

MORS Workshop Outbrief: Improving Cooperation among Nations in Irregular Warfare Analysis

Overview

December 11-13, 2007

Naval Postgraduate School,
Monterey, CA



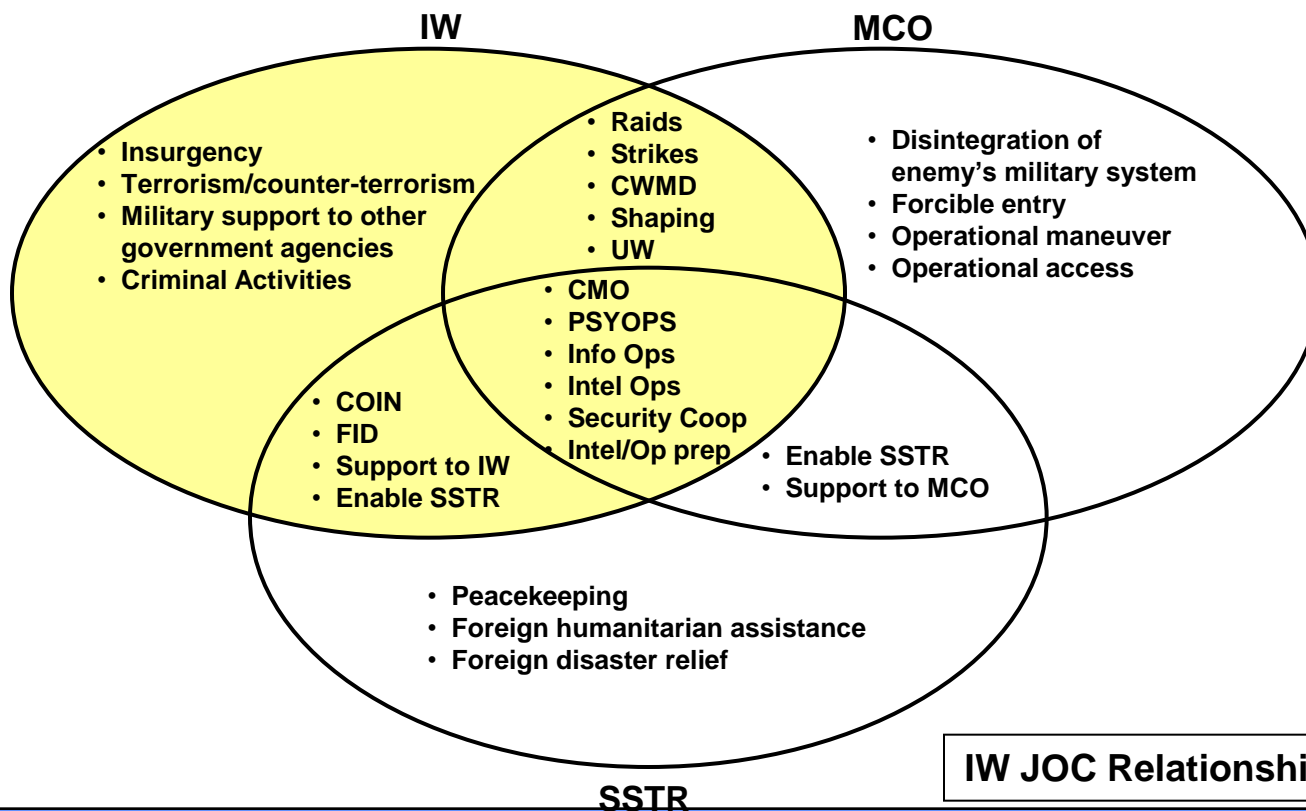
Overview

- **Title:** *Improving Cooperation among Nations in Irregular Warfare Analysis*
- **Organization**
 - 11-13 Dec 07, held at UNCLASS level at Naval Postgraduate School, Monterey, CA
 - Program chairs: Dr. Al Sweetser and Dr. Karsten Engelmann
 - 10 Dec pre-conference session: Pythagoras Users Group (Dr. Bob Sheldon)
 - 4 workshop working groups: (1) COIN, (2) Counter-terrorism, (3) Stability Ops, (4) Maritime Security Ops
- **Objectives**
 - To enhance collaboration among U.S., allies and partner military and interagency analysts and subject matter experts in the area of Irregular Warfare.
 - To improve the ability of U.S., ally, and partner defense analysts to use analytically supported wargames to assess Irregular Warfare.
- **Context**
 - Changing strategy with greater emphasis on Irregular Warfare (NDS, QDR, IW JOC)
 - Continuing emphasis on building partnership capacity (BPC Roadmap, TSC, etc)
- **Scope:**
 - Focus on counterinsurgency, counter-terrorism, stability operations, and maritime security operations
 - Tools/methods, algorithms, historical/current data sources, on-going analysis, opportunities for collaboration on future analysis and tool development

Irregular Warfare Defined

IW Operations include:

- Insurgency and Counterinsurgency (COIN)
- Unconventional Warfare (UW)
- Stability, Security, Transition, and Reconstruction (SSTR)
- Civil-military Operations (CMO)
- Information Operations/Psychological (IO/PO)
- Cyberspace
- Counter Terrorism (CT)
- Foreign Internal Defense (FID)
- Counter WMD (CWMD)
- WMD Proliferation (WMD/P)
- Human/Cultural Behavior (H/B)



IW JOC Relationship to other JOCs

What Was Special About This Workshop?

•Participation:

- 165 participants, including 40 internationals from 20 different countries
- The interaction among participants from varying backgrounds (operators, regional experts, analysts, wargamers) dramatically enhanced the experience of participants!

•Experience:

- Use of two, diverse war games to explore their value
- A survey provided near real time feedback on the experience
- The workshop was far more experiential than prior MORS events!

Participating countries included the Algeria (1), Australia (2), Bangladesh (1), Canada (4), Colombia (3), El Salvador (1), Germany (1), Guyana (1), India (2), Israel (1), Japan (1), Kenya (1), Morocco (1), Netherlands (1), Niger (1), Pakistan (3), Saudi Arabia (1), Serbia (1), Singapore (2), UK (11), US (125).

Key Plenary Insights

- **Dr. Conrad Crane, AWC (lead editor FM 3-24)**
 - Military plays a supporting role in IW but it is proving difficult for the military to hand-off responsibilities to other organizations
 - COIN involves adaptive, learning organizations on both sides
 - Paradox: the more you protect the force the less secure you are
 - Insurgents tend to win conflicts that last 4-9 years
- **COL Joe Osborne, Irregular Warfare Directorate (J10), USSOCOM**
 - IW conflicts often involve very long time span (years, decades)
 - DoD should rebalance joint force mix and include interagency and allies in our plans
- **Ted Smyth, FS, MORS Workshop on Wargaming & Analysis**
 - Analysts-artists-architects paradigm for IW wargame design – need composite approach
 - Wargames need to reflect the dynamics of multi-sided conflict
 - Real world data collection essential
- **International panel**
 - Common perspectives:
 - Holistic, whole of government approach needed
 - Methods used: study friendly/adversary doctrine; historical analyses
 - Tools: agent based models; system dynamics models
 - Selected gaps
 - Dealing with complex human behavior
 - Attacking a “business” (e.g., narcotics)
 - Understanding how to control an area with minimal presence

Perspective	Focus	Judged by
Analyst	Model	Realism
Artist	Stimulate	Real Emotions
Architect	Distill (Decisions)	Focus (Choices)

Common Insights from Working Groups

- Planning/operations
 - “Whole of government” approach needed
 - PMESII effects & DIMEFIL actions provide a useful framework for planning AND analysis
 - Adaptive learning is an essential ingredient to success (for any side)
- Tools, methods, data & metrics
 - Significant gaps exist between analytical capability & operator needs
 - Increased collaboration across U.S. government & allies in both analysis and tool/method/model development could be beneficial
 - Hybrid analytic approaches (e.g., war game - model - war game or integration of multi-models); appear to be the most promising means of conducting analysis in the near term
 - There is no single “campaign-level” model for IW
 - Wargames provide insights and understanding by bringing together operators, subject matter experts, and analysts

- **Insights from National Defense University Counter-Terrorism students**
 - Focus on *comparative* Counter-Terrorism: cultural, religious, social, economic, psychological origins of terrorism
 - Common themes
 - Motivations of terrorists varied by country
 - Keep people employed, married, engaged with community
 - Foster education / reform of educational systems
 - Most countries have a country Terrorism Center and elite forces combating terrorism

Wargames – Key Outputs

- **Wargames were conducted with two different tools examining a common, unclassified scenario**
 - **“Algernon,” adapted from a commercial wargame “Algeria, 1954”**
 - **High level representation of conflict – supports rapid assessment of different strategies for each side; multiple iterations conducted by multiple teams**
 - **“Peace Support Operations Model,” (PSOM), collaborative development of JS J8, OSD PA&E, and UK DSTL**
 - **Much more structured detailed model, reflecting extensive UK operational experience; five turns conducted as part of a single game**
- **Reflections from wargame participants:**
 - **Provides a structured environment for participants to identify and discuss key issues**
 - **The tools used (Algernon, PSOM):**
 - **Aided in understanding effects of soft factors (Political, Information, Social)**
 - **Illustrated complexities of IW to participants**
 - **Captured the asymmetry of military power (advantage to the government) and information (advantage to the insurgent)**
 - **Tools are helpful, but the game’s value lies in eliciting the knowledge & insights of participants; operators, regional & subject matter experts, & analysts all needed**

Summary: Selected IW Analysis Challenges

*There are many, many challenges to developing IW Analytical Models;
These are but a few key ones*

- Building foundational understanding of IW to support M&S (e.g., theory, methodology, data)
- Coping with data challenges
 - Social environment data
 - “On the ground” HUMINT data
- Modeling the Human Terrain: the social world
 - Modeling social change, both cultural and structural
 - Representing social networks
 - Integrating micro- and macro-issues (e.g., individual, group, society-level actions and effects)
 - Understanding the non-military effects IW operations produce
- Modeling an adaptive, opportunistic adversary
 - Structurally fluid organizations
 - Flexible Blue response to adaptive adversary
- Addressing M&S Verification, Validation, & Accreditation (VV&A)

Summary: Suggestions for the Way Ahead

- **Continue to promote international partnerships and collaborative IW analysis; the US analytical community has much to share as well as to learn from our partner's experience**
 - **NATO IW workshop is already in planning**
- **Continue unclassified workshops like this but consider allocating a day or so at the end for classified discussions**
- **The participation of National Defense University Counter-Terrorism students added immensely to the quality of the workshop discussions; Seek opportunities to integrate them in future DoD analysis**
- **The participation of civilian wargamers like Brian Train, the developer of “Algeria 1954,” was eye-opening**
 - **Consider sponsoring a competition like DARPA's “Desert Challenge” to solicit ideas for developing IW simulation tools**
 - **Consider sponsoring an unclassified wargame, perhaps in conjunction with MORSS**

Back Up

WG 1 (COIN) Key Outputs

Analytical methods with greatest utility for COIN Analysis

Real world

- Scope / Understand
 - Seminar exercises
 - Historical analysis
- Analysis / Test
 - Agent-based simulation
 - Gaming/wargaming
- Decide /Confirm
 - Cost benefit analysis
 - System dynamics

Scenario analysis/acquisition

- Scope / Understand
 - Seminar exercises
- Analysis / Test
 - Physics based models
 - Agent-based for system of systems
 - Field trials
- Decide /Confirm
 - Cost benefit analysis
 - Collaborative analysis techniques

WG 2 – Combating Terrorism (CT) Key Outputs

- Combating terrorism requires successful integration of local & regional ops
- Analysis must consider tipping points/sparks, resonance, and exploitation
- Assessment of analytical methods for CT analysis:
 - **Wargaming**
 - Incorporates human factors
 - Time-intensive to branch and achieve statistical significance
 - **Agent-Based Simulation**
 - Enables modeling of adaptation, emergent behavior
 - Tends to be general and lack rigor
 - **Game Theory**
 - Captures strategy
 - Works best with limited number of moves
 - **Artificial Intelligence**
 - Incorporates expert systems and uncertainty (fuzzy, Bayesian)
 - Tends to be correlational rather than causal
 - **System Dynamics**
 - Captures system structure and feedback
 - Difficult to simulate network structure change
 - **Integrative Toolkits (e.g., COMPOEX)**
 - Composable modules of social science theories, methods, and models
 - Needs further development

WG3 (Stability Ops) Key Outputs

- The “Lessons Learned” process:
 - Will we avoid an IW “Surge, then purge” of lessons learned?
 - Difference between lesson identified and lesson learned
- The US could learn from governments that have national police and how they interact with military (e.g., Italy)
- Question to U.S. military analysts: “How many inter-agency analysts are linked to your *Facebook* page?”
- Shared “whole of government” mental models (operational design) needed prior to planning
 - “Commander’s Appreciation and Campaign Design”, TRADOC Pamphlet 525-5-500”*
- Recommendation: MORS sponsor an annual wargame or *Desert Challenge*-like event to develop IW tools

WG4 (Maritime Irregular Warfare)

- Maritime IW is different! It encompasses:
 - Protection of shipping and critical infrastructure
 - Maritime theater security cooperation
 - Humanitarian assistance
- Search theory and kinetic effects modeling are applicable or can be adapted to some maritime IW problems
- Some key issues for analysis:
 - Pattern recognition
 - Integration of HUMINT
 - Non-lethal weapons
 - Ship boarding techniques
- There are rich opportunities for collaborative international analysis as a result of extensive partnership activities