Abstracts

1-Day Workshop on

Strategic Uncertainty in National Security

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Samuel Neaman Institute, Technion

Contents

ISR and the Condition of Persistent Uncertainty

Douglas Macgregor

Professional military leaders live in a world of incomplete information or persistent uncertainty. In an environment of persistent uncertainty it is always difficult to know with precision the strategic intentions and purposes of other great powers, let alone non-State terrorists and criminals. As a result, crises and conflicts continue to develop that defense planners frequently do not anticipate. When fighting begins, new capabilities inevitably emerge thanks to the innovative integration of new technology with new operational and tactical frameworks that were either misunderstood or missed beforehand.

Tightly networked sensors from seabed to space are the foundation for modern intelligence, reconnaissance and surveillance (ISR) operations. The application of precision firepower from stand-off attack weapons in all domainsland, air, space and seaand the maneuver of ground forces to achieve positional advantage depend on the effective collection, analysis and dissemination of accurate intelligence. Yet, despite the undeniable advantages in technology and firepower that the new technologies of ISR and Strike create, uncertainty persists.

Coping with persistent uncertainty demands a different approach, one that accepts the fleeting value of information and intelligence about the opponent. However, professional military leaders must liberate their thinking from the force planning constructs of the past. They must find low-risk ways of reducing national margins of vulnerability to the unknown or unanticipated technological breakthrough. National military leaders must recognize that military power, regardless of the form it takes, is no longer out-of-sight or out-of-reach for both Nation State and Non-state opponents. Disguising movement, intent and capabilities must be a full-time activity to protect the effectiveness of friendly ISR, as well as, to defeat the enemy's ISR capabilities. A wide-ranging mix of redundant means linked to an intellectually elastic, risk-conscious framework to assess opponents is vital.

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Logic in Action

Doron Avital

The lecture will present some of the main ideas of Doron's Avital's book, *Logic in Action* (Zemora-Kinneret Biran, 2012), in which he offers a novel model for planning, decision making and the very idea of the economy of risks. He examines key concepts such as Rules, Standards, Criteria, in view of the philosophy of language and logic of the 20th century — in center place the handling of these concepts in the philosophy of Ludwig Wittgenstein (1889-1951) — and shows how the misunderstanding of the logical structure of these concepts serves a false model of the relationships between planning and execution, akin to a similar fallacy that pertains to the relationship between the proposition to the fact it depicts. A false model that took dominance in our thinking in the second half of the 20th century and that we are now bound to depart from. In weaving together the logical analysis with case studies from his own combat and special operations experience as well as historical case studies the case is made in the support of the novel model offered in his book.

Strategic Uncertainty, Digital Technology and Formal Cause

Milo Jones

Without a proper diagnosis of the primary cause of strategic uncertainty in the current geopolitical environment, approaches to managing it will be sub-optimal at best. For that reason, this talk begins with the assertion that digital technologies are the new *formal cause* of our strategic environment, i.e. digital technologies are structuring our choices and shaping both causes and effects in the traditional domains of national security. A proper understanding of digital technology as a *formal cause* moves the discussion well beyond the new media environment, past "Cyber" as a new domain of conflict, and transcends any discussion of "Hybrid War". Those approaches treat digital technologies merely as *efficient causes,* technological triggers that bring about "effects." By treating digital technologies as a formal cause, they can be acknowledged as profoundly reshaping our political, social, economic and military environments for the foreseeable future. Simultaneously, a formal cause approach acknowledges that digital technologies are in the process of reshaping the very sensibility through which we perceive the current upheavals in the political, social, economic and military domains (which in every culture and country are currently structured by analogue, text and broadcast technologies). It is this new "reality of the virtual" that any doctrinal and methodological responses to contemporary strategic uncertainty must face. In other words, only when digital technologies are understood as constituting the formal cause underlying contemporary strategic uncertainty can specific defense policies can be formulated, threats analyzed and prioritized, and the useful tactical and strategic questions can be posed.

Conservatism, Innovation and Adaptation in Force Design

Meir Finkel

A lot was written in the last decade on the need for flexibility/adaptation during short and long conflicts. More was written in the previous decade (and since then until today) on the need for pre-war/peace time innovation. The American quest for "Third Offset Strategy" and the similar Israeli "Leap Strategy" are two examples. Nobody talks or writes on the third part of the equation — conservatism. The lesson we can draw from biological evolution and human sociology is that conservatism (= keeping the basic design with incremental modifications) is the preferred strategy when the environment is stable, and innovation is needed when uncertainty prevails. When tanks were dominating the battle field, failed American innovation with the new tank destroyers was replaced by the Sherman tanks. Within the technological boundaries of WWII, the tank and airplane arms race are examples of conservative force design. When missile technology developed in the 70s, a "leap" in military organization and tactics took place, but since then, a conservative force design is the rule. Cyberwar is opening the innovation-conservatism loop again. My contention is that conservatism should be added to the discussion. Too big an innovation "leap" in an uncertain era that we are living in can become an "innovation too far" when war will suddenly erupt. A "conservatism based innovation", means that innovation in one field will be based on grounded conservatism in another (as we can describe now the innovative German use of tanks, and counter T-34 tank adaptation, as based on the conservative employment of mission command). A force design process that will deliberately consider in which fields conservative lines should be taken, in which innovative ones, and how to promote battle field adaptation, will both benefit from "safer" innovation while minimizing the risk from "an innovation too far" crisis.

Decision-making in 'An Age of Uncertainty':

A Critical Analysis of the British Approach to Full-Spectrum Challenges

Rob Johnson

This paper offers an insight into the case example of the United Kingdom, and its approach to what was described, in its 2010 National Security Strategy, as 'An Age of Uncertainty'. The British decision-making process is an interesting one, but it is often studied from the point of view of strategic theory or policy-making, ignoring some of the behaviours that constrain decision-making, such the impact of certain organisational structures and the influence of individuals. These constraints have a far greater impact than the legacy of history, which is often thought to influence British thinking very strongly. The production of written doctrine and national strategies does however give us a strong empirical basis for analysing the British approach to futures of deep uncertainty, what they perceive as the 'full-spectrum' of threats and challenges that lie ahead, and their international relations with the United States, Commonwealth partners, Europe and other parts of the world. This paper evaluates what assumptions underpin British thinking, their record of managing uncertainty over three decades, and what insights can be derived more generally about strategic decision-making.

What Strategic Planners Need to Know in the Age of Uncertainty

Yakov Ben-Haim

Strategic planners need two distinct intellectual capabilities. First, extensive topical or disciplinary expertise, supported by a broad understanding of the world, is needed for dealing with complex subtleties of human affairs. Second, methodological expertise in decisions under uncertainty is needed for dealing with unique situations involving innovation, discovery, and surprise by friend or foe.

One argument for this dichotomy of intellectual capabilities is based on the uniqueness of historical circumstance. Each strategic planning situation has many unique attributes of culture, geography, technology, ideology, etc. E.g. Britain's counterinsurgency (COIN) strategy in Malaya was, in many respects, quite different from its COIN in Northern Ireland, and both were different from British COIN in Kenya, Brunei, Malaysia, Radfan (Yemen) and Dhofar (in Oman). While there are generic aspects of all conflicts, historical distinctiveness and innovation are also characteristic. This makes the identification of useful concrete rules of strategy difficult. (Clausewitz would agree.) Thus, strategists need both profound understanding of human affairs and societies, and expertise in managing surprise and uncertainty.

Another argument for expertise in managing uncertainty is based on Shackle-Popper indeterminism (SPI), which will be discussed. SPI provides a generic epistemic framework for understanding historical idiosyncracy and the prevalence of non-probabilistic Knightian uncertainty.

So, what do strategic planners need to know? Disciplinary expertise based on broad understanding of human affairs, together with expertise in managing uncertainty and surprise. Info-gap robust satisficing, to be briefly described, provides a versatile conceptual framework for managing uncertainty.