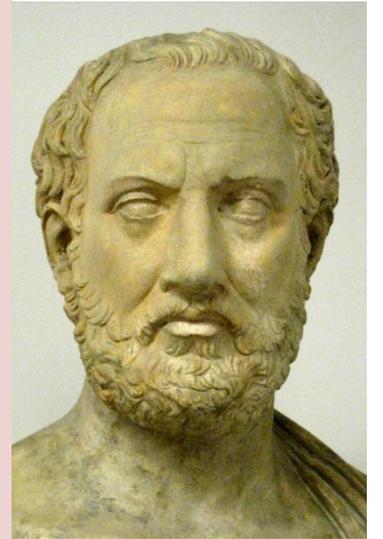


Military Planning, Adaptation, and Technological Innovation



War, Warfare, and Forecasting

“And the nature of the case first compelled us to advance our empire to its present height; **fear being our principal motive, though honor and interest afterwards came in.** . . . [I]t was not a very remarkable action, or contrary to the common practice of mankind, if we did accept an empire that was offered to us, and refused to give it up under the **pressure of three of the strongest motives, fear, honor, and interest.**” Athenian envoy addressing the Spartan war assembly (Thucydides, *The Peloponnesian War* I. 75-76)



“And I must tell you, when it comes to predicting the nature and location of our next military engagements, since Vietnam, **our record has been perfect. We have never once gotten it right,** from the Mayaguez to Grenada, Panama, Somalia, the Balkans, Haiti, Kuwait, Iraq, and more – **we had no idea a year before any of these missions that we would be so engaged**”. – Secretary of Defense Robert Gates (2012)

Agenda

- **The Character and Nature of War**
- **Innovation in Peace and War**
- **Challenges of Forecasting and the Utility of History**
- **Technology and Revolutions of Military Affairs: Promise and Peril**
- **Case Studies: The Third Offset Strategy & Multi-Domain Battle**
- **Conclusion and Key Takeaways**

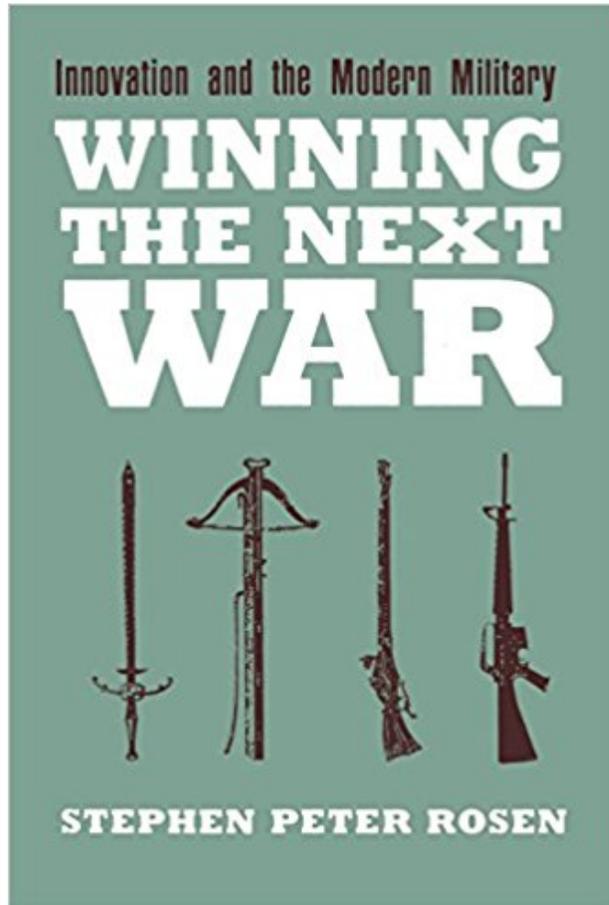
The Character and Nature of War

- Nature of War is *enduring*. . .
 - Connection to politics, and strategy
 - People as ‘root cause’
 - A duel, subject to Fog, Friction, and Chance
 - Non-linear
- But its character is routinely *in flux*
 - Contingent on how people fight (art and science of war)
 - Evolves and has emergent properties



“The first, the supreme, **the most far-reaching act of judgment** that the statesman and commander have to **make is to establish...the kind of war on which they are embarking**”—*On War*, Carl Von Clausewitz

Innovation in Peace and War

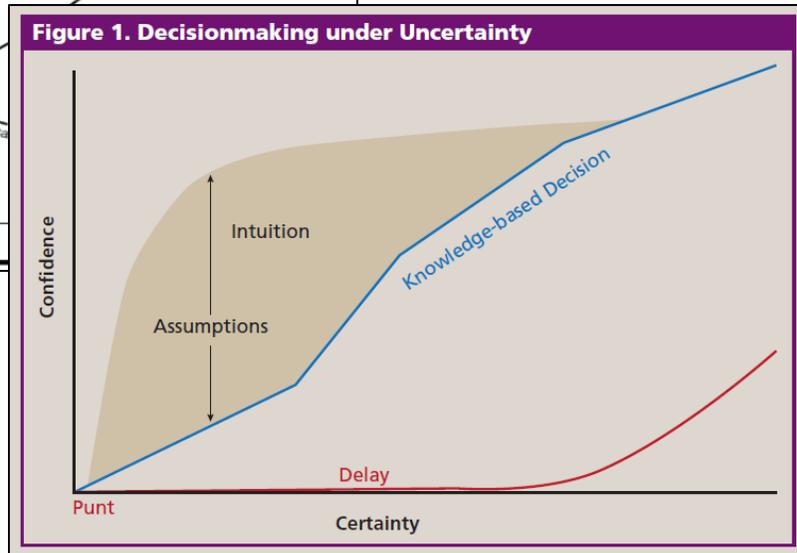
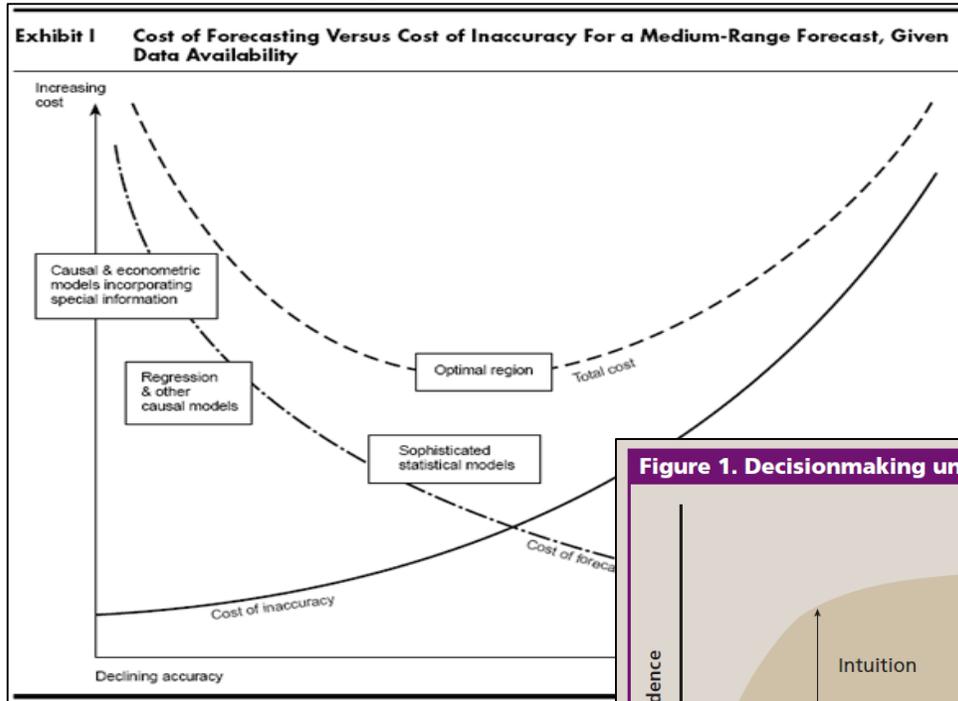


Key Lines of Inquiry from Rosen's book

- Peacetime Innovation
- Wartime Innovation
- Resources and Innovation
- Future Innovation

“ Military organizations do not innovate in peacetime simply in response to defeat or civilian intervention. Innovation in wartime is not a matter of seeing that existing methods do not work and then correcting them”- Stephen Peter Rosen

Challenges of Forecasting and the Utility of History



- All militaries...
 - Have to make “bets” on the future (force planning, force design, force employment)
 - Must make assumptions about the future character of war...and their adversaries
 - Face tradeoffs and pressures...politically, financially, bureaucratically
 - Cannot escape the “core logic” of strategy

“Since the future by definition has yet to happen, it is quite a challenge to assess any weight of evidence in self praise of one’s own foresight”- Dr. Colin S. Gray

Challenges of Forecasting and the Utility of History



(AP Photo by RIA Novosti, Alexei Nikolsky, of the Russian Presidential Press Service)

“The very ‘rules of war’ have changed. The role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness.”

- General of the Army Valery Gerasimov

The Value of Science Is in the Foresight

New Challenges Demand

Rethinking the Forms and Methods of Carrying out Combat Operations

General of the Army Valery Gerasimov, Chief of the General Staff of the Russian Federation Armed Forces

Technology and Revolutions of Military Affairs (RMAs): Promise and Peril

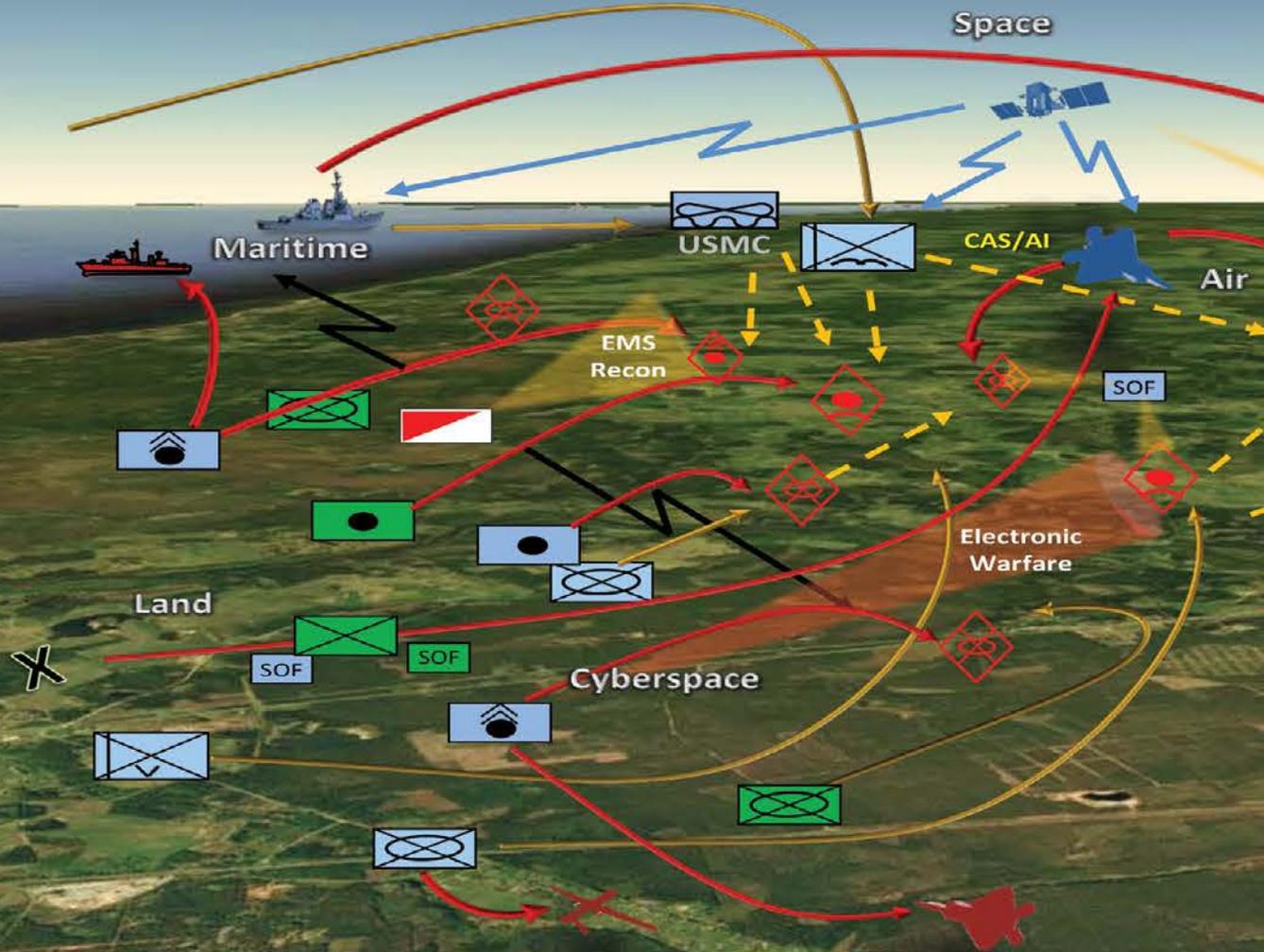
- **What is a Revolution of Military Affairs (RMAs)?**
 - **Marriage of Concept, Employment, AND Technology**
- **Differences from a ‘Military Revolution’?**
 - **Uncontrollable**→ Shifts “Framework” of War
- **RMAs and the Nature and Character of War**
 - **Technological Innovation ≠ RMA**
- **Hopes of 1990s RMA proponents and 9/11 Wars**



The Third Offset Strategy

- What is meant by “offset”?
- What were the “First” and “Second” Offset?
- Why a “3rd Offset”?
 - Conventional Deterrence
 - “Overmatching” adversary capabilities
- Key areas of emphasis:
 - Autonomous learning systems
 - Human-machine collaborative decision-making
 - Assisted human operations
 - Advanced manned-unmanned systems operations
 - Network-enabled autonomous weapons and high-speed projectiles

Multi-Domain Battle: Achieving Cross-Domain Synergy



“Multi-domain battle is a concept driven by proactive choice and informed by the threat of failure.

It is an evolution of the Army operating concept, detailing a response to our observations of developments in the South China Sea, Russian New Generation Warfare, and continued challenges in the Middle East.

It is an acknowledgment that the United States is reaching the end of a period in which it can make change by choice, without having taken severe losses.”—GEN David Perkins, TRADOC

Conclusion

- True Innovation is Conceptual, Organizational, AND Technological
- Innovation cannot be agnostic from Strategic Context to remain relevant
- As the human condition remains relatively unchanging, our propensity for war remains
- The practice of warfare will always have a lethal, imperfect, and sub-rational human dimension
- Military power in all forms has political meaning and purpose

“Given what we think we know and understand about past millennia, alas, it is completely safe bet that the human race will not improve. All we can do is be vigilant in our watch.”—Dr. Colin S. Gray

Discussion