


**15th ISMOR THEME:
IS A REVOLUTION IN
ANALYSIS REQUIRED?**


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**CANADIAN DEFENCE
OPERATIONAL RESEARCH:
CHANGES AND CHALLENGES**

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**PRESENTATION
CONTENTS**

- CHANGES IN THE DEFENCE ENVIRONMENT
- ROLE OF OPERATIONAL RESEARCH
- CRITICISMS/SHORTCOMINGS
- THE FUTURE
 - PLANNING
 - PEOPLE
 - CLIENT, CLIENT INTERFACE
 - ORGANIZATION
 - TOOLS, TECHNIQUES, AND TECHNOLOGY


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**CHANGES IN THE
DEFENCE ENVIRONMENT**

WELL DEFINED THREAT	⇒ CHANGING THREAT
COMBAT OPERATIONS	⇒ COMBAT AND OOTW
SINGLE SERVICE FOCUS	⇒ JOINT & COMBINED FOCUS
LARGE FORCES	⇒ SMALLER FORCES
AVAILABLE RESOURCES	⇒ RESOURCE CONSTRAINED
ATTRITION FOCUS	⇒ PRECISION STRIKE
NATIONAL FOCUS	⇒ GLOBAL FOCUS
INTENSIVE, STRUCTURED ANALYSIS	⇒ QUICK TURNAROUND ANALYSIS
EXTENSIVE TEST AND EVALUATION	⇒ LESS TESTING, MORE M&S
WHAT'S THE COST	⇒ BEST BANG FOR THE BUCK

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PREDICTING THE FUTURE

“when you get the urge to predict the future, better lie down until the feeling goes away”

Forbes Magazine USA 1976 following a review of forecasts made in 1956.

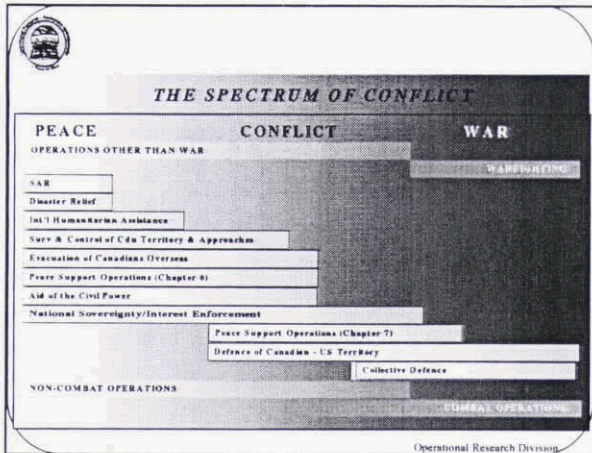
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RECENT FUTURE WORK FUNDINGS

- EXPECT NOVEL MODES OF COERCION OR ATTACK.
- HIGH PROBABILITY SECURITY RISKS NEED DIFFERENT CAPABILITIES THAN FOR UNLIKELY MAJOR CONFLICTS.
- IMPACT OF INDUSTRIAL RESTRUCTURING.
- ADVANCES IN FAST DESIGN AND BUILD.
- THE NATURE OF NATION STATES AND ALLIANCES CHANGING.
- PUBLIC OPINION IS HAVING MORE INFLUENCE ON DECISION MAKING.

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THE ANALYSIS SPECTRUM

	Individual Environments	Joint / Combined
Strategic	✓✓	✓✓✓✓
Operational	✓✓✓	✓✓
Tactical	✓✓✓	✓

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OPERATIONAL RESEARCH DIVISION MISSION

TO PROVIDE EXPERT, TIMELY AND OBJECTIVE ADVICE BASED ON SCIENTIFIC METHOD. THE FOCUS OF THE EFFORT SUPPORTS:

- MEASURING THE IMPACT OF FORCE DEVELOPMENT AND RESOURCE ALLOCATION DECISIONS;
- PROVIDING ANALYTICAL ADVICE THROUGHOUT THE ACQUISITION PROCESS;
- CONTRIBUTING TO THE IMPROVED OPERATIONAL EFFECTIVENESS AND EFFICIENCY OF THE CF AND DND TODAY AND INTO THE FUTURE.

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- ### CRITICISMS/SHORTCOMINGS
- LEVEL OF MILITARY KNOWLEDGE NOT WHAT IT USED TO BE;
 - REALITY DOESN'T ALWAYS MATCH ANALYTICAL ASSUMPTIONS;
 - CONFLICTING STUDY RESULTS;
 - RESULTS NOT ALWAYS TIMELY;
 - STUDIES IGNORE THE FINANCIAL ASPECTS TOO MUCH;
 - ANALYSTS ARE TOO ABSTRACT IN THEIR PRESENTATIONS.
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THE QUESTION

HOW SHOULD THE ANALYSIS COMMUNITY CHANGE TO MEET THE ANALYTICAL DEMANDS TO SUPPORT DECISION MAKERS

- IN A DECISION ENVIRONMENT OF INCREASED AND CHANGING DEMANDS?
- UNDER THE CONSTRAINTS OF REDUCED RESOURCES?

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- ### THE FUTURE
- PLANNING
 - PEOPLE - ANALYST CAPABILITIES
 - CLIENT, CLIENT INTERFACE
 - ORGANIZATIONAL CHANGES
 - TOOLS, TECHNIQUES, AND TECHNOLOGY
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PLANNING

- AN ESSENTIAL STEP
- TO ANTICIPATE AND RESPOND TO CHANGING DEMANDS
- MUST IMPLEMENT RESULTS
- MUST FOLLOW-UP

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PEOPLE ANALYST CAPABILITIES

- EDUCATION
- RECRUITMENT
- TRAINING
- MENTORING
- INTELLECTUAL CHALLENGES
- COMMUNICATIONS/TEAMWORK
- SPECIALISTS vs GENERALISTS
- RESPONSIBILITY, INFLUENCE

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CLIENT, CLIENT INTERFACE

CLIENT

- LESS TIME FOR ISSUES THEMSELVES
- MORE TIME PRESSURE
- MORE DEMAND AND BROADER SCOPE FOR ISSUES
- DEDICATED PERSONNEL

CLIENT INTERFACE

- RESPONSIVENESS
- NEW LINKAGES

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ORGANIZATIONAL CHANGES

- ANALYST TO SUPPORT RATIOS
- LAYERS OF MANAGEMENT
- CRITICAL MASS
- AGE DISTRIBUTION ISSUES
- TEAM WORK/COLLABORATION
- FUNCTIONAL AREA KNOWLEDGE

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TOOLS, TECHNIQUES AND TECHNOLOGY

- INCREASED USE OF TECHNOLOGY HAS RESULTED IN MAINTENANCE OF PRODUCTIVITY WITH REDUCED RESOURCES
- EMPLOYMENT OF TECHNOLOGY
- TOOL DEVELOPMENT (INCL VV & A)
- INTEGRATION OF “SOFT” OR TECHNIQUES
- TOOL APPLICATION, TIMELINESS
- DATA
- TRANSPARENCY OF MODELS/TECHNIQUES

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CONCLUSIONS

- WORLD OF ANALYSIS IS CHANGING
- PLANNING IS ESSENTIAL
- OR PRACTITIONERS AND TOOLS NEED TO ADAPT TO THE CHANGES

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