



Applying Soft OR to Assessing Conduct

Presentation to the Deterrence & Assurance Symposium

Mr Stuart Smith
NATO-Civ, A-3
JAS Division

Purpose:
Information



Agenda

- Deterrence
 - Definitions
 - Interpretations
 - Effect
- Spectrum of ...
- NSHQ list of hybrid actions
- Scale of conduct based on hybrid actions
- Conclusions and application



Deterrence – Definitions

- **deterrence / dissuasion:** The convincing of a potential aggressor that the consequences of coercion or armed conflict would outweigh the potential gains. This requires the maintenance of a credible military capability and strategy with the clear political will to act. 1996.01.09 [AAP-6]
- Inducing someone to refrain from unwanted action by putting before him the prospect that taking it will prompt a response with disadvantages to him outweighing the advantages of the action [Deterrence and Doctrine, Whitehall Papers, 41:1]



Deterrence – Interpretations

- While deterrence is focused on convincing an adversary not to undertake acts of aggression, dissuasion is aimed at convincing a potential adversary not to compete with the United States or go down an undesirable path, such as acquiring, enhancing, or increasing threatening capabilities [Can Deterrence Be Tailored? M. Elaine Bunn, 2007]
- Compellence concerns forcing someone to do something while deterrence means convincing someone not to do something [NATO and Tailored Deterrence: Surveying the Challenges, David S. Yost, 2009]

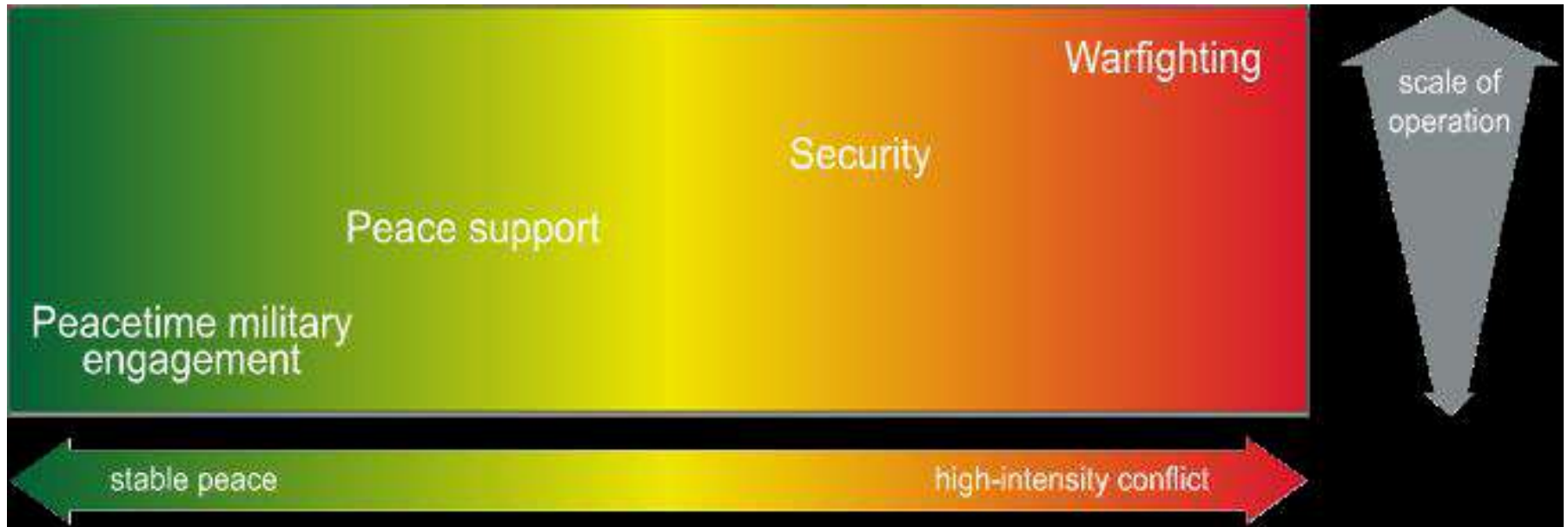


Deterrence – Effect

COPD Paragraph 1-5.c.(2) “Process. Changing conditions from an unacceptable to an acceptable state will require the creation of effects that are necessary to achieve planned objectives and contribute to the achievement of the NATO end state. This central idea of planning determines the combination and sequencing of actions in time and space using available resources with the greatest potential to create the required effects.”



AJP-01(E) – The Spectrum of Conflict



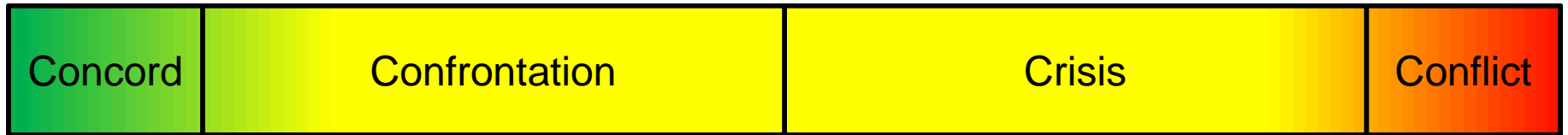


The Spectrum of Conduct

Concord		Confrontation		Crisis	Conflict
International political order (non-NATO nation territorial integrity/ sovereignty)				NATO nation sovereignty undeniably violated and/or territorial integrity threatened by an (identifiable) conventional force	NATO nation territorial integrity undeniably violated by an (identifiable) conventional force (Art V)
NATO values (humanitarian, securing the global commons) and/or principles (democracy, individual liberty, rule of law)					
Threatened		Violated			



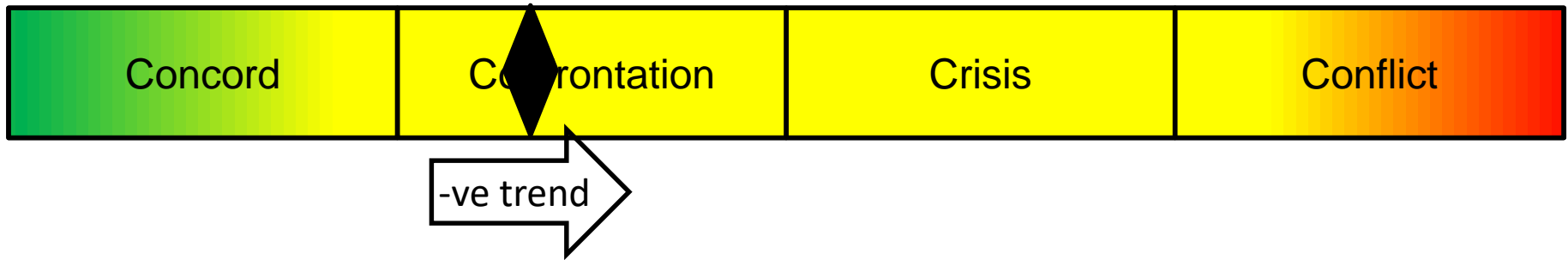
Scale is not Linear



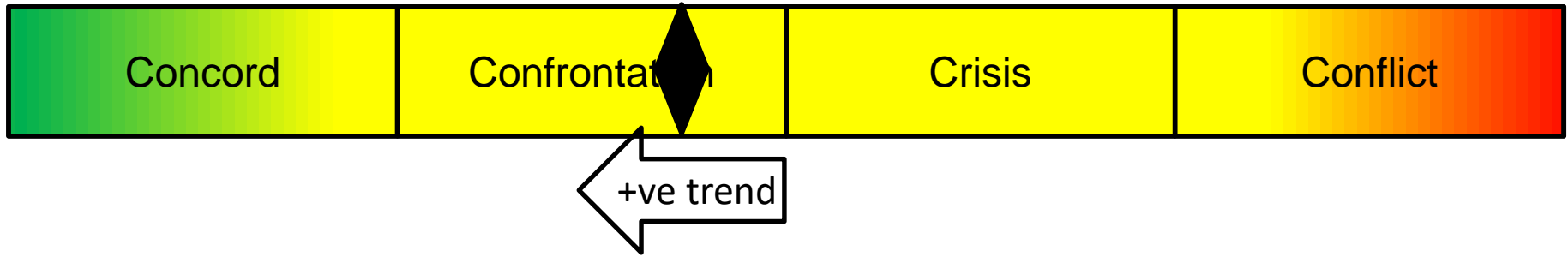


Current Assessment vs Trend

Close to concord but deterrence is failing



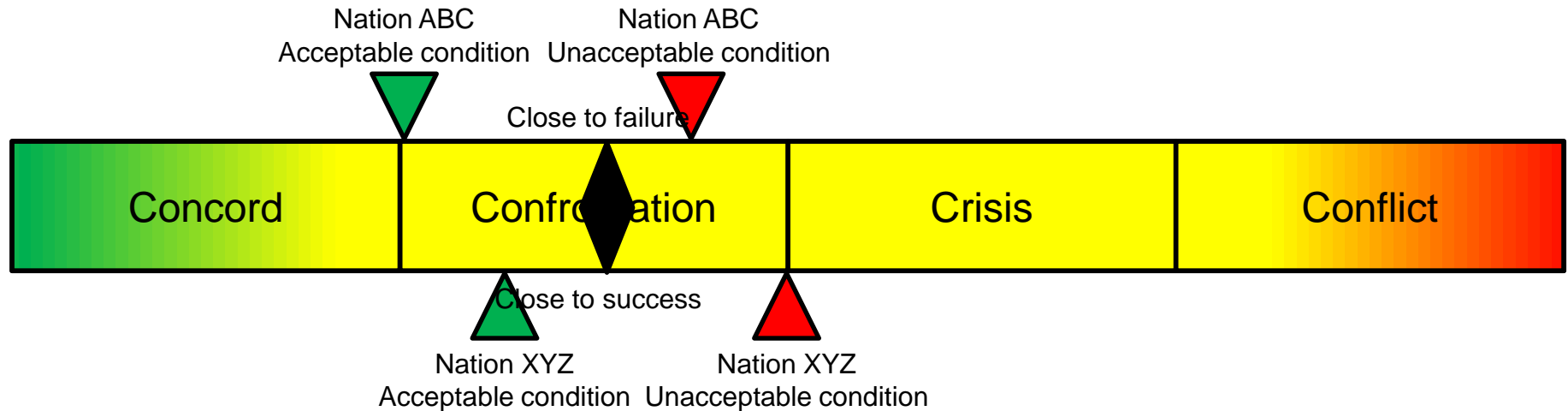
Close to crisis but deterrence is working





Unacceptable & Acceptable Conditions

- Not given
- May be different from nation to nation





Unacceptable Conditions

Cannot assess the perceptions of RUS decision-makers directly. Are there behaviours that indicate their perception?

- RUS offensive action against a NATO nation – Art V
- RUS ‘hybrid’ actions that disrupt the normal functioning of NATO nations
- RUS posturing that ‘threatens’ NATO nations
- RUS actions against non-NATO nations that disrupt/threaten the international political order
- RUS actions that are not consistent with NATO values



NSHQ List of Hybrid Actions

- Land force build-up
- Air/sea patrols
- Snap exercises
- Media Ops
- Cyber attacks on NATO and national CIS
- Dedicated assassinations and kidnappings
- Acts of sabotage
- IED attacks on critical infrastructure
- Organised armed groups
- Agent provocateurs / violent demonstrations
- Physically blocking critical infrastructure
- Funding RUS oriented media / political parties
- Economical pressure
- Distributing RUS passports to RUS speaking minorities



Pairwise Comparison of Hybrid Actions

Pairwise comparison of which actions indicate a more hostile (less deterred actor)

		Land force build-up	Air/sea patrols	Snap exercises	Media Ops	Cyber attacks on NATO and national CIS	Dedicated assassinations and kidnappings	Acts of sabotage	IED attacks on critical infrastructure	Organised armed groups	Agent provocateurs / violent demonstrations	Physically blocking critical infrastructure	Funding RUS oriented media / political parties	Economical pressure	Distributing RUS passports to RUS speaking minorities
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
Land force build-up	A		A	A	A	E	F	G	H	I	J	K	L	M	N
Air/sea patrols	B			C	D	E	F	G	H	I	J	K	L	M	N
Snap exercises	C				D	E	F	G	H	I	J	K	L	M	N
Media Ops	D					E	F	G	H	I	J	K	L	M	N
Cyber attacks on NATO and national CIS	E						F	G	H	I	J	K	L	M	N
Dedicated assassinations and kidnappings	F							Equal	Equal	Equal	F	F	F	F	F
Acts of sabotage	G								Equal	Equal	G	G	G	G	G
IED attacks on critical infrastructure	H									Equal	H	H	H	H	H
Organised armed groups	I										I	I	I	I	I
Agent provocateurs / violent demonstrations	J											Equal	J	J	J
Physically blocking critical infrastructure	K												K	K	K
Funding RUS oriented media / political parties	L													M	N
Economical pressure	M														N
Distributing RUS passports to RUS speaking minorities	N														



Hybrid Actions Ranking – All Judges

		A	B	C	D	E	F	G
Land force build-up	A	11	10.5	6	8.5	11	2.5	9
Air/sea patrols	B	14	13.5	10	11	14	10	10
Snap exercises	C	13	12	8	8.5	12.5	5	13.5
Media Ops	D	12	13.5	13.5	10	12.5	14	11.5
Cyber attacks on NATO and national CIS	E	10	9	1	7	7.5	7.5	7
Dedicated assassinations and kidnappings	F	2.5	2	6	4	5.5	2.5	2
Acts of sabotage	G	2.5	2	3	5	4	4	5.5
IED attacks on critical infrastructure	H	2.5	2	3	3	2.5	1	1
Organised armed groups	I	2.5	5	3	13.5	1	7.5	4
Agent provocateurs / violent demonstrations	J	5.5	6.5	13.5	6	5.5	7.5	5.5
Physically blocking critical infrastructure	K	5.5	6.5	6	13.5	2.5	7.5	3
Funding RUS oriented media / political parties	L	9	10.5	9	2	10	13	13.5
Economical pressure	M	8	8	11.5	1	9	11	8
Distributing RUS passports to RUS speaking minorities	N	7	4	11.5	12	7.5	12	11.5

H_0 : there is no agreement between judges; p-value = $2.0E-06 < .05$, reject H_0
 Kendall's coefficient of concordance, $W = 0.56$; Spearman correlation $r = 0.48$



Hybrid Actions Ranked & Categorised

		Instrument of Power		Domain	Use of Force	Level of Operations (against NATO)		Level of Operations (against non-NATO)		Attribution
		PMEC	DIMEFIL	PMESII						
1	IED attacks on critical infrastructure	No match	No match	Multiple	Actual use of force	Violates	Sovereignty	Threatens	Political Order	Deniable
2	Dedicated assassinations and kidnappings	No match	No match	Political	Actual use of force	Violates	Sovereignty	Threatens	Political Order	Deniable
3	Acts of sabotage	No match	No match	Multiple	Actual use of force	Violates	Sovereignty	Threatens	Political Order	Deniable
4	Organised armed groups	No match	No match	Multiple	Actual use of force	Violates	Territorial Integrity	Threatens	Political Order	Attributable with evidence
5	Physically blocking critical infrastructure	Civil	Complementary capabilities	Multiple	Threatening the use of force	Violates	Sovereignty	Threatens	Political Order	Immediately and clearly attributable
6	Cyber attacks on NATO and national CIS	Civil	Information	Multiple	Non-violent	Violates	Sovereignty	Threatens	Political Order	Highly deniable
7	Agent provocateurs / violent demonstrations	No match	No match	Multiple	Actual use of force	Threatens	Political Order	Threatens	Political Order	Deniable
8	Economical pressure	Economic	Economic	Economic	Non-violent	Threatens	Political Order	Threatens	Political Order	Immediately and clearly attributable
9	Land force build-up	Military	Military	Political	Threatening the use of force	Threatens	Territorial Integrity	Threatens	Political Order	Immediately and clearly attributable
10	Distributing RUS passports to RUS speaking minorities	Civil	Complementary capabilities	Political	Non-violent	Threatens	Political Order	Threatens	Political Order	Immediately and clearly attributable
11	Funding RUS oriented media / political parties	Economic	Economic	Political	Non-violent					Deniable
12	Snap exercises	Military	Military	Political	Threatening the use of force	Threatens	Territorial Integrity	Threatens	Political Order	Immediately and clearly attributable
13	Air/sea patrols	Military	Military	Political	Threatening the use of force	Threatens	Territorial Integrity	Threatens	Political Order	Immediately and clearly attributable
14	Media Ops	Civil	Information	Multiple	Non-violent					Attributable with evidence



Conclusions and Possible Application

- Conclusion
 - It is possible to use subjective analysis techniques to rank hybrid actions on a scale of conduct
 - Subjective interpretation correlates with some objective criteria
- Applications
 - Identify information requirements: would additional information increase consensus on actions with widest variance?
 - Compare groups: how do political assessments compare to military assessments?
 - Compare over time: how does year 20xx compare to 20xy?
 - Compare interpretations of 'unacceptable'
 - Assess Alliance actions from RUS perspective



Discussion



Assessing Deterrence versus Assessing Conduct

Assessing deterrence:

- Need to know:
adversary's prior intent
and adversary's current
intent
- Need to establish
causation between own
action and change of
intent

Assessing conduct:

- Need to know: prior level
of conduct and current
level of conduct



Normal OPSA vs Conduct Assessment

'Normal' Operations Assessment

- Gather objective data
 - Gathering the same data over different time periods provides consistency
 - The data is a direct observation of one aspect of the desired effect, e.g. kinetic incidents are a direct observation of security
- Place that data into context (information) – the 'context' is constant, e.g. Afghanistan, but may require subjective interpretation
- Combine this information into understanding, will require subjective interpretation
- Provides a subjective assessment based on objective directly-relevant data (evidence), the data provides consistency, auditability, etc.

Assessing conduct

- Gather objective data
 - Different data sets for each period
 - The data is an indirect observation of the desired effect, i.e. observation of behaviour, the effect is aimed at opinions (perceptions)
- Place that data into context (information) – different contexts for each period, e.g. operations in Ukraine versus operations in Syria, so will require subjective interpretation
- Combine this information into understanding, will require subjective interpretation
- Provides a subjective assessment based on subjective interpretation of indirectly-relevant data (evidence), little consistency



Method

- Produce summary of events for each year
- Conduct pairwise comparison in order to identify consensus
- Extract events with consensus and an average ranking = overall average
- Conduct pairwise comparison for all combinations
- Construct ordinal (interval?) scale of conduct



Topics/Template for Annual Summary

- RUS use of Diplomatic IoP against NATO and/or NATO Nations
- RUS use of Information IoP against NATO and/or NATO Nations – Is cyber a separate topic?
- RUS use of Military(+) IoP against NATO and/or NATO Nations
- RUS use of Economic IoP against NATO and/or NATO Nations
- RUS use of Military IoP on NATO's periphery
 - Afghanistan, Balkans, Crimea, Iran, Syria, Ukraine



Military IoP

AJP-01(E): The military instrument. Military power can be used in conjunction with the other instruments in a wide variety of circumstances. Military force is therefore an instrument of policy. Operations are characterized by the activities undertaken and by the context within which they take place; for example, the military contribution to deterrence, conflict prevention, disaster relief, stabilization and reconstruction, and combat. Integrating the military instrument early into a collective strategy is critical and is enabled at a high level by continuous effective civil-military interaction (CMI). The Alliance will use military force, which is a component part of the military instrument, only as a last resort.