



Institute of Defence and Strategic Studies



Future Systems Directorate

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CONTEMPORARY CONFLICT

[Fighting Flares on Israel-Lebanon Border](#)

Jane's Defence Weekly – 2 June 2006

Lebanon's volatile southern border with Israel witnessed the heaviest exchange of fire in six years on 28 May between the military wing of the Lebanese Shia Party of God Hizbullah and the Israel Defence Force (IDF). At least one Hizbullah fighter and two members of the Popular Front for the Liberation of Palestine-General Command were killed and two IDF soldiers were wounded in clashes that ran along the length of Lebanon's 70-mile southern frontier. The violence will intensify the pressure on Hizbullah to disband its military wing and dismantle military outposts manned by radical Syria-backed Palestinian groups in Lebanon.

Counter-Terrorism

[What War Should We Be Fighting?](#)

Centre for Defense Information – 1 June 2006

It is common wisdom now that the war on Iraq has been an expensive and ineffective detour from the mission of neutralizing the terrorists who attacked America on Sept. 11, 2001. Some 130,000 troops are still tied up in that country, taking daily casualties, and the promise of a model democracy in the Middle East seems a distant dream.

Meanwhile, Osama bin Laden is still at large, and, while there has not been a subsequent attack in the United States, there have been terrorist attacks in Madrid, London, Morocco, Bali and elsewhere. Al-Qaida is still viable, Muslims living in Europe are increasingly restive, and anti-Americanism is growing around the world.

[Vietnam After All?](#)

National Review – 9 June 2006

As with the formulaic type scenes of Homeric epic, there now arises a sense of familiarity with the current outcries over Haditha. We do not really know yet what happened in that terrorist-infected hellhole, but it seems not to matter. Those who customarily decry the supposed loss of civil liberties are now the first to rush to judgment—reminding us that it is not always principle per se that they embrace, but a partisanship to be advanced at all costs.

[America Readying Major Offensive Against Al Qaeda](#)

New York Sun – 9 June 2006

America is preparing to launch a series of major operations against Al Qaeda in Iraq on the basis of key documents and contact details found in the operation that ended in the death of Al Qaeda's leader in Iraq, Abu Musab al-Zarqawi. As soon as Zarqawi's death was confirmed yesterday morning, 17 simultaneous raids were launched against sites in the country, particularly in Baghdad.

DEFENCE INDUSTRY

[China as a Low-Cost Aerospace Provider](#)

Aviation Week & Space Technology – 20 February 2006

Is the aerospace industry on the cusp of a great wave that will shift work to low-cost producers in China? Or is offshoring a minor phenomenon being exploited by companies to win concessions from workers and local governments?

[Focus: Rethinking the Defence Industry for the 21st Century](#)

Jane's Defence News – 26 April 2006

Many Western and European governments are increasingly asking questions about how their defence budgets should be spent. They are using new methods of funding, privatisation, joint ventures and commercial off-the-shelf technology in an attempt to make defence policy more responsive and economically efficient. On one side of the Atlantic, the US government still has the economic and political power to grow and maintain its arms, military personnel and technological advantage. US defence spending is still almost 50 per cent of the global total - a proportion that is not expected to change in the near future.

[EU Warned on Dearth of R&T Spending](#)

Jane's Defence Weekly – 1 June 2006

EU member states will spend EUR2.3 billion (USD2.9 billion) on defence research and technology (R&T) in 2006, prompting the European Defence Agency (EDA) to warn that it "is clearly not enough to sustain Europe's future technological and industrial base". Spending in the current year represents a 5.3 per cent increase compared with 2005, but the total for the 24 participating member states - the EU countries excluding Denmark - is roughly five times lower than that of the US.

DEFENCE STRATEGY

[US Navy Set Missile Defence Operations Area in the Sea of Japan](#)

Nautilus – 30 May 2006

Hiromichi Umebayashi, Founder and President of Peace Depot, a non-profit organization for peace research and education in Japan, 'reports that a study using FOIA "has established for the first time the actual patrol patterns of the U.S. Navy Aegis destroyers in the Sea of Japan engaged in missile defense duties." Umebayashi concludes that "the plan is to integrate Aegis ships long-range surveillance and tracking data in the Sea of Japan, the interceptor missile launch control system and the battle management system. Accordingly, the Japan Sea patrols are a crucial component in exercises to develop the core of the whole integrated system US National Missile Defense system."

DEFENCE TECHNOLOGY

[America's Robot Army](#)

New States Man–12 June 2006

Already there are killing machines operating by remote control. Soon the machines will be able to kill on their own initiative. A new warfare is on its way. War is about to change, in terrifying ways. America's next wars, the ones the Pentagon is now planning, will be nothing like the conflicts that have gone before them. In just a few years, US forces will be able to deal out death, not at the squeeze of a trigger or even the push of a button, but with no human intervention whatsoever. Many fighting soldiers - those GIs in tin hats who are dying two a day in Iraq - will be replaced by machines backed up by surveillance technology so penetrating and pervasive that it is referred to as "military omniscience". Any Americans involved will be less likely to carry rifles than PlayStation-style consoles and monitors that display simulated streetscapes of the kind familiar to players of Grand Theft Auto - and they may be miles from where the killing takes place.

[New American Non-Nuclear ICBMs Creates Global Danger](#)

Space War News –16 June 2006

On May 22, The Washington Post carried an article "A Missile Strike Option We Need" by two former U.S. Secretaries of Defense - Harold Brown, 1977-1981. and James Schlesinger, 1973-1975. Brown and Schlesinger suggested installing non-nuclear warheads on U.S. strategic missiles, first of all, Trident II D5 submarine-launched ballistic missiles, or SLBMs, which have multiple independently targeted reentry vehicles, or MIRVs. These warheads can hit terrorist bases more effectively than, say, cruise missiles or free-fall bombs. Such precise strikes could be dealt minutes after the military receive information about

terrorist bases and their coordinates and would involve no bombers or carrier task forces and submarines operating in direct proximity to hostile areas.

[Eye Catching Mobile Security on its Way](#)

Space War News – 6 June 2006

The mobile phone may soon be equipped with a higher level of security thanks to Leeds, United Kingdom-based technical solutions company xVista and its iris-scanning technology. The company says it has developed what it considers to be United Kingdom's first iris-scanning system that can be housed within compact low-power computing systems such as a camera mobile phone.

ENERGY SECURITY

[Energy Gap, What Energy Gap?](#)

New Scientist – 13 May 2006

ENERGY gap, what energy gap? According to the conservation group WWF-UK, it's nothing more than a myth created to justify building a new generation of nuclear power stations. A report into energy generation commissioned by WWF from the firm ILEX Energy Consulting concludes that the UK can meet its future energy needs and reduce carbon dioxide emissions without the help of nuclear power. The report finds that some tweaks of energy policy would allow the UK to cut CO₂ emissions by 40 per cent from 1990 levels by 2010, and maintain them at this level until 2025. That's despite almost all nuclear power stations being closed during this time. Increased use of renewable energy coupled with reductions in energy waste would allow emissions to fall by 55 per cent by 2025, the report says.

[Solar Power – Seriously Souped Up](#)

New Scientist – 31 May 2006

IF YOU want efficient solar power, Victor Klimov has a deal for you. Give him one photon of sunlight, and he'll give you two electrons' worth of electricity. Not impressed? You should be. In all solar cells now in use - in everything from satellites to pocket calculators - each incoming photon contributes at most one energised electron to the electric current it generates. Now Klimov, a physicist at Los Alamos National Laboratory in New Mexico, has broken through this barrier. He has shown that by shrinking the elements of a solar cell down to a few nanometres, or millionths of a millimetre, each captured photon can be made to generate not one, but two or even more charge carriers.

MILITARY OPERATIONS

[Why Read Clausewitz when Shock and Awe Can Make a Clean Sweep of Things?](#)

London Review of Books – 8 June 2006

The events of 11 September 2001 killed thousands, left many thousands more bereft, and horrified countless millions who merely bore witness. But for a few, 9/11 suggested an opportunity. In the inner circles of the United States government men of ambition seized on that opportunity with alacrity. Far from fearing a 'global war on terror', they welcomed it, certain of their ability to bend war to their purposes. Although the ensuing conflict has not by any means run its course, we are now in a position to begin evaluating the results of their handiwork.

[U.S. Holds Landmark FCS Field Experiment](#)

Jane's International Defence Review –25 May 2006

Elements of the US Army's Future Combat Systems (FCS), together with surrogate FCS platforms, participated in their first military field experiment during April. The US Air Force-led experiment, designated Joint Expeditionary Force Experiment 2006 (JEFX '06), was conducted at Nellis Air Force Base (AFB), Nevada. During the experiment, the FCS Tactical Unattended Ground Sensors were used to detect 'threats' and relayed that information to the surrogate command-and-control platforms, where it was fed to the Combined Air & Space Operations Center, and then on to strike aircraft for target engagement.

[Sea Trial Demonstrates Networking Breakthrough](#)

Jane's Defence Weekly – 1 June 2006

A team led by UK science and technology group QinetiQ has successfully delivered and demonstrated a tactical intranet across a number of UK Royal Navy (RN) ships during a major exercise in Norway. Forming part of Operation 'CETUS 06', the sea trial marked the culmination of a three-year GBP6.3 million Maritime Tactical Network Command and Control (MTNC2) applied research programme designed to demonstrate secure, interoperable networking for vessels hitherto disadvantaged by their lack of super-high- frequency (SHF) satellite communications (Satcoms).

U.K. and U.S. Create Experimental Units

Jane's Defence Weekly – 16 June 2006

The British Army will stand up a battalion in 2008 to aid the development of new medium-weight capabilities. Major General Dick Applegate, capability manager (battlespace manoeuvre) at the UK Ministry of Defence, told the Future Land Warfare Conference organised by the Royal United Services Institute and Defence Events Management on 8-9 June that the battalion will provide a basis for experimentation. It will assist in the introduction of new equipment and the development of new doctrine.

NUCLEAR PROLIFERATION

Will America Attack?

The Prospect Magazine – June 2006

As I discovered on a recent trip to London, it's not easy for an American these days to convince his European colleagues that the US is unlikely to attack Iran's nuclear sites any time soon. Given the Iraq precedent, and with senior US officials now regularly coming forward with similarly dire warnings about the Iranian threat, Europeans are understandably inclined to believe reports—such as those recently published by Seymour Hersh in the New Yorker—that Washington is getting ready to bomb Iran, possibly even with tactical nuclear weapons.

How to Build a Bomb

The Prospect Magazine – June 2006

Anyone seeking to build a nuclear weapon needs two things: 1) enough fissile material for a critical mass (either 20-25kg of highly enriched uranium, the material used in the Hiroshima A-bomb, or 6-8kg of plutonium, as used in Nagasaki) and 2) a "weaponisation" package for a controlled fission reaction. They will also need a delivery vehicle—typically an aircraft or ballistic missile, but a suicide vessel or truck would do. In the case of Iran, attention has focused on its uranium enrichment programme. Uranium enrichment involves increasing the concentration of fissile U-235 in uranium. What does this mean? The U-235 isotope makes up 0.7 per cent of naturally occurring uranium. U-235 is an isotope that will split, or fission, when struck by a loose neutron, emitting radiation energy and more neutrons that can split other atoms in a chain reaction. (Isotopes are atoms of a given element with the same chemical make-up and the same number of protons but varying numbers of neutrons. The number after the chemical symbol—U in uranium's case—is the atomic mass, the number of protons and neutrons, and is used to denote different isotopes.) But the bulk of natural uranium is the stable U-238

isotope, which cannot sustain a chain reaction. The point of the process of enrichment is to increase the concentration of U-235.

[From the Tehran Street](#)

The Prospect Magazine – June 2006

If you have been following the developing story of Iran's defiance of the IAEA, then you have probably seen images of Iranian women in long black chadors (veils) surrounding nuclear facilities in support of their government's position. You may have even heard reports of the Iranian public's overwhelming support for its government's nuclear efforts. For once, it seems, the Iranian public and its regime agree on something. I'm not so sure. Iranian public opinion is unreliable at best. Iranians are masters at gauging what to say and how to present it. They seem to have a nose for what their audience wants to hear. Everyone I talk to in Iran has an opinion, yet I am rarely sure if that opinion remains the same from discussion to discussion.