I. Overview

II. Future Security Environments

III. Implications and Recommendations

IV. Military-Political Approaches
I. Overview
Overview

Chapter 1: Domestic Political and Social Stability
Chapter 2: Defense Spending and Military Capabilities
Chapter 3: National and Transnational Objectives, Military Doctrines, and Approaches to the Use of Force
Chapter 4: Interstate Bilateral and Multilateral Relationships
Chapter 5: Future Security Environments
  I. Status Quo Redux
  II. Asia-Pacific Cold War
  III. Pacific Asia-Pacific
  IV. Asian Hot Wars
  V. Challenged Region
Chapter 6: Implications and Recommendations
  Strategic Risks
  Strategic Opportunities
  Conditions
  Recommendations
General Trends

Conflictual Trends

- Domestic instability in key states: China, North Korea, Russia
- Arms races, military crises, and the nuclearization of the Korean peninsula
- Adverse changes in foreign policies toward greater assertiveness / ultra-nationalism
- Growing lack of confidence in and unity within the U.S.-led alliance system

Cooperative / Positive Trends

- Prioritization of peaceful economic development
- Economic integration and transnational and nontraditional security threats
- Absence of strongly aggressive national objectives and military doctrines
- Some prospects for cooperation among U.S. Allies
- Low likelihood of a U.S.-China military conflict over Taiwan
II. Future Security Environments
Five different security environments in the Asia-Pacific over the next 25 years (in order of likelihood):

I. **Status Quo Redux**: Constrained but ongoing economic and political competition alongside continuing cooperation.

   - National objectives and military doctrines are development-oriented and restrained; suspicions remain regarding security intentions and capabilities, fueling competition and increasing levels of defense spending.
   - The U.S.-led hub-and-spokes alliance system remains a major feature of the regional security order; high levels of economic and political engagement; sensitive issues (e.g. territorial disputes) remain unresolved.
II. Asia-Pacific Cold War: Deepening regional bipolarization and militarization, driven by a worsening U.S.-China strategic and economic rivalry.

— Decision to move away from the status quo environment due to a political-military crisis or the emergence of ultra-nationalist leadership; zero-sum conception of national interests and greatly intensifying security competition, including an intense arms race over the ability to control the first and second island chain.

— Efforts to expand bilateral and multilateral trade at the expense of the other side; cooperation on transnational issues virtually disappears; reductions in the level of economic interdependence among major powers.
III. Pacific Asia-Pacific: Increased U.S.-China and regional cooperation and tension reduction.

— Stable and enduring balance of power, with investment in the resolution or management of transnational issues and the creation of significant regional security structures that reduce distrust.

— High levels of verifiable restraint in the development and deployment of certain types of military capabilities; deepening levels of economic integration; the development of more effective global energy cooperation.
IV. **Asian Hot Wars**: Episodic but fairly frequent military conflict in critical hotspots, emerging against a cold war backdrop.

- Mutually hostile domestic political environments; the emergence in both the U.S. and China of ultranationalist leaderships, with possible domestic instability in China. Polarization as third parties pressured to choose sides; cooperation on transnational issues virtually disappears; no bilateral or multilateral security assurances; reductions in the level of economic interdependence among major powers.

- War-oriented national objectives and military doctrines; efforts to strengthen or create military alliances; severe crises due to deterrence miscalculation and “tests” of resolve. Sustained, very high levels of defense spending.
IV. **Challenged Region**: A region beset by social, economic, and political instability and unrest separate from U.S.-China competition.

— Focus on domestic and transnational challenges; low economic growth rates; possible domestic instability in China. Alliances and multilateral mechanisms increasingly focus on managing transnational issues.

— Drivers of security competition or crises become less important; focus on stabilizing such problems in order to permit resolving overwhelming transnational threats. Defense spending declines or remains level; credible security assurance mechanisms and improvements in managing crises.
III. Implications and Recommendations
Strategic Risks

Primary Risks

• A shift in national resources toward security competition
• Increased tests of resolve and political-military crises
• A United States more embroiled in third-party disputes
• Greater challenges to the unity and power of the U.S. alliance system

Secondary Risks

• Exclusionary political and economic arrangements
• Severe domestic instability and violent regime collapse in North Korea
• Domestic instability and nationalist forces in China
• U.S. miscalculations or overreaction in response to a more powerful and assertive China
Strategic Opportunities

- Common support for continued economic growth
- The absence of deeply adversarial and existential disputes
- Continuing American strength
- The possibility of a more flexible China
- The possibility of more cooperation in dealing with North Korea
- The imperative to cooperate in dealing with transnational threats
Recommendations

• **Clarify and prioritize primary, secondary, and tertiary** U.S. interests and policy methods in the Asia-Pacific

• **Conduct** an unprecedented U.S.-China strategic dialogue on the long-term future of the Asia-Pacific

• **Undertake** a range of strategic assurances between the United States and China

• **Clarify and strengthen** the U.S. position on maritime disputes

• **Develop** a coordinated force for SLOC defense, including the Chinese

• **Provide** greater support for a variety of crisis management mechanisms

• **Establish** a forum for the discussion of energy security issues

• **Strengthen** ASEAN institutions and increase engagement with individual ASEAN states
IV. Military-Political Approaches
Military-Political Approaches

Robust Forward Presence
• A deterrence-centered response designed to retain unambiguous allied regional primacy through either highly ambitious and forward deployment-based military concepts, such as Air-Sea Battle, or approaches more oriented toward long-range blockades, such as Offshore Control

Conditional Offense/Defense
• A primacy-oriented response that nonetheless avoids both preemptive, deep strikes against the Chinese mainland and obvious containment-type blockades and stresses both deterrence and reassurance in a more equal manner

Defensive Balancing
• A response that emphasizes mutual area denial, places a greater reliance on lower visibility and rear-deployed forces, and aims to establish a more genuinely balanced and cooperative power relationship with China in the Western Pacific
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<th>Military-Political Approaches</th>
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<tr>
<td><strong>Possible Doctrines/Operational Concepts</strong></td>
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## Military-Political Approaches

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<th>Affordability</th>
<th>Political/Bureaucratic Feasibility</th>
<th>Deterrence Capacity</th>
<th>Alliance Integration</th>
<th>Sino-Alliance Tension</th>
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<tr>
<td>Robust Forward Presence</td>
<td>Low</td>
<td>Variant A: Mid</td>
<td>Mid-High</td>
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<td>Variant B: Low</td>
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<td>Variant B: High</td>
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Conflict and Cooperation in the Asia-Pacific Region

A Systems Dynamics Perspective

Naval Postgraduate School
Monterey, CA

Cliff Whitcomb | Gary Parker | Paul Beery | Chris Wolfgeher | CDR Michael Szczerbinski, USN | MAJ Chike Robertson, USA
I. Overview

II. Systems Planning Perspective

III. Systems Dynamics Model and Tool

IV. Summary
I. Overview
Overview

• Objective
• Systems Planning Perspective
• Systems Dynamics Model and Tool
Objective

• Provide planners, in support of decision makers, a tool to make better sense of the non-linear dynamics and feedback mechanisms at play in the complex environment in which they, and their competitors, operate to study ‘futures’
• Broaden the horizon of strategic thinking and inform planning
• Use a systems approach
Context

• Focus Model on Key Influencing Variables
  – Identified by project stakeholders

• Create Flexible, Sustainable Computer Tool
  – Commercial modeling tool
  – Interface and model details available for manipulation to planners and analysts
  – Design interface in basic form to allow users to adapt to their desired form in final end use
    • Avoid implementing detailed usability “design” in the flight simulator user interface
II. Systems Planning Perspective
Systems Approach

• Based on Systems Thinking
  – Considers ‘world’ view
  – Thinking determines what you do about what you see

• Systems Thinking is a Mindset
  – General Systems Theory (von Bertalanffy, 1937)

• Replaces Reductionism (Analysis Basis)
  – Belief that everything can be reduced to individual parts –
    understand how a system works – study parts

• Embraces Expansionism (Synthesis Basis)
  – Belief that system can be a sub-system of larger system –
    understand why system works as it does – study system
Systems Planning Perspective

• Reactivist – embraces the past environment
• Inactivist – satisfied with the way things are
  • Seek to avoid errors within the current system – want to avoid errors of *commission*
• Preactivist – unsatisfied with past, as well as current
  • Seek to understand all aspects of future that may impact success – want to avoid errors of *omission*
• Interactivist – believe future is subject to creation
  • Seek having stakeholders solve problems themselves

Ackoff 1981
III. Systems Dynamics Model and Tool
• NPS Team Created Systems Dynamics (SD) Model
  – Allow planners to study futures based on interactions among factors
  – Context: Either raise or lower level of “tensions” between U.S. and China in Pacific region

• Used commercial SD software (iThink® version 10.0.6)

• Base model decomposed into five sub-models or domains
  – Tension
  – Military Actions
  – Demographics and Stability
  – Economics
  – Energy and Resources
SD Model Overview

I. Systems Dynamics Model and Tool

- Energy and Resources Sub-Model
- Military Actions Sub-Model
- Economic Sub-Model
- Tension Sub-Model
- Demographics and Stability Sub-Model
Opening the model takes user first to the Home page. Navigation from there is up to the user.
Still on the Interface Layer

Provides users with specific information on each of the sub-models
IThink Tool Simulation Page

- Simulation output area
- Key page for average users
- Contain model controls

User input controls
Simulation execution controls
IV. Summary
Summary

• Created systems dynamics tool to allow planners to study futures based on interactions among influencing factors
  – Used commercial SD software (iThink® version 10.0.6)

• Provides planners a tool to gain additional insight from a systems perspective
  – Includes non-linear dynamics and feedback mechanisms at play in complex environment in which they, and their competitors, operate
Simulation Structure

Analytic Product:
- Carnegie Analysis
- START Analysis
- CSIS Analysis
- GMU Analysis

Start-State Scenario
-------------
White Noise Updates
-------------
Input by ‘PACOM’ Subjects

Six storylines driving towards either “Status Quo Redux” or “Asia Pacific Cold War” outcomes

Updated Scenario composed of individual variable and indicator updates – moves towards one of 5 proposed ‘Future Scenarios’

Repeat, Round II

Round I: Five Year Window

36
Participant Groups

_Treatment Group:_
- Received access to all Analytic Product of the SMA effort
- Civilian GS, uniformed military, non-GS civilian
- Distribution of planning experience from 4 years to over 20 years, average of over 10 years
- Distribution of Asia-Pacific experience of 3 years to over 20 years, average of ~5 years

_Control Group:_
- Did not receive access to Analytic Product
- Civilian GS, uniformed military
- Distribution of planning experience from ~10 years to over 25 years, average ~17 years
- Distribution of Asia-Pacific experience of ~2 years to over 25 years, average of ~13 years
Key Findings
Divergence in Priorities Between Groups

• In Round I, little difference in major themes of planning inputs between groups

*In Round II (2020-2025) dynamic began to shift noticeably:

• Treatment Group overall shifted increasing priority to bilateral and multilateral relationship management (both in existing alliances and beyond) – 80% of inputs recommended specific adjustments

• Control Group remained more focused on force posture modifications, with only 20% of inputs recommending specific adjustments to bilateral and multilateral engagement
Divergence in Planning Priorities Within Treatment Group

- 80% of TG members reported *significant use* of the analytic product, while 20% reported little use, or use of only one tool or product

- Of the 80% of inputs for Round II recommending significant adjustments to bilateral and multilateral relationships, almost 90% were submitted by participants who reported *significant use* of the analytic product
Focus on Bilateral and Multilateral Engagements (Treatment Group)

- 20% Little or No Adjustment for Round II
- 70% Significant Use of AP
- 10% Little use of AP
Salience of PRC

- 85% of all inputs across both groups, and through both rounds, contained either specific focus on the PRC or a reference to the PRC related impact of decisions.

- In post sim questionnaire participants were asked to identify whether the thought the end-state of the simulation would see more competitive or cooperative relations between US and PRC – 70% said competitive, despite simulations structure and participant caveats.