



Institute of Defence and Strategic Studies



Future Systems Directorate

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CONTEMPORARY CONFLICT

[Hamas and the 'Green Revolution'](#)

Janes Intelligence Digest - 29 September 2005

In what looks set to become the next political minefield in Israeli-Palestinian relations, Prime Minister Ariel Sharon has made it clear that Israel does not want the Islamic Resistance Movement (Hamas) to participate in the Palestinian legislative elections scheduled for January 2006. In essence, Hamas appears to have switched to a phased plan that prioritises long-term political popularity over the use of force against the Palestinian authorities. However, there is also the view that the militants' ultimate goal will remain unchanged: the establishment of an Islamist regime in the entire area of what was once Palestine under the British Mandate.

COUNTER-TERRORISM

[Will, Resolve Key to Defeating Terror, Leaders Say](#)

American Forces Press Service – 29 September 2005

U.S. leaders of the American effort in Iraq told senators that U.S. strategy in the country is correct and that Americans must see it through. All called for patience as Iraqis prepare to vote on their proposed constitution Oct. 15 and hold national elections Dec. 15.

DEFENCE ECONOMY

[The Economic Costs of the War in Iraq](#)

AEI-Brookings Joint Center for Regulatory Studies Working Paper 05-19 – September 2005

In this joint report, the *American Enterprise Institute* and the *Brookings Institution* provide a comprehensive estimate of the direct costs, both present and future, of the war in Iraq. While US budgetary allocations for the war total \$212 billion, "the actual direct cost...[includes] the opportunity cost of resources used in the conflict that cannot be used elsewhere and the welfare losses of those killed and wounded." At the time of publication this sum comes to \$429 billion, while cost estimates through 2015 are projected to exceed \$1 trillion.

[Modernising China's Military: Opportunities and Constraints](#)

RAND Monograph - 2005

The monograph projects future growth in Chinese government expenditures as a whole and on defense in particular, evaluates the current and likely future capabilities of China's defense industries, and compares likely future expenditure levels with recent defense expenditures by the United States and the U.S. Air Force.

DEFENCE TECHNOLOGY

[As Military Becomes More Reliant On Networks, Vulnerabilities Grow](#)

National Defense - October 2005

As the Defense Department pursues programs dependant on global computer networks, government officials warn that the current methods of ensuring information security are not commensurate with the threats against them. If these problems are not addressed, the Pentagon could spend \$200 billion during the next 10 years on a network with serious vulnerabilities, according to security experts.

[Army to Deploy Web-Based Intelligence Network](#)

National Defense - October 2005

The Army is creating a database for U.S. commanders in Iraq to archive and distribute intelligence on suspected insurgents. The absence of a consolidated database of information on alleged insurgents—such as their biometrics and personal backgrounds—has hampered efforts to accurately identify and arrest terrorist suspects, officials said.

[New breed of robots, gizmos take war to next level](#)

USA Today – 12 May 2003

Unmanned machines like the X-45 are being cooked up and tested in the country's most advanced labs. Within 20 years, squadrons of unmanned planes will swarm enemy sites like killer bees, launching missiles and avoiding detection with sophisticated jamming devices. Self-programmed submarines will replace dolphins to detect and disarm mines. Robotic mules the size of pickups will haul ammunition, medical supplies and food. Drone ambulances will load wounded soldiers and cart them to hospitals. Crablike robots will crawl into buildings to sniff out chemical stashes.

[Nanotechnology for the Intelligence Community](#)

National Academies Press - 2005

The intelligence community (IC) of the United States faces a different set of challenges from those that dominated its formative years during the Cold War. The collapse of the Soviet Union, the acceleration of globalization, and the emergence of terror as the

primary threat to U.S. society are but a few of the salient aspects of this new environment. Another dimension of change is the revolutionary advance in scientific understanding and its application across many new technologies. An example is nanotechnology and the development of new tools to analyze and manipulate matter at the molecular level. The pace of technology growth and its rate of proliferation across the world also present major new challenges. The opportunities that these advances represent require new and more aggressive ways to extract positive advantage. The ability of terrorists and other threats to access these advances is a growing concern relating to our security.

[Insensitive Munitions Make the Military Less Accident Prone](#)

Janes International Defense Review - 21 September 2005

Few users doubt the principle of having safer or 'insensitive' munitions (IM), after the catastrophic damage suffered in recent decades by naval and ground forces as a result of the inadvertent detonation of munitions, whether aboard aircraft carriers or in vehicle depots. In a battlefield context, the move to light forces with their less well-protected weapon platforms has arguably increased the risk of ready ammunition being triggered as a result of the direct or indirect effects of hostile weaponry.

[Silicon Sniffer](#)

Scientific American - 19 September 2005

Shortly after terrorist bombs ripped through central London's transit system on July 7, Scotland Yard dispatched trained sniffer dog teams to search for explosives and to scent out clues at the blast sites. Meanwhile, less than an hour up the M11 highway in Cambridge, engineers Billy Boyle, Andrew Koehl and David Ruiz-Alonso were lamenting the fact that the antiterrorist technology they had worked on since just after 9/11--a sensitive but inexpensive electronic nose--had not been ready to help avert this tragedy. The Ph.D. engineers have developed a button-size chemical sensor prototype that is designed, among other things, to detect trace amounts of explosives before they detonate.

MILITARY HANDBOOKS

[US Army Weapons System Handbook](#)

Federation of American Scientists, Military Analysis Network - 22 September 2005

The 2005 U.S. Army Weapons System Handbook provides an official overview of both new weapons systems, which will equip the Army of the near-term future and those systems already in the force. Previous editions of the Handbook were routinely made available on Army web sites. But along with many thousands of other unclassified documents, they were withdrawn from online public access a few years ago when the Army moved much of its web-based content behind a password-protected portal called Army Knowledge Online. The unclassified Handbook is not sensitive, even by

government standards. A hardcopy of the publication can still be purchased through the Government Printing Office.

[DOD Dictionary of Military Terms](#)

Department of Defense Dictionary of Military and Associated Terms, Joint Publication 1-02 - 31 August 2005

The Department of Defense has updated and substantially expanded its Dictionary of Military Terms. The Dictionary is useful for students of military policy and also provides some striking adaptations of ordinary language to military needs. "Space," picking an example at random, is defined as "A medium like the land, sea, and air within which military activities shall be conducted to achieve US national security objectives."

MILITARY OPERATIONS

[Tomorrow's Air Warfare - A German Perspective on the Way Ahead](#)

Air & Space Power Journal - September 2005

Operation Iraqi Freedom's application of joint operations, network centric warfare, and improved sensors and weapons will influence future NATO equipment and force-structure decisions. The author states that nations who do not adjust to these developments will not meet the standards required of future coalition partners. NATO's implementation of a Response Force and other initiatives indicates that it understands this message and is strengthening transatlantic links.

[Breaking the Surface](#)

Janes Defence Weekly - 26 September 2005

Since the end of the Cold War operational demands on submarine forces have changed inexorably from what was a primary bluewater anti- submarine warfare role. Current objectives have necessitated an increasing need for the submarine to become a node in the networked battlespace. The growing requirement for submarines to operate within a task group has compelled naval planners to focus on improved connectivity between submerged submarines and other platforms. In particular the race is on for solutions that will deliver a reduction in time latency, increased throughput and the ability to maintain communications at speed and depth.

MILITARY TRANSFORMATION

[Military Reengineering Between the World Wars](#)

RAND Monograph – 2005

The monograph analyses the contrasting military responses of various militaries to the internal combustion engine between World War I and World War II. Incorporating new technology requires a change in military process (i.e., reengineering); the author sets forth the conditions necessary for successful military reengineering.

[Toward Incentives for Military Transformation: A Review of Economic Models of Compensation](#)

RAND Monograph – 2005

The military must ensure that its compensation system provides flexibility in managing personnel, induces innovatory activities and well-calculated risk-taking, and provides incentives for performance, retention, and skill acquisition. This monograph analyses four models of compensation-promotion tournaments, deferred compensation, pay-for-performance mechanisms, and non-monetary rewards-in the context of military transformation efforts.

[Reshaping the Expeditionary Army to Win Decisively: The Case for Greater Stabilization Capacity in the Modular Force](#)

Carlisle Papers in Security Strategy – August 2005

The author argues that the major capability gap in today's force and vital for future campaigns is the ability to conduct stabilization. He suggests three areas where Army leaders must make near-term adjustments in the Modular force to ensure the nation has an expeditionary force with the campaign capacity for both rapid decisive operations and stabilisation.

SPACE DEVELOPMENTS

[Stairway to Heaven](#)

The Telegraph – 25 September 2005

The race is on to build the first "space elevator" - long dismissed as science fiction - to carry people and materials into orbit along a cable thousands of miles long. In a significant step, American aviation regulators have just given permission for the opening trials of a prototype, while a competition to be launched next month follows in the wake of the \$10 million (£5.6 million) "X Prize", which led to the first privately developed craft leaving the Earth's atmosphere, briefly, last year.

[Ex-Cold War Missile May Boost University-Built Satellites](#)

Space News – 22 September 2005

University-built space payloads may get a lift from deactivated intercontinental ballistic missiles that are now on a trajectory for the scrap heap. The idea is to utilize the Peacekeeper missile, phased out under mutual nuclear arms reduction agreements inked between U.S. President George W. Bush and Russian President Vladimir Putin.

[U.S. Deploys Warfare Unit to Jam Enemy Satellites](#)

The Washington Times – 22 September 2005

The U.S. military is bracing for future attacks in space, and the Air Force has deployed an electronic-warfare unit capable of jamming enemy satellites, the general in charge of space defenses says.