers•Clearing and holding areas<ul style="list-style-type: none">○Saturating with troops○Policing units○Reliable communication○Sanctions on insurgent helpers•Fortified lines and Impassible barriers<ul style="list-style-type: none">○Blockhouse barriers and barbed wire○Electrified fence○Minefields○Watchtowers•Civilian resettlement•Military tactics to do least damage to society and keep casualties low<ul style="list-style-type: none">○More troops○Secure government base areas•Rectitude | <ul style="list-style-type: none">•Disrupt Insurgents<ul style="list-style-type: none">○Close sanctuaries used by insurgents○Impede outside aid to insurgents•Intelligence<ul style="list-style-type: none">○Construct intelligence service•Movement of troops and supplies•Non-Violent Action<ul style="list-style-type: none">○Amnesty○Publicize criminal acts done by insurgent leaders○Resettlement programs for long-time insurgents taking amnesty○Pay cash or release prisoners for guns•Separate insurgency from leaders<ul style="list-style-type: none">○Reforms○Ethnic divide and conquer•Security for civilians<ul style="list-style-type: none">○Village militias○Small group of regular army in charge of defense |
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Manwaring and Joes VH



- Objectives grouped according to underlying values
- Duplicate objectives are removed

Table 14: First Grouping of Rule of Law Objectives

<ul style="list-style-type: none">• Restore Public Order<ul style="list-style-type: none">○ Policing System○ Detention○ Judicial System○ Civil Law• Wartime Law<ul style="list-style-type: none">○ Protect intervention force	<ul style="list-style-type: none">• Human rights laws at all levels• Governance<ul style="list-style-type: none">○ Local political involvement○ Establish leaders○ Elections○ International authorization
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Table 15: Second Grouping of Rule of Law Objectives

<ul style="list-style-type: none">• Restore Public Order<ul style="list-style-type: none">○ Policing System○ Detention○ Judicial System○ Law	<ul style="list-style-type: none">• Governance<ul style="list-style-type: none">○ Local political involvement○ Establish leaders○ Elections○ International authorization
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Manwaring and Joes VH



Table 16: First Grouping of Security Objectives

<ul style="list-style-type: none"> • Physical Isolation of Insurgents <ul style="list-style-type: none"> ○ Separate insurgents from civilian population ○ Clearing and holding areas ○ Fortified lines and Impassible barriers ○ Separate insurgency from leaders • Military tactics to do least damage to society and keep casualties low <ul style="list-style-type: none"> ○ More troops ○ Secure government base areas ○ Security for civilians ○ Construct intelligence service ○ Safe movement of troops and supplies 	<ul style="list-style-type: none"> • Non-Violent Action <ul style="list-style-type: none"> ○ Amnesty ○ Publicize criminal acts done by insurgent leaders ○ Resettlement programs for long-time insurgents taking amnesty ○ Pay cash or release prisoners for guns • Disrupt Insurgents <ul style="list-style-type: none"> ○ Close sanctuaries used by insurgents ○ Impede outside aid to insurgents
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Table 17: Second Grouping of Security Objectives

<ul style="list-style-type: none"> • Security vs. Insurgents <ul style="list-style-type: none"> ○ Physical Isolation of Insurgents ○ Disrupt Insurgents ○ Non-Violent Action 	<ul style="list-style-type: none"> • Military tactics to do least damage to society and keep casualties low <ul style="list-style-type: none"> ○ More troops ○ Secure government base areas ○ Security for civilians ○ Construct intelligence service ○ Safe movement of troops and supplies
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Manwaring and Joes VH



Table 18: First Grouping of Social Well-Being Values and Objectives

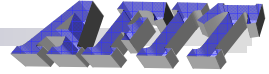
<ul style="list-style-type: none">• Funding<ul style="list-style-type: none">○ International orgs and structures for ER• Systems<ul style="list-style-type: none">○ Water○ Medical services○ Minority needs○ Food○ Transportation	<ul style="list-style-type: none">• Best Practices<ul style="list-style-type: none">○ Successful ER ops• Human Rights<ul style="list-style-type: none">○ Human Rights accountability○ Human rights monitoring teams○ Investigate abuses○ Teach○ Disseminate
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Table 19: First Grouping for Economy Values and Objectives

<ul style="list-style-type: none">•Rehab and development•Self-reliance•Economic opportunity	<ul style="list-style-type: none">•Socialist to market economies•Economic intervention
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Other Silver Standard Objectives



- Orr
 - Security, Governance, Social and Economic Well-Being, and Justice and Reconciliation
 - Humanitarian Aid, Social Well-Being, and Economy combined into one fundamental objective
 - Objectives align with Directive 3000.05 fundamental objectives
- Covey *et al*
 - Politics (Governance), Defeating Military Extremists (Security), Rule of Law, Economy
 - Sub-objectives overlap
 - Prisons in Rule of Law
 - Detention Facilities in Security
 - Economy sub-objectives list several Humanitarian Aid and Social Well-Being objectives



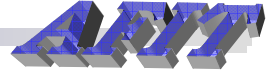
DoS Matrix



- DoS Post-Conflict Reconstructions Essentials Tasks Matrix (DPCRETM) currently used to plan and prioritize SOPS
 - Living document, continually increases in size
 - Five broad headings
 - Security
 - Governance and Participation
 - Economic Stabilization and Infrastructure
 - Humanitarian Assistance and Social Well-Being
 - Justice and Reconciliation
 - 1000+ objectives mostly means objectives
 - Same tasks appear under multiple headings
 - Hierarchy constructed from headings and sub-headings



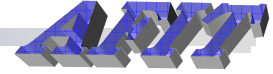
Coalition Provisional Authority



- CPA documentation specific to Iraqi stabilization
- Four fundamental objectives
 - Governance
 - Economy
 - Security
 - Essential Services (Social Well-Being)
- Rule of Law sub-objectives scattered within Governance, Security, and Essential Services
- Many means objectives in the documentation



Enhanced Directive 3000.05 Stability Value Hierarchy



- Good Value Hierarchies
 - Complete
 - Non-Redundant
 - Decomposable
 - Operable
 - Small Size
- Combined VH
 - Deconstructs all previous objectives into single VH
 - 41 Attributes
 - Includes the five fundamental objectives from Dir 3000.05



All Silver Standard Objectives Deconstructed



- Process
 1. Fundamental objective of stability is chosen to develop sub-objectives
 2. Second affinity groupings from each Silver Standard for particular branch are listed
 3. Objectives deconstructed via WITI test
 4. Objectives reconstructed and become lower tiers of Directive 3000.05 stability VH until an appropriate measure can be obtained
 5. New fundamental objective for stability is chosen
 6. Repeat until all branches of hierarchy have been developed



Example of Deconstruction of Security Branch



Table 19: Orr Security Objectives and Sub-objectives

<ul style="list-style-type: none"> ●Public safety <ul style="list-style-type: none"> ○Freedom from violence and coercion ○Operation of schools ○Conducting business ●Cease-fires 	<ul style="list-style-type: none"> ●Military Strength <ul style="list-style-type: none"> ○Rebuilding of military ○Security Forces Capability ○Unity of effort ●Dealing with Enemies <ul style="list-style-type: none"> ○DDR ○Criminal Enterprise
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Table 20: Manwaring Security Objectives and Sub-objectives

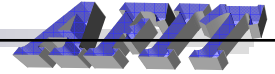
<ul style="list-style-type: none"> ●Security vs. Insurgents <ul style="list-style-type: none"> ○Physical Isolation of Insurgents ○Disruption of Insurgents ●Non-Violent Action <ul style="list-style-type: none"> ○Amnesty ○Publication of criminal acts done by insurgent leaders ○Resettlement programs for long-time insurgents taking amnesty ○Payment of cash or release prisoners for guns 	<ul style="list-style-type: none"> ●Military tactics to do least damage to society and keep casualties low <ul style="list-style-type: none"> ○More troops ○Security for government base areas ○Security for civilians ○Construction of intelligence service ○Safe movement of troops and supplies
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Table 21: Covey Security Objectives and Sub-objectives

<ul style="list-style-type: none"> ●Public Safety <ul style="list-style-type: none"> ○Demining ○Protection of Movement ○Refugee/IDP security ●Minimizing Extremist Threat <ul style="list-style-type: none"> ○Minimization of Fighting ○Demobilization ○Disarmament 	<ul style="list-style-type: none"> ●Territory Security <ul style="list-style-type: none"> ○Violence across boundaries of state ○Border Monitoring ●Military Presence <ul style="list-style-type: none"> ○Maximizing multinational strength ○Joint mil-police command and control ○Allied Security and Participation
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Continued Deconstruction of Security Branch



- Public Safety (following sub-objectives incorporated into Public Safety sub-objective)
 - Demining
 - Protection of Movement
 - Refugee/IDP Security
 - Freedom from Violence and Coercion
 - Operate Schools
 - Conduct Business
- Maximizing multinational strength
- Joint mil-police command and control
- Allied Security and Participation
- Military tactics to do least damage to society and keep casualties low
 - More troops
 - Secure government base areas
 - Security for civilians (remove—divided into Freedoms from Violence and of Movement)
 - Construct intelligence service
 - Safe movement of troops and supplies
- Military Strength (rename—Military)
 - Rebuild military (change—decompose into Personnel and Infrastructure)
 - Security Forces Capability (remove—many of these objectives are accounted for in Law Enforcement Capability and DDR)
 - Unity of effort
- Minimize Fighting (remove—product of DDR)
- Demobilization (combine—Demobilization and Disarmament are two physical ways to reduce extremist threat; combination of both avoids preferential dependence issues)
- Disarmament (combine—Demobilization and Disarmament are two physical ways to reduce extremist threat; combination of both avoids preferential dependence issues)
- Reintegration
- Physical Isolation of Insurgents (combine—Defeat Extremist/Militant Threat)
- Disrupt Insurgents (combine—Defeat Extremist/Militant Threat)
- Non-Violent Action (incorporated into Defeat Extremist/Militant Threats)
 - Amnesty
 - Publicize criminal acts done by insurgent leaders
 - Resettlement programs for long-time insurgents taking amnesty
 - Pay cash or release prisoners for guns
- Cease Fires (removed due to being an alternative)
- DDR (removed due to duplication)
- Criminal Enterprise (removed due to counting in Economy)
- Territory Security
 - Violence across boundaries of state
 - Border Monitoring



Security Objectives Organized

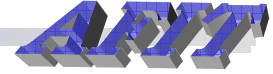


Table 22: Security Objectives and Sub-objectives for Directive 3000.05 Security Branch

- Defeat Extremist/Militant Threat
 - Demobilization and Disarmament
 - Reintegration
 - Territory Security
- Military
 - Military Forces
 - Military Infrastructure
 - Unity of Effort
- Public Safety

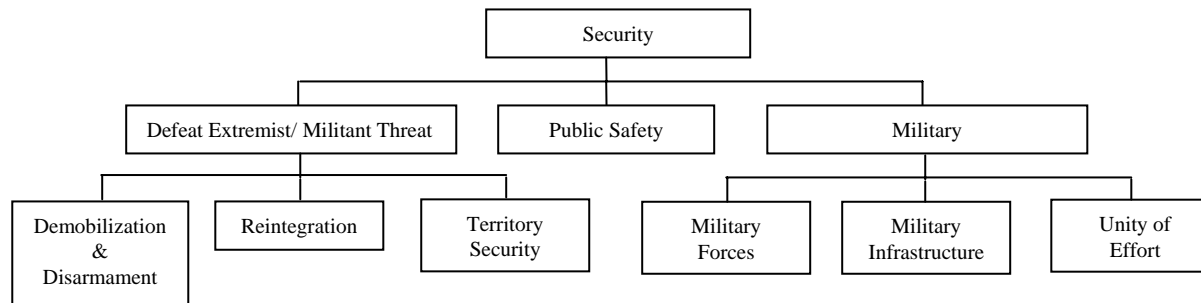


Figure 1: Security Sub-objectives of the Combined Nation-State Stability Value Hierarchy



Combined Stability VH

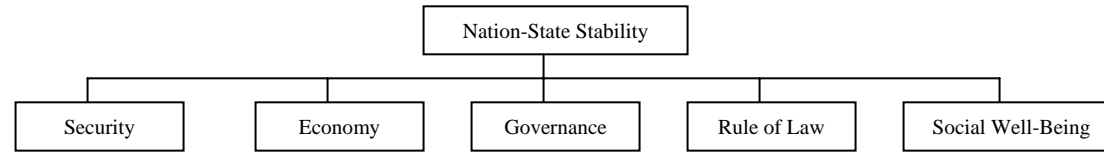


Figure 2: The Top Tier Values of the Combined Nation-State Stability Value Hierarchy

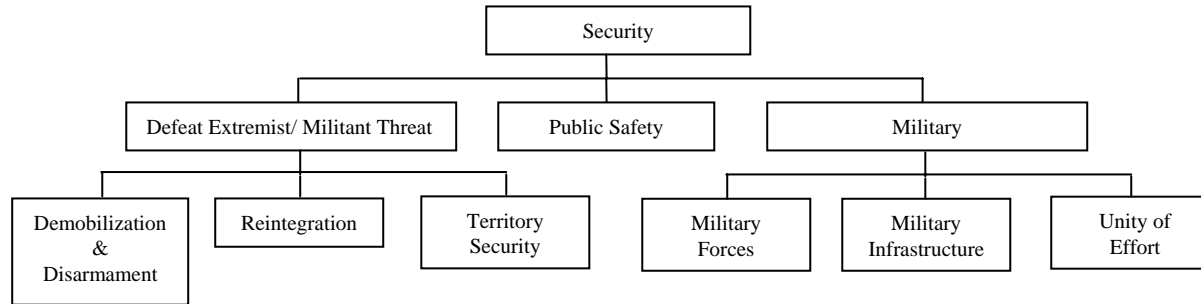


Figure 3: Security Sub-objectives of the Combined Nation-State Stability Value Hierarchy

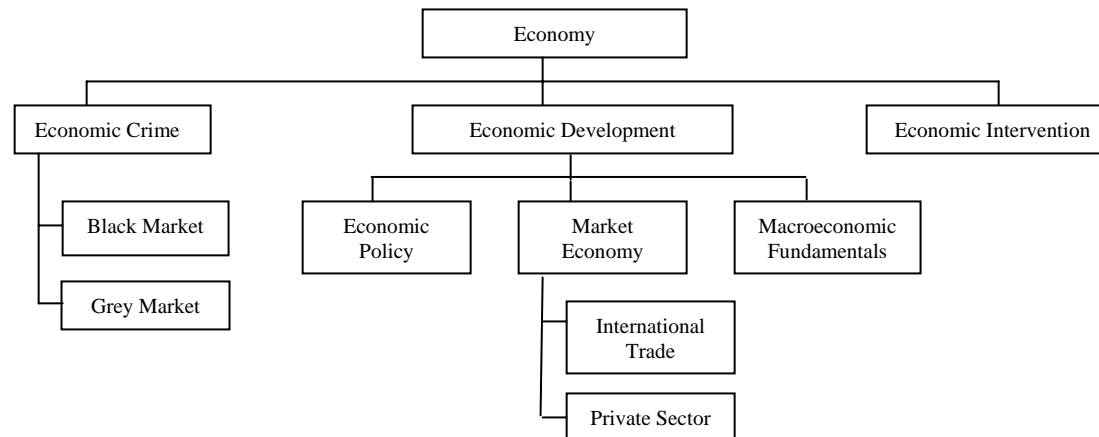


Figure 4: Economy Sub-objectives of the Combined Nation-State Stability Value Hierarchy



Combined Stability VH

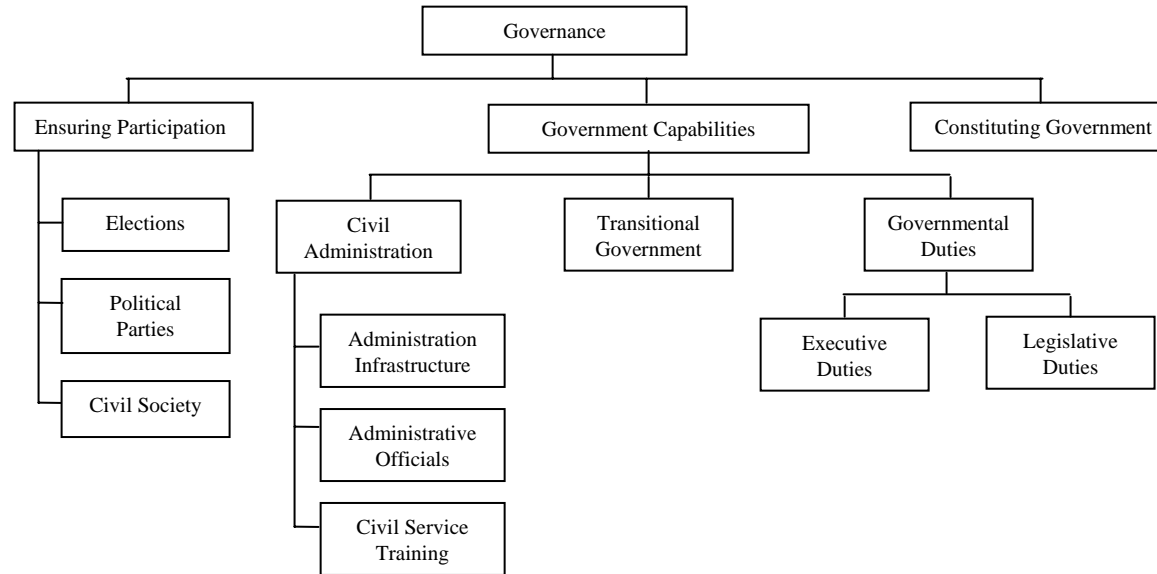


Figure 5: Governance Sub-objectives of the Combined Nation-State Stability Value Hierarchy

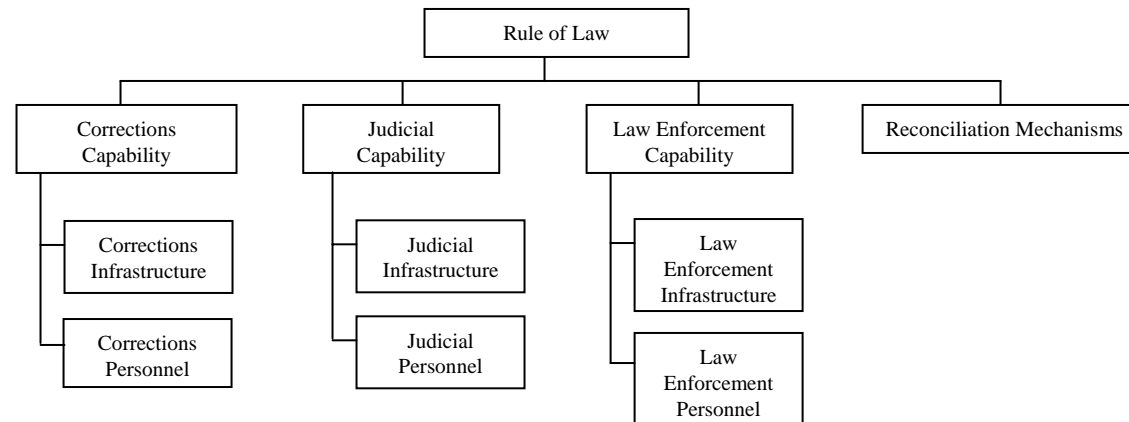


Figure 6: The Rule of Law Sub-objectives of the Combined Nation-State Stability Value Hierarchy



Combined Stability VH

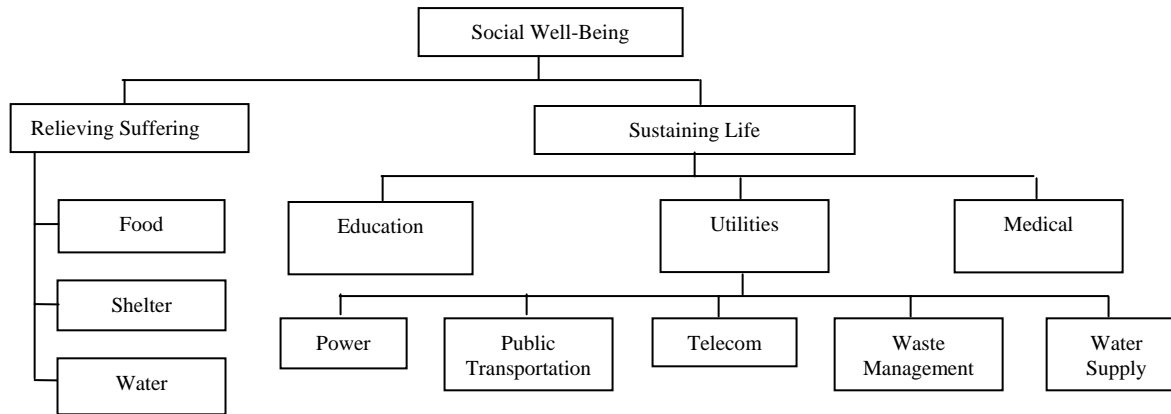


Figure 7: Social Well-Being Sub-objectives of the Combined Nation-State Stability Value Hierarchy



Attributes and SDVFs



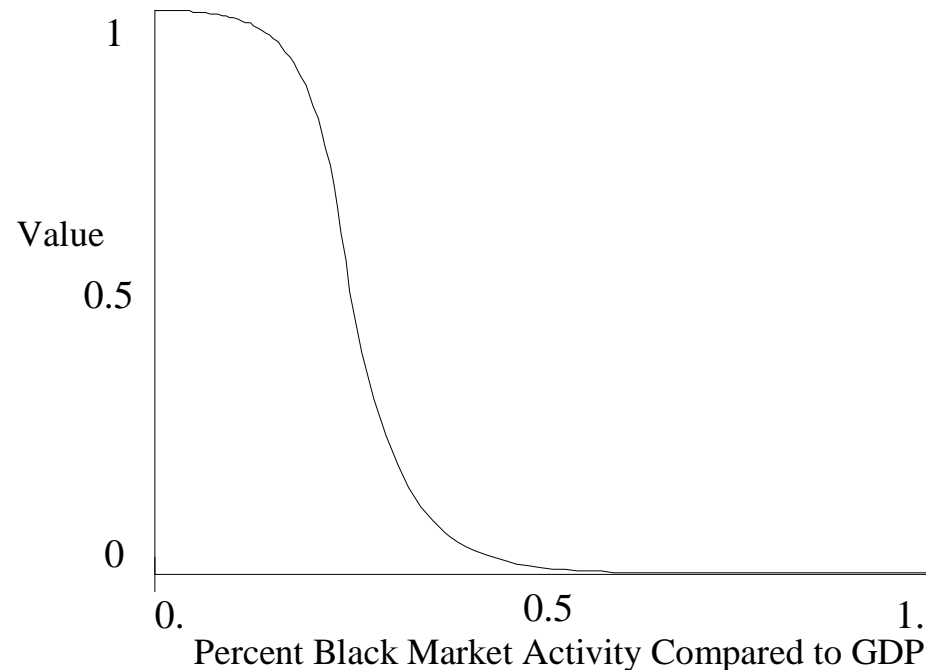
- Making strategic decisions necessitates high level evaluations
- Dividing sub-objectives until a natural-direct measure is found is undesirable
 - Unacceptably large hierarchy
 - Difficult to analyze
 - Difficult to understand
- Constructed scale offers advantages
 - Small and functional hierarchy
 - Quick analysis



Notional Attribute and SDVF Examples



- Black market activities are defined as “illicit trade in goods or commodities in violation of official regulations” (Merriam-Webster 2006).
 - Money laundering
 - Trafficking of weapons, drugs, and humans
- Notional Black Market Attribute: Estimated % Money loss from black market activity in comparison to GDP

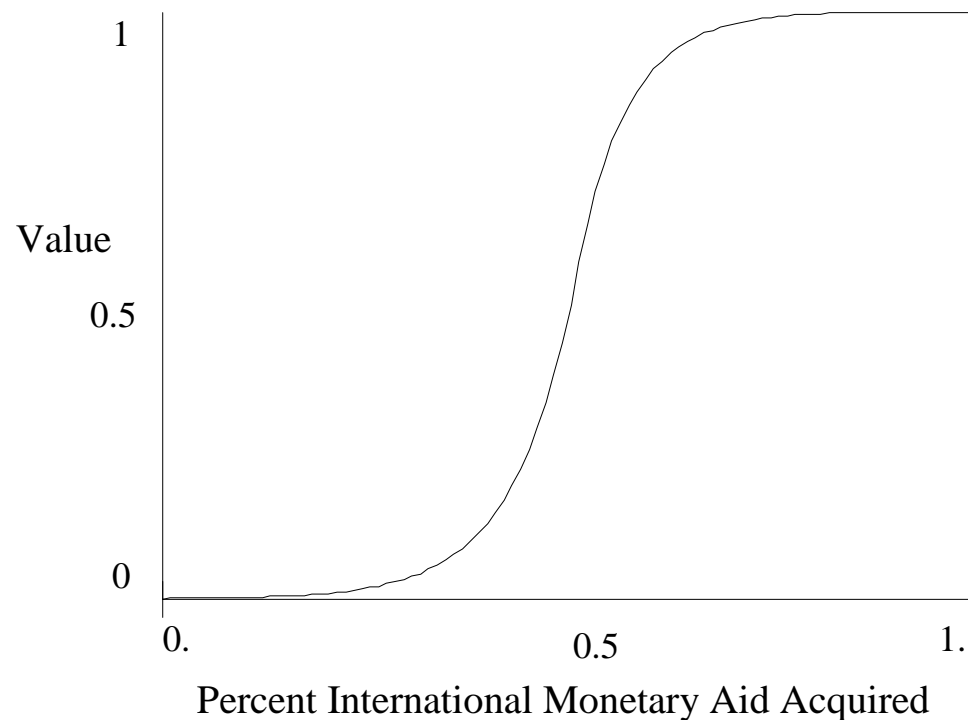




Notional Attribute and SDVF Examples



- Economic Intervention is the international community offering economic aid in the beginning stages of SOPS to revive the economy of a failed nation
- Notional Economic Intervention Attribute: % Difference of money obtained vs. the money needed as defined by appropriate SME

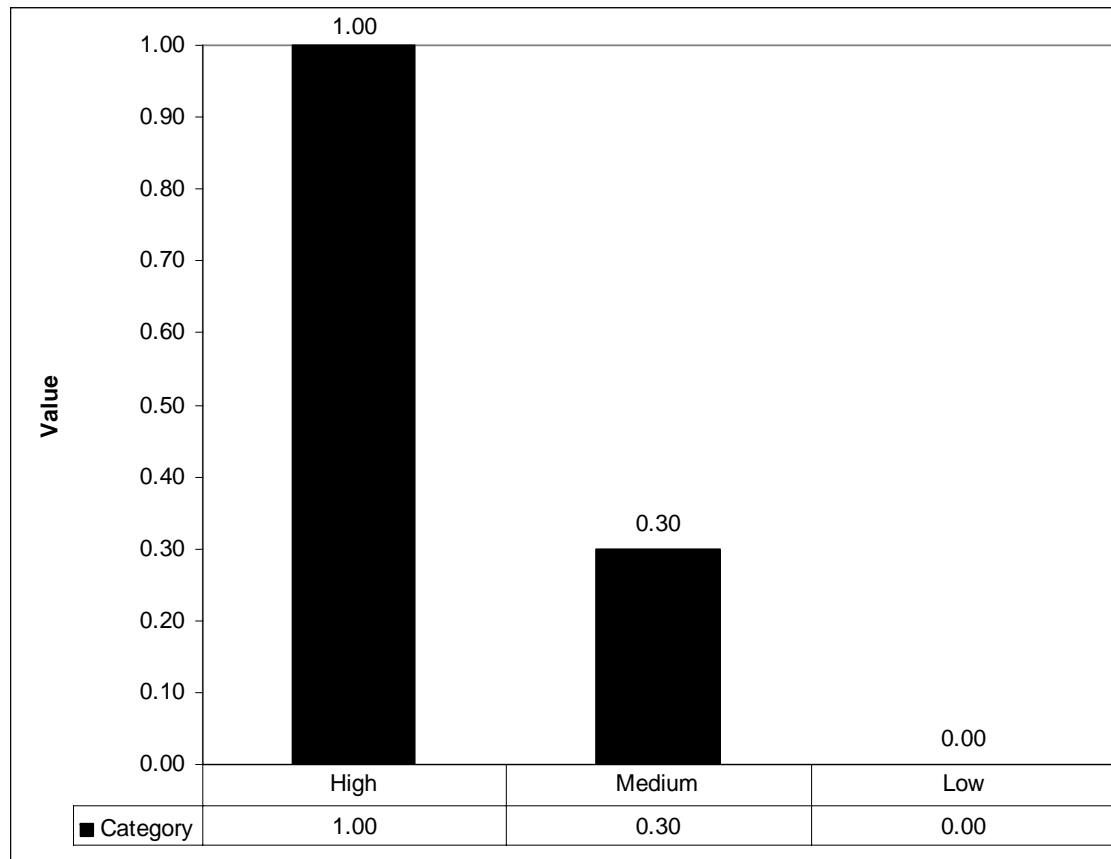




Notional Attribute and SDVF Examples



- Constituting Government is the process in which a national government is established either through national dialogues or constitutional conventions
- Notional Attribute: Establishment of the constitution





Attributes and SDVFs



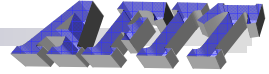
- Attributes and SDVFs needed for Directive 3000.05 stability VH
 - High level decision maker can use SME input from all areas of SOPS for assessment
 - SMEs use their respective knowledge and experience to score the sub-objectives and are not limited to one specific quantifiable measure to evaluate an area
- Combination of all the attributes to evaluate the attainment of a stable state is achieved through the additive value function (AVF)

$$v(x_1, \dots, x_N) = \sum_{i=1}^N k_i v_i(x_i) \quad \text{and} \quad \sum_{i=1}^N k_i = 1$$

where v_i is the value function over X_i and k_i is global weights of attribute X_i



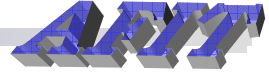
Weighting the Value Hierarchy



- Weights typically elicited from Decision Maker
- Used Gold and Silver Standards for Weighting
 - Documents provide little insight to relative importance to any values to each other
 - Swing weighting from bottom up preferred, but use notional weighting top down due to lack of detail in Gold and Silver Standard materials
 - Security assumed 1.5 times importance than other fundamental objectives, and other fundamental objectives equally important to each other



Notional Calculation of Weights



- Weights of objectives denoted “w” with subscript letters

$$w_E = w_G = w_{RL} = w_{SWB} = x$$

$$w_S = 1.5x$$

$$w_S + w_E + w_G + w_{RL} + w_{SWB} = 1 \rightarrow$$

$$1.5x + x + x + x + x = 1 \rightarrow$$

$$5.5x = 1 \rightarrow$$

$$x = 1/5.5 = 0.\overline{18} \rightarrow$$

$$w_S = 0.\overline{27} \quad w_E = 0.\overline{18} \quad w_G = 0.\overline{18}$$

$$w_{RL} = 0.\overline{18} \quad w_{SWB} = 0.\overline{18}$$



Illustration of SOPS Model



- Evaluation of SOPS using fictional state of Badistan
 - Notional Attribute Scores based on Courses of Action (COA's)
 - Evaluation between 2003 and 2005



Attribute Scoring

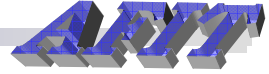


Ranking for Proposed Stable State Value





Attribute Scoring Revisited



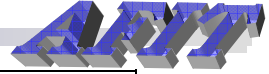
Ranking for Proposed Stable State Value



- Level of Public Safety
- Proportional Level of Economic Aid
- Establishment of Constitution
- Level of Reconciliation Capability
- Level of Military Infrastructure
- Level of Military Forces
- Level of Food
- Level of Shelter
- Level of Water
- Level of Education
- Level of Medical Care
- Level of D&D of Insurgents
- Level of Reintegration of Insurgents
- Level of Territory Security
- Other

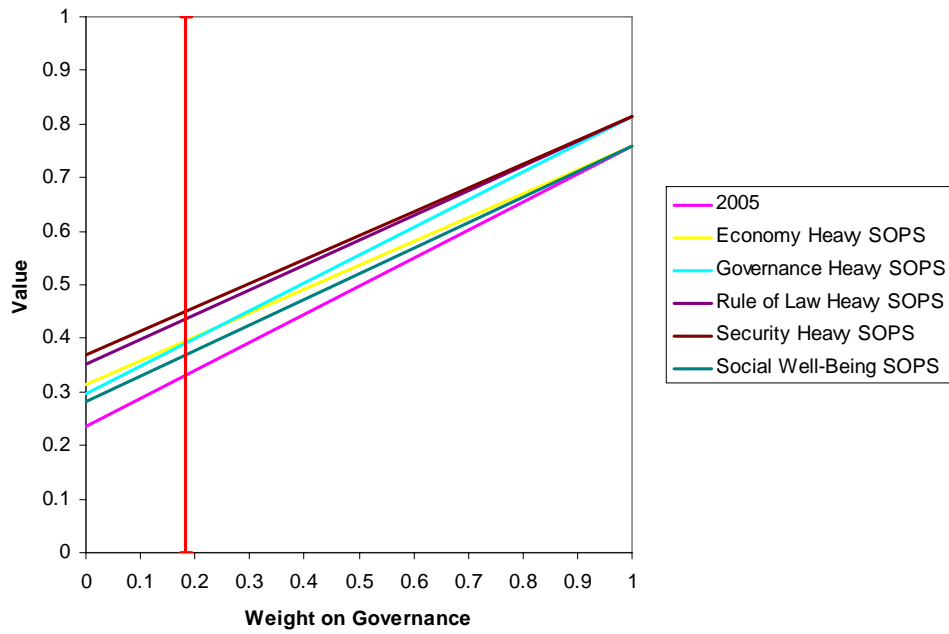


SOPS COAs Scoring and Sensitivity

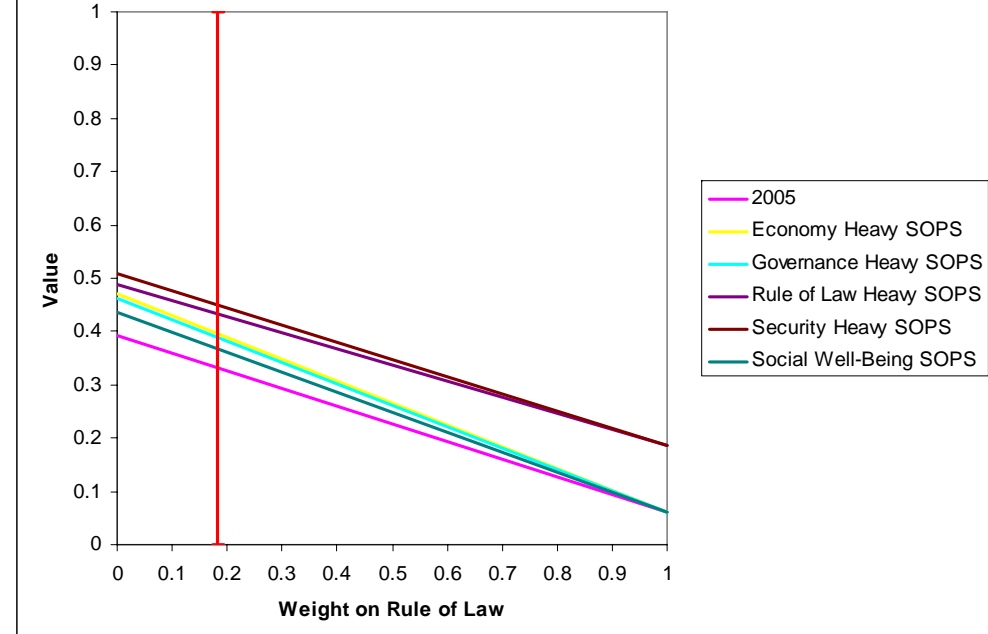


Alternative	2005	EH	GH	RLH	SH	SWB
Score	0.362	0.438	0.420	0.462	0.478	0.398

Sensitivity Analysis on Governance

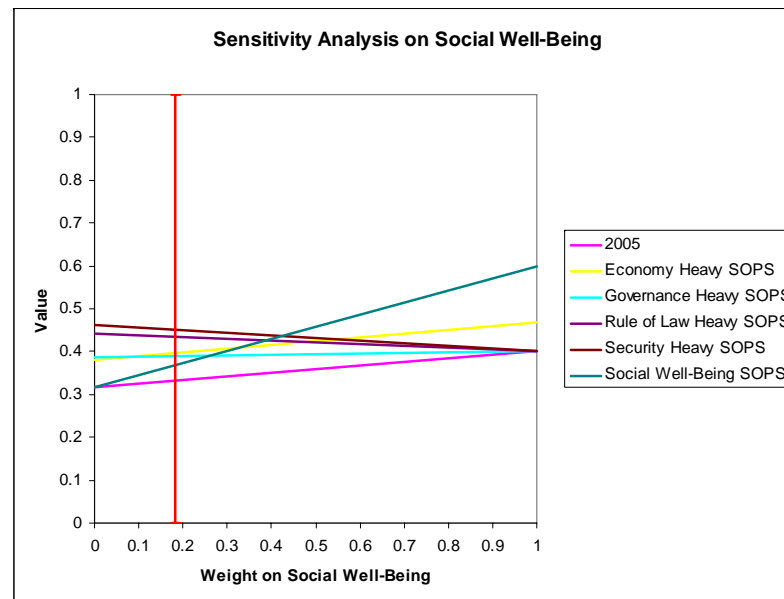
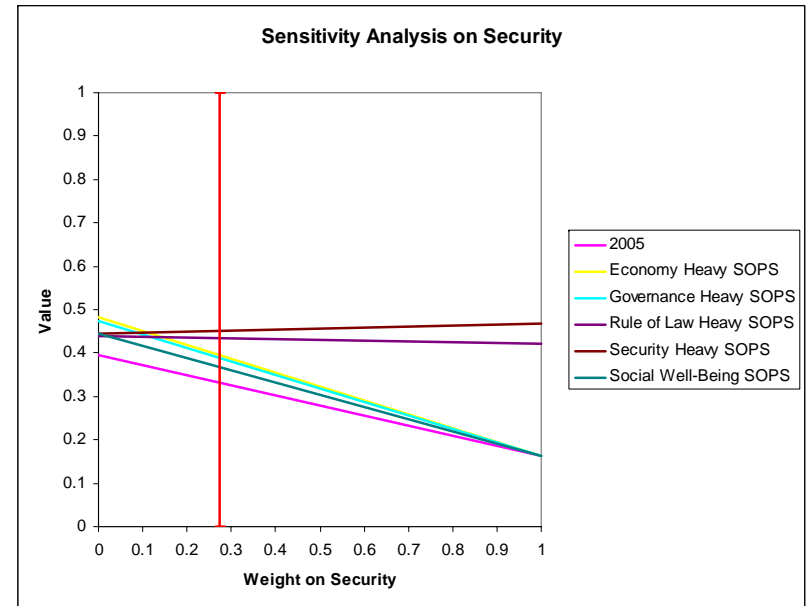
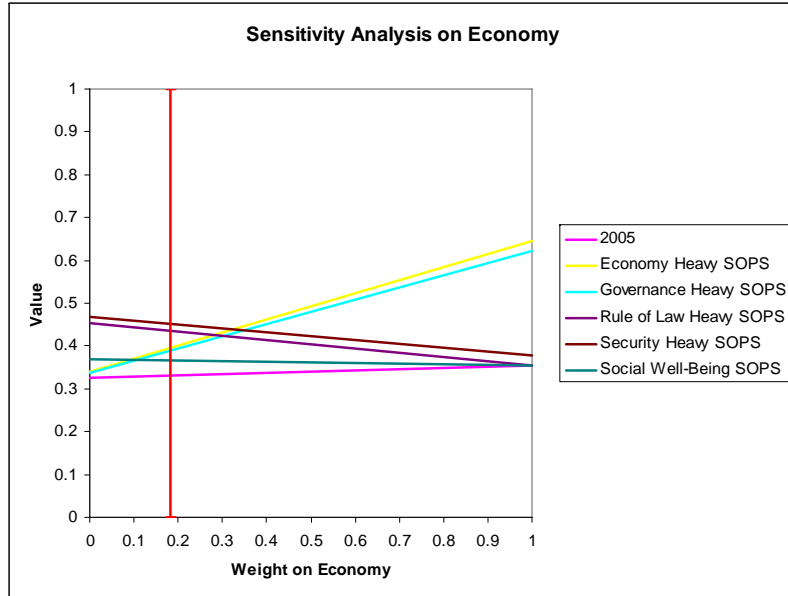
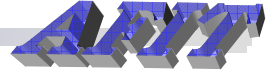


Sensitivity Analysis on Rule of Law





SOPS COAs Scoring and Sensitivity





Conclusion



- VFT methodology developed a value hierarchy based on Directive 3000.05 and other Silver and Gold Standards to measure stability in failing states
- Directive 3000.05 stability VH uses
 - Scoring and assessing stability through illustration of Badistan over time
 - Efficiently and effectively prioritize SOPS COAs based on the current evaluation of a failed state was illustrated
- Research has promising contributions to the SOPS community by illustrating how VFT can be used



Further Research



- Weighting of model should be revisited with input from actual DM using swing weighting technique
- Establish accepted attributes for the Directive 3000.05 stability VH
 - VH suggests DMs values in measuring stability
 - Refine attributes with approval from DM or SME
 - May have missing data issues
 - Use appropriate missing data techniques
 - Re-evaluate and develop new attributes
 - Issue intelligence requirement
- Improve prediction of COA outcomes
 - Prediction inaccuracies affect ranking
 - Use simulation to predict COA outcomes and SOPS hierarchy to rank COAs



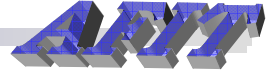
Summary



- Stability Operations
- Value-Focused Thinking
- Scope
- Assumptions
- Using VFT to Create Directive 3000.05-based stability Value Hierarchy
- Notional Results and Analysis
 - Scoring Stability of Nation-State Over Time
 - Prioritizing SOPS COAs
- Conclusion



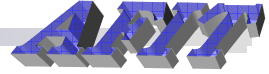
Questions



U.S. AIR FORCE



Backup Slides





Literature Review



- SOPS History and Lessons Learned
 - Dobbins *et al*, *America's Role in Nation-Building: From Germany to Iraq*
 - Defense Science Board (DSB), "Transition to and from Hostilities"
 - DSB, "Transition to and from Hostilities: Supporting Papers"
 - DSB, "Instituting Stability Operations within DoD"
- SOPS Objectives
 - Department of Defense (DoD) Directive 3000.05
 - DoD Stability Operations Joint Operating Concept
 - Covey *et al*, *The Quest for Viable Peace: International Intervention and Strategies for Conflict Transformation*
 - Manwaring and Joes, *Beyond Declaring Victory and Coming Home: The Challenges of Peace and Stability Operations*
 - Orr, *Winning the Peace: An American Strategy for Post-Conflict Reconstruction*
 - Department of State (DoS), *Post Conflict Reconstruction Essential Tasks Matrix*
 - Coalition Provisional Authority
- VFT
 - Clemen, *Making Hard Decisions: An Introduction to Decision Analysis*
 - Keeney, *Value-Focused Thinking: A Path to Creative Decision Making*
 - Keeney and Raiffa, *Decisions with Multiple Objectives: Preferences and Value Tradeoffs*
 - Kirkwood, *Making Hard Decisions: An Introduction to Decision Analysis*



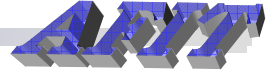
SOPS Investigated



- WWI Germany
- WWII Germany
- WWII Japan
- Panama
- Somalia
- Haiti
- Bosnia
- Kosovo
- Afghanistan



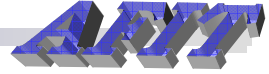
Germany (WWI) Lessons Learned



- Thinking must be done about changing political and cultural frameworks
- Idealist peace documents don't address necessary changes for stability
- Allied troops need presence on enemy soil
- Enemy must unconditionally surrender to allow for SOPS to be successful
- Reparations should be addressed after rebuilding the economy
- Peace treaty should not humiliate the defeated



Germany (WWII) Lessons Learned



- Democracy can be transferred, and societies can be encouraged to change
- Defeated populations can sometimes be more cooperative than anticipated
- Enforced accountability for past injustices can facilitate transformation
- Dismembered and divided countries can be difficult to put back together
- Defeated countries often need large transfers to cover basic government expenditures and quickly provide humanitarian assistance post-conflict
- Reparations immediately following the conflict are counterproductive. The economy must grow before a country can compensate the victims of the conflict
- Permitting more than one power to determine economic policy can delay economic recovery



Japan Lessons Learned



- Democracy can be transferred to non-Western societies
- How responsibility for the war is assigned can affect internal political dynamics and external relations in the future
- Co-opting existing institutions can facilitate nation-building better than building new ones from scratch
- Unilateral nation-building can be easier than multilateral efforts
- Concentrating the power to make economic policy decisions in the hands of a single authority can facilitate economic recovery
- Delegating implementation of economic policy decisions to local governing elites, with their own priorities, can significantly minimize the effectiveness of change
- Idealistic reforms designed for the long-term improvement of the recipient nation must sometimes yield to the immediate global concerns of the occupying power



Panama Lessons Learned



- Leaders must clarify mission and objectives for SOPS
- SOPS planning process needs to combine plans and policies with operations
- SOPS planning process needs to be linked with combat operations planning
- Planners need political, social, and institutional understanding of the region of SOPS
- Planners can not have responsibility for SOPS execution
- SOPS needs interagency coordination



Somalia Lessons Learned



- Nation building objectives should be scaled to available forces, resources, and staying power
- Military forces need to be complemented by civil capabilities for law enforcement, economic reconstruction, and political development
- Unity of command can be as important in peace operations as in war
- There can be no economic or political development without security



Haiti Lessons Learned



- Short departure deadlines and exit strategies diminish prospects for enduring transformation
- International police armed with weapons and the power to arrest can usefully supplement military peacekeepers
- Broad justice-sector reform is necessary to bolster policing efforts
- Where government is grossly ineffective, it needs to be reformed before reconstruction programs can be successful
- Privatization can be a prerequisite for economic growth, especially where government officials use state-owned enterprises for their own private purposes



Bosnia Lessons Learned



- Unity of command can be as important for the civil aspects of peace operations as for the military
- Elections are an important benchmark in progress toward democracy. Held too early, they can strengthen rejectionist forces rather than promote further transformation
- Organized crime can emerge as the greatest obstacle to transformation
- It is difficult to put a nation back together if its neighbors are pulling it apart
- Successful reconstruction in poor and divided countries requires substantial long-term commitment from donors
- Foreign donors need to take an active role in economic policy in countries with stalemated or ineffective governments



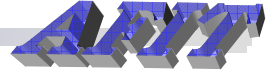
Kosovo Lessons Learned



- Broad participation, extensive burden-sharing, unity of command, and effective U.S. leadership can be compatible
- A slow mobilization of civil elements in SOPS can be costly
- Uncertainty over final international status can hinder democratic transition
- When countries lack effective governmental institutions, placing expatriate staff in positions of authority can facilitate economic policymaking and implementation
- Large-scale assistance can rapidly restore economic growth in conjunction with effective economic institutions



Afghanistan Lessons Learned



- Low input of military and civilian resources yields low output in terms of security, democratic transformation, and economic development
- Support of neighboring nations can have an important influence on the consolidation of weak and divided states
- In the absence of pervasive security, the prospects of widespread economic recovery or political development are very limited



DSB Findings on SOPS



- At this time the Secretary [of Defense] is not adequately informed regarding our readiness for success in stability operations... He is not fully informed whether we are better or worse prepared to succeed at any of the essential elements of stability operations within a region... Without that knowledge, that management information, he can lead but he cannot fully manage. He cannot with full confidence advise the President and the Congress regarding our potency for stability operations that may be required by various courses of action under consideration. (Defense Science Board 2005b:27)



Sub-objective Definitions



I. Economy—System made up of policy, macroeconomic fundamentals, free market, and international trade that exchanges wealth, goods, and resources mostly free of economic criminal activity.

A. Economic Crime—Black and Grey Market Activities

1. Black Market—Black market activities are defined as "illicit trade in goods or commodities in violation of official regulations". Examples of black market activities are: money laundering, trafficking of weapons, drugs, and women.

2. Grey Market—Grey market activities are defined as illegally obtaining commodities that are generally considered legitimate. Examples of grey market activities are: avoidance of taxes, violation of regulations, smuggling, evasion of economic embargoes, currency manipulation, and exploitation of raw material resources.

B. Economic Development—Development of economy based on the three objectives: Economic Policy, Macroeconomic Fundamentals, and Market Economy.

1. Economic Policy—Economic policy refers to the actions that governments take in the economic field. It covers the systems for setting interest rates and government deficit as well as the labor market, national ownership, and many other areas of government.

Fiscal policy—the size of the government deficit and the methods it uses to finance it.

Fiscal stance: The size of the deficit

Tax policy: The taxes used to collect government income.

Government spending on just about any area of government

Monetary policy is concerned with the amount of money in circulation and, consequently, interest rates and inflation.

Interest rates, if set by the Government

Incomes policies which aim at imposing non-monetary controls on inflation

Bank regulations which affect the money multiplier

Trade policy refers to tariffs, trade agreements and the international institutions that govern them.



Sub-objective Definitions



2. Macroeconomic Fundamentals—Necessary components needed for economy to work: Currency, Central Banking System, Regulatory Framework, Financial Transaction Reporting, and Business Registration System.

3. Market Economy—Economic system in which the production and distribution of goods and services takes place through the mechanism of free markets guided by a free price system rather than by the state in a planned economy.

a. International Trade—Exchange of goods and services across international boundaries or territories.

b. Private Sector Economy—The part of the economy consisting companies not government-owned. Examples are private firms and companies, corporations, banks, charities, non-governmental organizations and individual companies.

C. Economic Intervention—International community offering economic aid to offset debt and re-fund various stabilization activities in the beginning stages of SOPS.

II. Governance—Governance is a public management process that involves a constituting process, governmental capabilities, and participation of citizens.

A. Constituting Government—Process in which a national government is established either through National Dialogues or Constitutional Conventions.

B. Government Capabilities—Government entity itself and the duties it entails.

1. Administration—Sub-objective of Government Capability that deals with structures, officials and training of the administration of the government.

a. Administrative Infrastructure—Facilities and structures that are needed in order for the administration to be able to govern the populace.

b. Administrative Officials—Appointed positions in the executive and legislative branches of the government at all levels except for positions in the uniformed services.

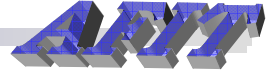
c. Civil Service Training—Training enabling members of Government Administration at all levels to be able to succeed at governance.

2. Government Duties—Duties performed by the executive and legislative branches of government.

a. Executive Duties—All duties incumbent to the executive branch of government: conduct foreign relations (mediation and negotiation), command armed forces, appoint state officials, administer the government departments and services, and issue executive orders.



Sub-objective Definitions



b. Legislative Duties—All duties incumbent to the legislative branch of government: create the body of law consisting of civil, economic, human rights, and wartime laws.

3. Transitional Government—Transitional Government made up of international government aid workers and infrastructure.

C. Participation in Government—Ability for populace to take part in and influence government

1. Civil Society—Ability of a population to partake in advocacy groups, civic associations, and free media

2. Democratic Elections—The fair process of a population to choose office holders.

3. Political Parties—Organized groups seeking political power by democratic elections

III. Rule of Law—Comprehensive, four-element justice and reconciliation effort that upholds the law involving: Corrections Capability, Judicial Capability, Law Enforcement Capability, and Reconciliation Capability.

A. Corrections Capability—Ability to punish, rehabilitate, or detain criminals convicted of breaking the law

1. Corrections Infrastructure—The basic facilities, services, and installations of the Corrections System: prisons, half-way houses, and other penal installations.

2. Corrections Personnel—Trained and equipped personnel needed to operate the Corrections System, such as prison staff.

B. Judicial Capability—Ability to try and administer legal processes for criminals suspect of breaking the law

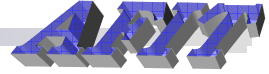
1. Judicial Infrastructure—The basic facilities, services, and installations of the Judicial System such as courthouse and other legal establishments.

2. Judicial Personnel—Trained and equipped personnel needed to operate the Judicial System including: Local Judges and Prosecutors, International Judges and Prosecutors, Defense Attorneys, Court administrators, and legal professionals.

C. Law Enforcement Capability—Ability to maintain law and order and protect the public from physical crime by performing police duties including: Criminal Intel, Criminal Investigation, High Risk Arrests, Crowd Control, Close Protection of Authorities, Combating Criminal Violence, Dismantling Organized Crime, Patrolling, Protection, and Other Police Duties.



Sub-objective Definitions



1. Law Enforcement Infrastructure—The basic facilities, services, and installations of the Law Enforcement System such as police HQ, police academy, and fixed posts.

2. Law Enforcement Personnel—Trained and equipped personnel needed to operate the Law Enforcement System such as police, detectives, and police administration.

D. Reconciliation Capability—Ability to reconcile past abuses and grievances of the populace against unfair rule.

IV. Security—Protecting lives of populace from immediate and large-scale violence and restoring the state's ability to maintain territorial integrity.

A. Defeat Extremist/Militant Threat—Causing militant (extremist, insurgent, or warfighter) threat to be incapable of continuing warfare, and securing populace, region, and state from militant warfare.

1. Demobilizing/Disarmament—Minimizing insurgents' capability to wage warfare via methods such as: Destroying Insurgent C2, Clearing and Holding Areas, Closing Insurgent Sanctuaries, and Limiting circulation and individual possession of weapons and small arms

2. Reintegration—Relocate soldiers to communities, provide employment, educational opportunities, and community reintegration programs

3. Territory Security—Deter violence across local and regional boundaries through efforts such as: border security, fortified lines, and impassable barriers.

B. Military—Permanent professional forces of soldiers, sailors, airmen trained in warfare

1. Indigenous Mil Forces—Personnel needed to constitute standing national military.

2. Indigenous Mil Infrastructure—The basic facilities, services, and installations of the Military such as training facilities, intelligence services, and bases of operation.

3. Unity of Effort—All aid in military reconstruction united under Allied Security and Participation (maximizing multinational strength) and Joint mil-police command and control.

C. Public Safety—Freedom of the populace to move about daily activities (ex: school, business, movement of troops/supplies, etc) without fear and harm from violence (ex: mines, violent crime, harassment, etc.)



Sub-objective Definitions



V. Social Well Being—Sustenance of life and relieving of suffering by way of humanitarian aid, best practices, human rights, essential services, and emergency response systems.

A. Relieving Suffering—Reducing death, pain, distress, loss, or damage to human life with humanitarian aid.

1. Food—Food provided for immediate emergency consumption

2. Shelter—Structures provided for immediate emergency habitation

3. Water—Potable Water source for immediate emergency consumption

B. Sustenance of Life—The support of life of the indigenous persons after emergency.

1. Education—The opportunity for school-aged students to be instructed created by educators, schools, and school supplies.

2. Medical—Prevention, treatment, and management of illness, injury, and the preservation of mental and physical well-being through the services provided by medical staff, hospitals and clinics, and medical supplies.

3. Utilities—Infrastructure needed to support life of indigenous persons: Power, Sewage, Telecom, Trash, and Water

a. Power—Generation, transmission, and distribution of electricity to the region.

b. Public Transportation—The different methods of public and mass international and intra-national transportation via methods like rail, bus, airline, ferries, and taxi.

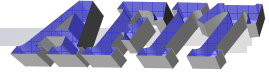
c. Telecom—Communication over distance via electronic systems including TV, radio, telephone, and computers.

d. Waste Management—Collection, transport, processing, recycling or disposal of natural human or constructed waste materials.

e. Water Supply—System providing water for general use and consumption to region.



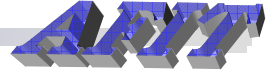
Means vs. Fundamental Objectives



- Fundamental Objective—characterizes essential reason for interest in the decision situation (Keeney 1992)
 - Essential to guide all effort in decision situations and in the evaluation of alternatives
- Means Objective—is of interest in the decision context because of its implications for the degree to which another (more fundamental) objective can be achieved (Keeney 1992)
 - Important because they are means to the achievement of fundamental objectives
 - Can be very useful for developing models to analyze decision problems and create alternatives



Decomposability and Preferential Independence



- Attributes are decomposable if the value attached to variations in the score of the attribute do not depend on the level of other lower-tier attributes.
 - Hard to determine preferability of alternatives without decomposability
 - Procedures can be too complicated for practical use of scoring



DoD Directive 3000.05 Stability VH

