Is Hydrocarbon Man the Next Terrorist Target?

Collection

CBRNE-TERRORISM Newsletter

Δελτίο ΧΒΡΠΕ-ΤΡΟΜΟΚΡΑΤΙΑΣ

Volume 4 - 2010

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CBRNE-Terrorism Newsletter®
Δελτίο ΧΒΡΠΕ-Τρομοκρατίας
Volume 4

Editor
BG (ret) Ioannis Galatas MD, MSc, MC
Consultant in Allergy & Clinical Immunology
Medical CBRN Planner
Senior Terrorism/WMD Analyst

Contact e-mail
igalatas@yahoo.com

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EDITOR'S NOTE

Dear CBRNE-T Colleagues,

There are many interesting papers in the current issue of CBRNE-Terrorism Newsletter. Global news indicates that we must stay alert because the enemy outthere is looking for new ways to attack civilized societes and the populace is at steak – as always… First Responders' mission is of outmost importance and the only barrier between evil and peace.

Starting from the next issue, the Newsletter will be enriched with original articles written from experienced First Responders worldwide. In that respect, the Newsletter will not be just a collection of interesting papers but it will be transformed to a forum of exchanging ideas and opinions on relevant issues based not solely to bibliography and events but to applied operational experience of those involved in real time operations. Papers published will be upon invitation only.

Let us all together desimate knowledge to those fighting in the front line for the protection of our way of life!

Kind regards to all!

BG (ret) Ioannis Galatas, MD

DEDICATED TO ALL OPPERATIONAL PEOPLE:

An engineer, a psychologist, and a theologian were hunting in the wilderness of northern Canada. Suddenly, the temperature dropped and a furious snowstorm was upon them. They came across an isolated cabin, far removed from any town. The hunters had heard that the locals in the area were quite hospitable, so they knocked on the door to ask permission to rest. No one answered their knocks, but they discovered the cabin was unlocked and they entered. It was a simple place ... 2 rooms with a minimum of furniture and household equipment. Nothing was unusual about the cabin except the stove. It was large, potbellied, and made of cast-iron. What was strange about it was its location ... it was suspended in midair by wires attached to the ceiling beams.

"Fascinating," said the psychologist. "It is obvious that this lonely trapper, isolated from humanity, has elevated this stove so that he can curl up under it and vicariously experience a return to the womb."

"Nonsense!" replied the engineer. "The man is practicing the laws of thermodynamics. By elevating his stove, he has discovered a way to distribute heat more evenly throughout the cabin."

"With all due respect," interrupted the theologian, "I'm sure that hanging his stove from the ceiling has religious meaning. Fire LIFTED UP has been a religious symbol for centuries."

The three debated the point for several hours without resolving the issue. When the trapper finally returned, they immediately asked him why he had hung his heavy potbellied stove from the ceiling. His answer was succinct. "**Had plenty of wire, not much stove pipe**."

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CBRNE-TERRORISM Newsletter

Δελτίο ΧΒΡΠΕ-ΤΡΟΜΟΚΡΑΤΙΑΣ

Volume 4 - 2010

CHEM –News

The history books on this issue shouldn't be written just yet.

Satellite Photos Support Testimony That Iraqi WMD Went to Syria

Source: http://pajamasmedia.com/blog/satellite-photos-support-testimony-that-iraqi-wmd-went-to-syria/ ?singlepage=true

Ha'aretz has revived the mystery surrounding the inability to find weapons of mass destruction stockpiles in Iraq, the most commonly cited justification for Operation Iraqi Freedom and one of the most embarrassing episodes for the United States. Satellite photos of a suspicious site in Syria are providing new support for the reporting of a Syrian journalist who briefly rocked the world with his reporting that Iraq's WMD had been sent to three sites in Syria just before the invasion commenced. The newspaper reveals that a 200 square-kilometer area in northwestern Syria has been photographed by satellites at the request of a Western intelligence agency at least 16 times, the most recent being taken in January. The site is near Masyaf, and it has at least five installations and hidden paths leading underneath the mountains. This supports the reporting of Nizar Nayouf, an award-winning Syrian journalist who said in 2004 that his sources confirmed that Saddam Hussein's WMDs were in Syria. One of the three specific sites he mentioned was an underground base underneath Al-Baida, which is one kilometer south of Masyaf. This is a perfect match. The suspicious features in the photos and the fact that a Western intelligence agency is so interested in the site support Nayouf's reporting, showing that his sources in Syria did indeed have access to specific information about secret activity that is likely WMD-related. Richard Radcliffe, one of my co-writers at WorldThreats.com, noticed that Masyaf is located on a road that goes from Hamah, where there is an airfield sufficient to handle relatively large aircraft, into Lebanon and the western side of the Bekaa Valley, another location said to house Iraqi weapons. It seems to be commonly accepted that Iraq did not have WMDs at all. The intelligence was obviously flawed, but the book has not been closed on what actually happened. The media blasted the headline that Charles Duelfer, the head of the Iraq Survey Group tasked with finding out if Saddam had WMDs, concluded that a transfer did not occur. In reality, his report said they were "unable to complete its investigation and is unable to rule out the possibility that WMD was evacuated to Syria before the war" due to the poor security situation. Although no conclusion was made, Duelfer has since said that he is "convinced" that no WMD went to Syria. He is a competent and credible individual, but there is evidence that key information on this possibility was not received by the Iraq Survey Group, which had many of its own problems. On February 24, 2009, I went to see a talk Duelfer gave at the Free Library of Philadelphia to promote his book. He admitted there were some "loose ends" regarding the possibility that Iraqi WMD went to Syria, but dismissed them. Among these "loose ends," Duelfer said, was the inability to track down the Iraqis who worked for a company connected to Uday Hussein that sources said had driven "sensitive" material into Syria. A Pentagon document reveals that an Iraqi dissident reported that 50 trucks crossed the border on March 10, 2003, and that his sources in Syria confirmed they carried WMD. These trucks have been talked about frequently and remain a mystery. During the question-and-answer period and during a follow-up interview, Duelfer made several interesting statements to me that reinforced my confidence that such a transfer occurred, although we can not be sure of the extent of it. General Georges Sada, the former second-in-command of the Iraqi Air Force, claimed in his 2006 book that he knew two Iraqi pilots that flew WMD into Syria over the summer of 2002, which came before a later shipment on the ground. I asked Duelfer if Nizar Nayouf or the two Iraqi pilots were spoken with. "I did not interview the pilots nor did I speak with the Syrian journalist you mentioned," he said. "We were inundated with WMD reports and could not investigate them all. … To narrow the problem, we investigated those people and places we knew would have either been involved or aware of regime WMD activities." He then told me that the lack of testimony about such dealings is what convinced him that "a lot of material went to Syria, but no WMD." He cited the testimony of Naji Sabri, the former Iraqi foreign minister, in particular. "I knew him very well, and I had been

authorized to make his life a lot better, or a lot worse," he told me. He said that Sabri's position would make him aware of any such deal between the two countries. However, in his book, Duelfer said that Sabri had nothing to do with any of Iraq's WMD efforts at any time. "His statements on WMD from an intelligence perspective would have been irrelevant," Duelfer wrote. "Someone among the people we interviewed would have described this," Duelfer said. However, such testimony does exist. Don Bordenkircher, who served as the national director of jail and prison operations in Iraq for two years, told me that he spoke to about 40 Iraqis, either military personnel or civilians assigned to the military, who talked about the WMDs going to Syria and Lebanon, with some claiming they were actually involved. Their stories matched and were not contradictory, he said. Another military source of mine related to me how an Iraqi intelligence captain in Al-Qaim claimed to have witnessed the movement of suspicious convoys into Syria between February and March 2003. I also asked Duelfer if he was aware of the intelligence provided by the Ukrainians and other sources that the Russians were in Iraq helping to cleanse the country shortly before the invasion. His facial expressions before I even finished the question showed he genuinely had never even heard of this. As explained in detail in Ken Timmerman's book Shadow Warriors, high-level meetings were held on February 10-12, 2004, involving officials from the U.S., the UK, and Ukraine. Among the attendees were Deputy Undersecretary of Defense John A. Shaw, the head of MI6, and the head of Ukrainian intelligence, Ihor Smeshko. The Ukrainians provided all the details of the Russian effort, including the dates and locations of meetings to plan the intervention and even the names of the Russian Spetsnaz officers involved. Shaw also worked with a British source that ran an intelligence network in the region and provided substantiation and additional details. The former head of Romanian intelligence during the Cold War, Ion Pacepa, has provided supporting testimony. He says that he had personal knowledge of a Soviet plan called "Operation Sarindar" where the Russians would cleanse a rogue state ally of any traces of illicit activity if threatened with Western attack. The plan's purpose was to deny the West of any evidence incriminating Russia or its ally. The presence of Russian advisors in Iraq shortly before the invasion, some of whom received medals from Saddam Hussein, is a strong indication that this plan was followed. Dave Gaubatz, who was the first civilian federal agent deployed to Iraq, told me that he saw intelligence that "suggested that some WMD had been moved to Syria with the help of Russian intelligence." Iraqis personally confirmed to him that there was a Russian presence before the American soldiers arrived. Amazingly, Duelfer seems to have never been informed of this intelligence. "This does not mean … that it was not passed on to ISG [Iraq Survey Group]," he said to me later. The fact that the head of the WMD search was never even made aware of this indicates something went seriously wrong. In Timmerman's book, Shaw says that Smeshko complained about the CIA's station chief in Kiev not being cooperative. Timmerman researched the station and chief and found that he was very close with other people in the intelligence community who were doing their best to fight Bush administration policies. Duelfer actually provides information that supports this account. He confirmed that Russia was helping Iraq's illegal ballistic missile program and had close ties to Saddam's regime. "Russians were present in Iraq for many activities. … Russian officials regularly met with Iraqi officials. … Russian KGB officers were in regular contact with the regime at very senior levels. … Russian businessmen were all over Baghdad trying to secure a variety of deals. And of course Russians, including very senior Russians, were in receipt of lucrative oil allocations under the UN Oil-For-Food Program," Duelfer told me. The theory that Iraq's WMD went to Syria is not a fringe conspiracy theory. John Loftus, a former Justice Department prosecutor known for his wide-ranging contacts in the intelligence community, said in an interview we did that "every senior member of a Western, European or Asian intelligence service whom I have ever met all agree that the Russians moved the last of the WMDs out of Iraq in the last few months before the war." General Tommy Franks and General Michael DeLong, the top two officials in CENTCOM when the invasion began, have spoken of credible intelligence supporting the theory. General James Clapper, President Obama's pick to replace Dennis Blair as director of national intelligence, has previously stated his belief that the weapons went to Syria and took part in the meetings organized by Shaw. Obviously, it is impossible to

prove and we do not know exactly what went to Syria, but the history books on this issue shouldn't be written just yet.

Ryan Mauro is the founder of WorldThreats.com, national security advisor to the Christian Action Network, and an intelligence analyst with the Asymmetrical Warfare and Intelligence Center (AWIC).

What is Assad hiding in his backyard?

Source: http://www.haaretz.com/print-edition/news/what-is-assad-hiding-in-his-backyard-1.292935

Satellite photos of secret Syrian site depict at least five guarded installations whose purpose is unclear. Which Western intelligence agency requested satellite photographs of secret Syrian military installations near the border with Lebanon over the past two years? A small patch of territory in northwest Syria has been photographed on at least 16 occasions. The images were procured by satellite imaging service DigitalGlobe, which the Western company hired. The company received more orders for photographs over the past year, including two in January. All the photos, the dates they were taken and their precise locations are available online via Google Earth. The 200-square-kilometer area in question is 30 kilometers north of Syria's northernmost border with Lebanon. The nearest town is Masyaf, which has 35,000 residents and is in the Hama district. Official Syrian government websites say the town and its environs are an agricultural and tourist region. The images depict at least five guarded installations whose purpose is unclear. In the center is a new residential complex with at least 40 multistory buildings whose shape and structure are distinct from the architecture in the rest of the town. A number of Google Earth users said they saw passageways to bunkers leading to installations underneath the mountains surrounding Masyaf. Other users noted that Syrian journalist and human rights activist Nizar Nayouf told the Dutch newspaper De Telegraaf in 2004 that Iraqi dictator Saddam Hussein smuggled his arsenal of chemical and biological weapons into Syria just prior to the United States' invasion of Iraq in 2003. In the interview, Nayouf claimed that Iraqi weapons of mass destruction were stashed in three separate sites in Syria, including an underground military base beneath the village of AlBaida, one kilometer south of Masyaf. Nayouf was imprisoned by Syrian authorities for 10 years. In 2001, he was granted political asylum in France. Similar accusations of Iraqi weapons smuggling into Syria were made by then-prime minister Ariel Sharon during an interview with Channel 2 news. Former Israel Defense Forces chief of staff Moshe Ya'alon made similar claims in an interview with the now-defunct New York Sun. The latest photographs of the area were taken in January, when tensions between Israel and Syria reached a fever pitch. Syrian President Bashar Assad, his foreign minister Walid Moallem and Israeli Defense Minister Ehud Barak, exchanged warnings over a possible war in the absence of progress toward a peace treaty. Last month, media reports indicated that the transfer of Scud missiles and advanced M-600 rockets from Syria to Hezbollah led to the latest round of accusations between Jerusalem and Damascus. The news of the weapons delivery prompted the United States to delay the assignment of its ambassador to the diplomatic post in Syria. In light of the escalating tensions, the IDF cancelled a comprehensive military enlistment drill so that Syria would not interpret the exercise as a preparation for war. DigitalGlobe refused to say who requested the satellite

photos. Two weeks before the September 2007 destruction of the nuclear reactor in northeast Syria, the company placed an order for numerous photographs of the installation. Yedioth Ahronoth reported that the photos were ordered by Israel so that it could show them to the press after the bombing. According to the newspaper, Israel sought to demonstrate its military capabilities without revealing its sources.

Iraq's WMD Secreted in Syria, Sada Says

Source: http://www.nysun.com/foreign/iraqs-wmd-secreted-in-syria-sada-says/26514/

The man who served as the no. 2 official in Saddam Hussein's air force says Iraq moved weapons of mass destruction into Syria before the war by loading the weapons into civilian aircraft in which the passenger seats were removed. The Iraqi general, Georges Sada, makes the charges in a new book, "Saddam's Secrets," released this week. He detailed the transfers in an interview yesterday with The New York Sun. "There are weapons of mass destruction gone out from Iraq to Syria, and they must be found and returned to safe hands," Mr. Sada said. "I am confident they were taken over." Mr. Sada's comments come just more than a month after Israel's top general during Operation Iraqi Freedom, Moshe Yaalon, told the Sun that Saddam "transferred the chemical agents from Iraq to Syria." Democrats have made the absence of stockpiles of weapons of mass destruction in Iraq a theme in their criticism of the Bush administration's decision to go to war in 2003. And President Bush himself has conceded much of the point; in a televised prime-time address to Americans last month, he said, "It is true that many nations believed that Saddam had weapons of mass destruction. But much of the intelligence turned out to be wrong." Said Mr. Bush, "We did not find those weapons." The discovery of the weapons in Syria could alter the American political debate on the Iraq war. And even the accusations that they are there could step up international pressure on the government in Damascus. That government, led by Bashar Assad, is already facing a U.N. investigation over its alleged role in the assassination of a former prime minister of Lebanon. The Bush administration has criticized Syria for its support of terrorism and its failure to cooperate with the U.N. investigation. The State Department recently granted visas for self-proclaimed opponents of Mr. Assad to attend a "Syrian National Council" meeting in Washington scheduled for this weekend, even though the attendees include communists, Baathists, and members of the Islamist Muslim Brotherhood group to the exclusion of other, more mainstream groups. Mr. Sada, 65, told the Sun that the pilots of the two airliners that transported the weapons of mass destruction to Syria from Iraq approached him in the middle of 2004, after Saddam was captured by American troops. "I know them very well. They are very good friends of mine. We trust each other. We are friends as pilots," Mr. Sada said of the two pilots. He declined to disclose their names, saying they are concerned for their safety. But he said they are now employed by other airlines outside Iraq. The pilots told Mr. Sada that two Iraqi Airways Boeings were converted to cargo planes by removing the seats, Mr. Sada said. Then Special Republican Guard brigades loaded materials onto the planes, he said, including "yellow barrels with skull and crossbones on each barrel." The pilots said there was also a ground convoy of trucks. The flights - 56 in total, Mr. Sada said - attracted little notice because they were thought to be civilian flights providing relief from Iraq to Syria, which had suffered a flood after a dam collapse in June of 2002. "Saddam realized, this time, the Americans are coming," Mr. Sada said. "They handed over the weapons of mass destruction to the Syrians." Mr. Sada said that the Iraqi official responsible for transferring the weapons was a cousin of Saddam Hussein named Ali Hussein al-Majid, known as "Chemical Ali." The Syrian official responsible for receiving them was a cousin of Bashar Assad who is known variously as General Abu Ali, Abu Himma, or Zulhimawe. Short of discovering the weapons in Syria, those seeking to validate Mr. Sada's claim independently will face difficulty. His book contains a foreword by a retired U.S. Air Force colonel, David Eberly, who was a prisoner of war in Iraq during the first Gulf War and who vouches for Mr. Sada, who once held him captive, as "an honest and honorable man." In his visit to the Sun yesterday, Mr. Sada was accompanied by Terry Law, the president of a Tulsa, Oklahoma based Christian

humanitarian organization called World Compassion. Mr. Law said he has known Mr. Sada since 2002, lived in his house in Iraq and had Mr. Sada as a guest in his home in America. "Do I believe this man? Yes," Mr. Law said. "It's been solid down the line and everything checked out." Said Mr. Law, "This is not a publicity hound. This is a man who wants peace putting his family on the line." Mr. Sada acknowledged that the disclosures about transfers of weapons of mass destruction are "a very delicate issue." He said he was afraid for his family. "I am sure the terrorists will not like it. The Saddamists will not like it," he said. He thanked the American troops. "They liberated the country and the nation. It is a liberation force. They did a great job," he said. "We have been freed." He said he had not shared his story until now with any American officials. "I kept everything secret in my heart," he said. But he is scheduled to meet next week in Washington with Senators Sessions and Inhofe, Republicans of, respectively, Alabama and Oklahoma. Both are members of the Senate Armed Services Committee. The book also says that on the eve of the first Gulf War, Saddam was planning to use his air force to launch a chemical weapons attack on Israel. When, during an interview with the Sun in April 2004, Vice President Cheney was asked whether he thought that Iraqi weapons of mass destruction had been moved to Syria, Mr. Cheney replied only that he had seen such reports. An article in the Fall 2005 Middle East Quarterly reports that in an appearance on Israel's Channel 2 on December 23, 2002, Israel's prime minister, Ariel Sharon, stated, "Chemical and biological weapons which Saddam is endeavoring to conceal have been moved from Iraq to Syria." The allegation was denied by the Syrian government at the time as "completely untrue," and it attracted scant American press attention, coming as it did on the eve of the Christmas holiday. The Syrian ruling party and Saddam Hussein had in common the ideology of Baathism, a mixture of Nazism and Marxism. Syria is one of only eight countries that has not signed the Chemical Weapons Convention, a treaty that obligates nations not to stockpile or use chemical weapons. Syria's chemical warfare program, apart from any weapons that may have been received from Iraq, has long been the source of concern to America, Israel, and Lebanon. In March 2004, the director of Central Intelligence, George Tenet, testified before the Senate Armed Services Committee, saying, "Damascus has an active CW development and testing program that relies on foreign suppliers for key controlled chemicals suitable for producing CW." The CIA's Iraq Survey Group acknowledged in its September 30, 2004, "Comprehensive Report," "we cannot express a firm view on the possibility that WMD elements were relocated out of Iraq prior to the war. Reports of such actions exist, but we have not yet been able to investigate this possibility thoroughly." Mr. Sada is an unusual figure for an Iraqi general as he is a Christian and was not a member of the Baath Party. He now directs the Iraq operations of the Christian humanitarian organization, World Compassion.

'Dr Death' loses appeal

Source: http://www.timeslive.co.za/local/article525769.ece/Dr-Death-loses-appeal

"Apartheid-era germ warfare expert Dr Wouter Basson lost a court application yesterday to stop the Health Professions Council of South Africa [HPCSA] prosecuting him for professional misconduct. With the judge ruling against him, Basson is running out of options to stall the HPCSA probe, which could see him struck off the medical roll if he were found guilty. He is practising as a cardiologist in Cape Town. The council is investigating six charges of 'unethical and/or unprofessional conduct pertaining to human rights violations' by Basson, who was not present in court. [...] Known as 'Dr Death' for spearheading the apartheid military's secret biological and chemical weapons project, Basson directed research into deadly poisons and viruses in the 1980s. Basson went on trial in 1999 on 67 charges, including murder and conspiracy to murder, in the Pretoria High Court. He was acquitted in 2002 of these and other criminal charges related to 'Project Coast' amid administrative and technical problems."

Iran seeks identities of nations that sold CW materials to Iraq

Source: http://gsn.nti.org/gsn/nw_20100702_9708.php

"Iran's envoy to the international body that oversees the Chemical Weapons Convention on Tuesday urged the disclosing of the names of Western nations that provided materials that helped Iraq produce chemical warfare agents, Tehran's state-controlled Fars News Agency reported. The Organization for the Prohibition of Chemical Weapons should publicize the names of the alleged 15 nations so the international community can understand their involvement in the chemical weapons attacks launched by the Hussein regime during the 1980-1988 Iran-Iraq War, Iranian Ambassador to the Netherlands Kazzem Qaribabadi said at a meeting of the OPCW Executive Council in The Hague. [...] 'The world community should ask for the trial of the U.S. and 14 European countries for selling chemical weapons' to former Iraqi dictator Saddam Hussein, Iranian Supreme National Security Council Secretary Saeed Jalili said Tuesday in remarks observing the anniversary of an Iraqi chemical strike on Sardasht, a Kurdish city in northwestern Iran."

Russia to miss chemical weapons disposal deadline

Source: http://www.globalsecuritynewswire.org/gsn/nw_20100630_4072.php

"Russia has acknowledged that it would not meet the deadline for complete elimination of its arsenal of chemical warfare materials, the head of the international organization that oversees the Chemical Weapons Convention announced yesterday. For years Moscow has said it would fulfill its obligation under the convention to destroy 40,000 metric tons of chemical agents by April 29, 2012. Observers have questioned whether the nation could stick to that schedule without cutting corners on safety or security. The new anticipated end date for Russian disposal operations is 2015, Rogelio Pfirter, director general of the Organization for the Prohibition of Chemical Weapons, said during this week's meeting of the Hague-based agency's Executive Council. The full text of his address was not made public today, but an OPCW spokesman confirmed the statement on Russia's chemical demilitarization time line. An official with the Russian Embassy in Washington confirmed the need for an extension but said he did not have access to information regarding the specific schedule or the reason for the delay in completing the project. 'We have a good record in destruction of chemical weapons. We are committed to the goals of the convention,' the official told Global Security Newswire. 'We'll try to eliminate our chemical weapons as soon as possible,' he added. The convention originally required all member states to destroy their chemical stockpiles by April 2007, 10 years after the pact entered into force."

Next Generation HazMat Boots For Emergency Responders

Source: http://www.medicalnewstoday.com/articles/190261.php

The rubber boots that emergency personnel wear when responding to situations where hazardous materials (HazMat) are present may be functional, but they're not very comfortable. New research coming out of North Carolina State University hopes to provide a next generation HazMat boot that meets both criteria. "We've learned from firefighters and other first responders that the current rubber boots are slippery and uncomfortable; they'd prefer a leather boot similar to ones they wear during non-HazMat situations," explains Dr. Roger Barker, professor of Textile Engineering Chemistry and Science, director of the Textile Protection and Comfort Center (T-PACC), and lead researcher for this study. HazMat boots have traditionally been made of rubber so that they can easily be decontaminated and cleaned. Leather boots, which are more comfortable, have not been used because leather absorbs liquids - making decontamination a major technical issue. However, with the availability of new textile materials and surface treatments, researchers at NC State are confident they can develop a comfortable - and functional - leather boot for use in both fire-fighting and HazMat operations. "We're currently in the process of creating prototypes of this new HazMat boot.

We have been exploring options like providing a finish to the leather that would reduce chemical absorption, while making it easy to clean and decontaminate," Barker says. "So we're not just creating a leather HazMat boot, we're also designing a simple cleaning method to use on the boot that is readily available to onsite emergency personnel. If they have to send their boots off to a lab to be decontaminated, the boot is no longer functional." Barker and his team, which includes Dr. Don Thompson, associate director of T-PACC, along with Dr. Keith Beck, Shawn Deaton, Dr. Gerardo Montero, and graduate student Ashley Bradham, have demonstrated the ability of the special leather material to repel toxic chemicals. They are currently conducting their research in T-PACC's state-of-the-art Man-in-Simulant Test (MIST) laboratory - which allows researchers to evaluate the performance capability of protective footwear, gloves, masks and garments against a non-toxic vapor resembling chemical and biological agents in a manner simulating how those garments systems would be used by a first responder. They are also testing the prototype boots for comfort, ergonomic function, traction and stability. "We'll be doing tests by visiting fire departments and getting first responders to wear the different prototypes while performing activities such as walking up and down steps, on different terrains, and through a simulated task routine " Barker says. The research on this new tactical chemical, biological, radiological, and nuclear (CBRN) first responder boot is funded by an $800,000 grant from the Department of Defense through the Combating Terrorism Technical Support Office. After the final prototype has been demonstrated, it will be evaluated and certified to National Fire Protection Association standards by independent laboratories. Following certification, private footwear companies would be responsible for manufacturing the final product and bringing it to market.

CBRNE Casualties Simulation Kit

Source: http://www.simulaids.com/870.htm

Effective Mass Casualty Incident (MCI) treatment of Weapons of Mass Destruction (WMD) or Chemical-Biological-Radiological-Nuclear-Environmental (CBRNE) weapons demands a well-trained staff and starts with early recognition of the hazards at the scene. This new kit from Simulaids contains multiple copies of several types of wounds associated with WMD or CBRNE attacks. The new face masks feature the release of fluids to mimic the physiological reaction associated with these agents, such as sweating, tearing, nasal discharge, and mouth excretions. The stick-on wounds show Improvised Explosive Device (IED) damage, a selection of wounds from our other kits, and various stages of disease states. These can be quickly applied to numerous personnel to get the exercise started with less labor. The new strap-on wounds include below-the-knee and below-the-elbow amputations, and other face masks with varying stages of small pox, anthrax, and chemical burns. The kit comes complete in a rugged carry case and includes the various make-up and accessories listed below so that you may tackle the first exercise without purchasing other supplies. If you already have casualty kits from Simulaids, you may wish to augment those products with the WMD/CBRNE wound package.

WMD/CBRNE Kit 870 - $949.90

domestic preparedness .com

DomPrep Journal

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Global Disasters
Require Global Solutions

DECON and CBRNE treatment of the masses: Can we be that ready?

By Tom Carey
Source: http://theklaxon.com/decon-and-cbrne-treatment-of-the-masses-can-we-be-that-ready

No single agency at any level of government has the technical capability or authority to respond independently to mitigate the consequences of a weapons of mass destruction (WMD) attack within Anytown, U.S.A. Well-publicized terrorist incidents, such as the Tokyo

chemical sarin attack in 1995, as well as domestic attacks in Oklahoma City and the Northeast corridor of the U.S. during Sept. 11, 2001, implore emergency managers today to capitalize on these hard lessons learned. Is a community located on U.S. soil really prepared for a another WMD event? A Central Intelligence Agency report states that terrorist attacks in the future would likely be small scale, incorporating improvised delivery means, or easily produced or obtained chemicals, toxins, or radiological substances. Nontheless, leaders of municipalities and emergency managers must be ready to tackle the very possible threat of various types of effects caused by CBRNE to a given population.

Emergency Mass Casualty Decon Triage

I often wondered how long it would take a chemical company in the military to decontaminate an Infantry Battalion (combat arms entity of the U.S. Army consisting of approximately 800 Soldiers) during actual (not simulated) combat operations. I'm sure with some controls in place, the decontamination process could be completed in under 24 hours, including the movement of troops to the decon site thus refitting them for a new combat mission. Now, let's change the scenario to an uncontrolled environment and an adhoc size decon site. Do you see the problems? Decontamination capabilities of a given site will be quickly overwhelmed by the number of persons to decontaminate. "The challenges of emergency decontamination include the speed at which the decontamination operation must occur in order to save lives, the number of victims involved, and the limitations imposed by the availability of proper Personal Protective Equipment (PPE) to safely do the job," according to the U.S. Department of Homeland Security Preparedness Directorate Office of Grants and Training. Emergency organizations tasked with the responsibilities of managing a WMD situation must effectively establish containment of both the crowd as well as the agent. The rapid responses of emergency apparatus with decon capabilities that will provide showers for the public must be robust. This is a crucial event in setting up your decontamination line. Possible decon sites should be earmarked within your jurisdiction to accommodate equipment and alleviate congestion of arriving personnel if at all possible. This is a key factor in urban

and suburban areas with high populations. These sites should be categorized as law enforcement sensitive. The initial triage of patients should be conducted by EMTs in the hot zone if these personnel have the ability to do so, depending on the number of victims. Otherwise the coordination with the medical community in prioritizing the victims medical condition will have to start at the decon line. Victims at the decon line will be categorized as either ambulatory or nonambulatory. All personnel who have the potential of coming in contact to exposed casualties must wear personal protective equipment. PPEs must be matched to the various types of environments in which emergency responders are working in. For example, an OSHA Level B chemical protective clothing can provide protection to those personnel working in the Warm zone. As time progresses the response of state and federal resources will provide assistance to the exposed area. The National Response Framework (NRF) is designed to provide a unified joint response from all federal agencies to any type of terrorist incident, such as the explosion of a "dirty bomb" or the release of anthrax. For some municipalities outside state or federal resources may arrive simultaneously but, for some rural areas, some time may elapse before assistance arrives. This must be factored into your municipalities' overall contingency plan for providing vital services.

Chemical Biological Radiological Nuclear Explosives (CBRNE)
Since the response issues, identification and procedures in handling CBRNE issues vary, this article will address each of these concerns individually followed by recovery actions and planning ahead.

Chemical Attack Concerns
Maj. Gen. Stephen V. Reeves, the former Joint Program Executive Officer for Chemical and Biological Defense at the Pentagon, reminds emergency responders not "…to lose sight of the chemical threat, given the volume of toxic industrial chemicals and toxic industrial materials (TIC/TIM) present all around the United States." Widely published information on the Web, he also points out, "magnifies the challenge, because it gives the bad guys the how-to ability to make chemical agents." See The Chemical Threat and the State of Chemical Preparedness available at Domestic Preparedness. Chemical Warfare Agents can be obtained and utilized by terrorist organizations. These chemical warfare agents are categorized as being: nerve, blood, blister, and choking agents. Identifying the type of chemical agent dispersed can be attained through the use of gas chronometer/mass spectronometer and MINICAMS. The findings will assist first responders in rendering the appropriate aid to victims. Chemical agents are classified as being persistent or non-persistent. The Centers for Disease Control and Prevention (CDC) states treatment for chemical attacks is administered by public health agencies and first responders by using treatment modalities "based on syndromic categories (e.g., burns and trauma, cardiorespiratory failure, neurologic damage, and shock)." This classification determines the length of time an agent will remain in or near a target area after its dissemination. These classifications will be addressed later as they relate to technical decontamination during the recovery phase of an incident.

Biological Attack Concerns
Effects of biological agents present another real concern for emergency managers unlike that of chemical agents. A biological agent normally incubates for a period of time in the host's body before displaying any symptoms. Its subtle symptoms of an ordinary sickness can temporarily hide their real effects on a given population. Hospital emergency rooms will more than likely be flooded by patients suffering from its effects until a trend is discovered. Biological agents have a variety of affects on human beings depending on the dosage received and the route of entry. The range of effect can vary from mild effects to death. Biological warfare agents can be broken down into three groups: pathogens, toxins and bioregulators. Since bioregulators are chemical compounds, they can be used in conjunction with other CBRN in order to mask their identification and impair the proper medical treatment for its victims.

Radiological Attack Concerns

Effects of a radiological dispersion device (RDD), also known as a "dirty bomb," would produce injuries from heat, force of the explosion, debris and radiological dust. A dirty bomb consists of radioactive material attached to a conventional bomb. Upon confirming the initial fatalities after an explosion can future radiation be determined. This will be dependent upon the grade of radioactive material and the amount that has been released. The health risks of exposure to radioactive material are dependent upon several factors: the amount of radiation received, known as the dose and the length of time over in which the dose is received. Radiation generally penetrates the body when exposed to beta particles and gamma rays. Beta particles can be a hazard to both bare skin and eyes by causing burns. If ingested or inhaled, damage to internal organs will occur in its victims. Gamma radiation travels hundreds of meters in open air and penetrates most objects. Gamma rays penetrate tissue farther than do beta or alpha particles. Gamma rays can cause death. Alpha particles do not damage living tissue when outside the body however, when alpha-emitting atoms are inhaled or swallowed, they especially are damaging because they transfer relatively large amounts of ionizing energy to living cells. Damage to internal organs will occur in victims. First responders are reminded to utilize time, distance and shielding (TDS) in order to reduce or eliminate the exposure of radiation. Emergency managers must enforce this safety measure with their personnel upon their arrival to the scene. Another possible threat in responding to a "dirty bomb" incident is the issue of a secondary explosive device against first responders. This type of response will be addressed later under explosive attack concerns.

DECON and CBRNE treatment of the masses: nuclear, explosives

Since the response issues, identification and procedures in handling CBRNE issues vary, this article will address each of these concerns individually, followed by recovery actions and planning ahead.

Nuclear Attack

Although nuclear weapons pose the least credible threat since they are both difficult to obtain as well as employ, this type of threat must be considered. In May 1997, former Soviet National Security Advisor Alexander Lebed, addressed a U.S. Congressional committee in a closed door session and stated, "There were approximately a hundred small nuclear weapons referred to as suitcase nukes unaccounted for when the Soviet Union collapsed." According to

some repoorts, these devices probably were replicated by the Russians after the Special Atomic Demolition Munition (SADM) found in the U.S. weapons inventory during the 1960s through the 1980s. On Sept. 7, 1997, in an interview with CBS newsmagazine's correspondent Steve Kroft, Lebed repeated that 100 of 250 suitcase nuclear-sized bombs were missing and no longer in control of the Russian military. Over the next several years, the controversy raged as to the possibilities of terrorist groups such as al-Qaeda obtaining a suitcase nuclear device. The ability to acquire radioactive materials from any number of industrial, educational or scientific sources and the combination of this material to produce an explosion must remain a national concern to protect the populace. An attack on a nuclear facility provides another means of causing a radiological contamination to a widescale area. Terrorists may breach security through a direct assault to an installation or gain entry by means of collusion with existing employees. The results of a nuclear attack would prove devastating to the population at large, as well effect the economy, the dispensing of proper medical care and ability of municipalities and states to properly govern. The 1986 Chernobyl accident at a nuclear power station—although not a terrorist incident—proves this theory true. The best defense in this matter relies on a good offense. Continuous aggressive intelligence and counter-intelligence activities conducted by various governmental agencies is the best option to mitigate these type of threats.

Explosives (High Yield)

Terrorists continue to use high yield explosives and incendiary devices as a prime choice of weapons from their arsenal as a means of intimidation. In April 1995, a domestic terrorist parked a truck bomb at the base of the Alfred P. Murrah building and detonated the truck bomb with a timed fuse. High explosives are designed to shatter and destroy; this process is initiated by the shock of a detonator. High explosives fall into three categories: Primary (various mixed chemical compounds), secondary (TNT, PETN, C4 and dynamite to name a few well known to the public), and tertiary (ANFO, used in Oklahoma City bombing in 1995). Improvised Explosive Devices (IEDs) usually are constructed from available resources of the designer. The most common explosive of of this type is a pipe bomb that is filled with black or smokeless powders. After the events of Sept. 11 became clear by the carnage unleashed by al-Qaeda, the U.S. quickly learned how their operatives had factored in the use of jet fuel as a major component of their means of attack. With this said, liquified natural gas (LNG) must also be considered as a significant potential threat for high yield explosives. A Sandia National Laboratories report considered four ways of a terrorist attack against a tanker: (1) ramming with another large ship or vessel, (2) triggered explosion, such as a sub-surface mine, (3) an external assault with an explosive charge and (4) a hijacking. A high yield explosion likely is to overwhelm a municipality's resources within a short period of time. It is imperative municipality leaders establish, train and maintain an effective mutual aid program with agency counterparts in their surrounding counties. Other counties can assist your local government in maintaining the continuity of emergency operations and provide needed support to an affected area.

Secondary Devices/Scene Control

Emergency managers must anticipate the possible detonation of a secondary explosive device when one has gone off and their personnel are responding to the scene. The bombing of an occupied Sandy Springs family-planning clinic in Atlanta in January 1997 targeted responding emergency personnel and investigators from both the Federal Bureau of Investigation and Alcohol, Tobacco, Firearms and Explosives, after the initial blast. One month later in February 1997, a similar incident took place in the same city when a nightclub was bombed. A secondary device was discovered. Apparently, first responders were the target when a backpack later was discovered again after the initial blast had taken place. Scene control is critical. The initial units responding to the blast site must establish control—regardless of agency. Once law enforcement entities begin to arrive, they can assist other fire and EMS entities in establishing and taking control of perimeters. Proper coordination with the police/sheriff's bomb squad is key in addressing the possibility of an actual secondary

device and the advancement toward the inner perimeter for vital reasons. To ensure safety of both first responders and properly retrieving injured victims to safe areas, this coordination should take place before accessing the inner perimeter or seat of the blast. Most fire departments have an agreement with their police counterparts to await the arrival of the bomb squad to address explosive devices. Inter-agency drills for explosion scenarios should be part of any municipality's training curriculum. Getting each agency to work through this type of joint exercise together will better assist emergency managers in facilitating each agency's interoperability with one another. Better communication and common bonds likely will be achieved to support one another during times of crisis where time is of the essence.

DECON and CBRNE treatment of the masses: recovery actions, planning

Recovery Actions-Technical Decontamination

As the emergency decon process comes to a close for chemical attack/HAZMAT incident, technical decontamination of the affected area(s) should take place. Factors such as the classification of an agent (non-persistent/persistent), the purity and the type of agent will determine how a cleanup is conducted. Since non-persistent agents dissipate, decon operations can take place quicker than that of persistent agents. As we saw in the Tokyo chemical sarin attack in 1995, the exceptionally powerful air exchange system in the subway stations assisted in reducing in the number of casualties. This proves as a good lesson learned for the United States—both transportation nodes as well as office buildings should provide its tenants this service. Authorities and building owners responsible for operating these venues have a responsibility to protect the public from these types of dangers.The National Institute of Occupational Safety and Health (NIOSH) provides technical guidance on this topic in their publication: "Guidance for Filtration and Air-Cleaning Systems to Protect Building Environments from Airborne Chemical, Biological, or Radiological Attacks." Persistent agents often linger, depending a number of factors such as temperature, purity and agent. Technical decon services can be contracted out to private firms as long as they are provided the proper information regarding the chemical threat and hold the proper certifications for the services that are to be conducted.

Planning Ahead

Any lead agency having these enormous responsibilities in preparing for and conducting a mass decon has to look at this task on a daily basis. There is virtually no research being conducted on how to effectively organize and manage such a mass decontamination effort.

Research is needed to determine the optimal responder/patient ratio, how large an area is needed to decon 50, 500 and 5,000 people, what level of medical training is required for the personnel performing decon and how much medical care should be given in the warm zone as opposed to the cold zone or at the hospital. The military model primarily addresses how to handle young healthy soldiers already wearing protective clothing and respiratory protection, and is not directly applicable to a heterogeneous, unprotected and undisciplined population. Although a State National Guard's Civil Support Team (CST) and additional federal resources may be of assistance, how long will it take for those entities to arrive? If you're a manager within a municipality, you have to ask yourself what effective resourcing can I provide to the public within my jurisdiction, pending the arrival of the state and federal governments? Conducting joint training exercises with these agencies, as well as the private sector on a quarterly basis, can help alleviate some of these concerns. Many first responder agencies conduct some form of CBRNE training with varying standards and a minimal amount of training. Usually specialized units (the few) receiving the most technical schooling to pass onto their counterparts. Your training should be tailored and standardized following guidelines set forth by the Center of Domestic Preparedness. Here are just a few questions you should ask in evaluating your agency's capabilities:

- How many times a year does your agency conduct individual CBRNE/HAZMAT protective measures?
- How is your communication practices with other agencies? How would you grade them?
- When did you last perform a Joint Exercise with various layers of government, emergency management and support agencies?
- Are all your personnel trained on NIMS and/or their local equivalent systems?
- Are personnel familiar with their personal equipment and Doffing procedures?
- How many times a year does your agency conduct decon procedures as a team/unit?
- How do you measure what you have learned?
- What types of PPE are used in your agency?
- What levels of PPE are in your inventory to meet a given threat?
- How many people can you decon at a given site?
- Do you have support personnel (medical, sanitation, etc.)?
- Who is the lead agency in your jurisdiction?
- How long will it take for that agency to assist you?
- What agency can provide relief operations for you?
- Does your agency have a robust backup agency in a Mutual Aid Agreement?
- Do your local hospitals have decon facilities?

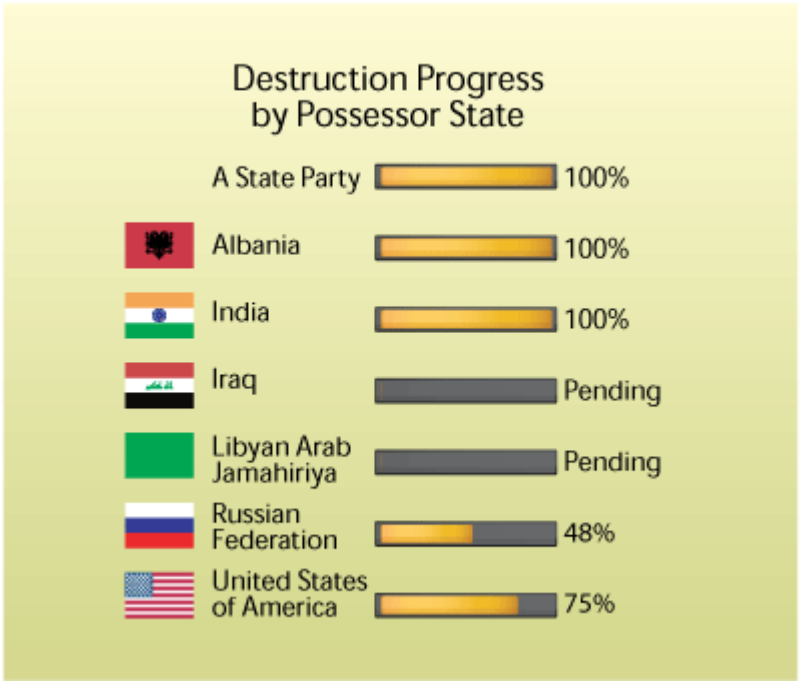
Resources

There are many training resources and products out there to assist your agency in both identifying threats and dealing with them. Terrorism Response videos can assist your agency's instructors to make key points through the use of this visual aid to your personnel. This type of training is cost effective, beneficial and not time consuming. Hands-on training should also take place after the classroom portion is complete. Obtaining timely intelligence always is critical in this business and so is identifying levels of radiation caused due to an unforeseen accident or that of a terrorist incident. The use of a K8 electronic alarming device provides its user with the instant feedback on the presence of gamma and X radiation (nuclear waste, RDDs/dirty bombs). Law enforcement and first responders actively can detect a large variety of radioactive hazards throughout their communities and can double as counter terrorism measure 24/7. Most fire departments have some sort of agreement with their counterpart the police department when it comes to handling bomb threat response. However, if FD gets on the scene first, they can provide mitigation actions by simply throwing a blanket over a potential RDD, pending the arrival of the bomb squad.

Global Campaign to Destroy Chemical Weapons Passes 60 Percent Mark

Source: http://www.opcw.org/nc/news/article/global-campaign-to-destroy-chemical-weapons-passes-60-percent-mark/

The destruction of chemical weapons that have been declared to the OPCW by States Parties under the provisions of the Chemical Weapons Convention (CWC) has surpassed 60 percent of global stockpiles, according to data reported today by the OPCW Technical Secretariat in The Hague. The Technical Secretariat has now verified the destruction of approximately 41,692 metric tonnes, or 60.05 percent, of all Category 1 chemical weapons that have been declared by seven possessor States since the Convention's entry into force on 29 April 1997. "Reaching this milestone is surely the OPCW's main achievement to date, bringing us ever closer to realizing the vision of a world free of these horrific weapons," said the OPCW Director-General, Ambassador Rogelio Pfirter. "The strong commitment shown by the possessor States in fulfilling their obligations proves that complete chemical disarmament under the terms of the Convention is indeed an attainable goal, and has made a significant contribution to international peace and security." Three of the possessor States - Albania, India, and a State Party that requests anonymity - have already completed destruction of their chemical weapons. The two countries with the largest stockpiles, the Russian Federation and United States of America, have met their intermediate destruction deadlines set by the Convention and are accelerating their activities. The Russian Federation has destroyed nearly 48 percent of its stockpiles to date and the United States just over 75 percent; however, both countries have confirmed that they will not complete destruction of their weapons before the 29 April 2012 deadline. The two most recently declared possessor States – Iraq, which joined the Convention in 2009, and the Libyan Arab Jamahiriya, which joined in 2004 -- have yet to begin destruction activities. The Chemical Weapons Convention is the first and only treaty that is designed to eliminate an entire category of weapons of mass destruction under a stringent regime of inspections to verify compliance. Since its entry into force in 1997 the Convention has attracted 188 States Parties representing more than 98% of the world's population and chemical industry. The OPCW Technical Secretariat currently commits 85% of its inspection resources to monitoring and verifying the destruction of chemical weapons stockpiles and their associated production facilities.



PRESS RELEASE 1/2010 THE HAGUE, 8 JULY 2010

Life Protective System

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GEOMET's Life Protective System offers a full line of fully integrated, modular, and performance tested personal protection equipment designed for the civilian and military first responder. Our systems provide protection against chemical warfare agents, biological agents, and toxic industrial materials (TIMs) using proven materials, modern sealing techniques, and customized breathing systems to ensure that the user is fully protected. GEOMET's Life Protective System includes:

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Chlorine leaks in Mumbai port

Source : http://www.deccanherald.com/content/81323/chlorine-leaks-mumbai-port-103.html

At least 103 people fell sick when they inhaled chlorine gas which leaked early today from one of the imported cylinders lying in Bombay Port Trust's (BPT) Hay Bandar premises for 13 years. The condition of eight persons who are in JJ hospital was said to be critical, police said. The incident at Sewri area near some residential buildings and a college also raised questions of negligence in disposal of the cylinders and hazardous material. The affected persons were taken to King Edward Memorial hospital, JJ hospital and BPT hospital, police and fire brigade officials said, adding they included college students, BPT staff and firemen. BPT, Police and Brihanmumbai Municipal Corporation are jointly conducting a probe into the incident while the Ministry of Shipping has sought a detailed report from the Port Trust authorities. Some of the affected persons were discharged after getting treatment. Eight persons are in Critical Care Unit due to respiratory problems, state-run J J Hospital Dean T P Lahane told reporters. "Due to intake of chlorine gas patients have developed breathlessness and are facing burning sensation in eyes, on face and hands", he said. The fire brigade personnel rushed to the spot to plug the leakage. Four fire officers took ill after inhaling the gas and were taken to hospital for treatment. The gas leakage was reported at 0315 hours from BPT premises located near Lal Bahadur Shastri college of Maritime and Research Studies, a fire brigade official said. Rahul Asthana, chairman of the Mumbai Port Trust, said some operators using the site import empty chlorine cylinders and fill them for re-use. "Some residual chlorine appears to have been left and that leaked out into the atmosphere," he said. "It's under control. We have put sodium hydroxide on it." According to an official press release, 136 cylinders, including the one from which the gas escaped, had been lying at BPT's Hay Bandar premises for the last several years. These had been imported in 1997 but the importers did not take delivery, it said. "Bombay Port Trust is checking its records to find out whether any action had been taken for disposal of the hazardous material in the past," the release said.

EasierTech Software, First In United States To Develop Software To Track Dangerous Chemicals For Universities

Source: http://www.medicalnewstoday.com/articles/199101.php

The creation of new federal policies requiring universities to maintain detailed records about specific laboratory chemicals deemed dangerous has presents new challenges for the nation's institutions of higher education and hospitals. Fortunately, Raleigh company, EasierTech Software, has developed the solution: the country's first online database software application designed for colleges and universities that generates chemical hygiene plans, required for OSHA, and tracks the Dept. of Homeland Security's target list of chemicals. The program enables university environmental health and safety managers to maintain the new DHS chemical facility antiterrorism standards while also managing lab safety. "We believe our software will help colleges and universities beyond reporting compliance by reducing wasteful inventory practices and man hours. With our software, in case of a fire, you generate an inventory of a building for emergency first responders. Also, in case there is an accident,

you can immediately see if the proper safety equipment was in place," states Samuel Polsky, CEO EasierTech Software. The first institution to deploy the new chemical hygiene software was North Carolina State University. The system manages chemical and safety information for more than 1,200 laboratories across campus. Last week, Towson University in Baltimore became a client. "The safety plan concept was originally developed for compliance with Occupational Safety and Health Administration Codes. With the windfall of information available, technological advances have allowed a quick, concise central depot of this information for streamlined reporting, emergency response planning and data sharing between numerous divisions, to promote a safe and sound research/work environment. From my experience, this system is a strong regulatory tool and customer service friendly data capture method. The database is robust and offers a myriad of options," remarks Amy B. Orders, M.S., M.Ed., RT(R), Assistant Director, Environmental Health and Safety, North Carolina State University. The Easier Environmental Health and Safety (EHS) Suite, software is designed for facilities of any size. It was developed in conjunction with North Carolina State's Environmental Health and Safety Department and has received a prestigious award from CSHEMA (Campus Safety Health and Environmental Association) for its role in the university's online safety plan compliance process.

Pont-Saint-Esprit poisoning: did the CIA spread LSD?

Source: http://www.bbc.co.uk/news/world-10996838

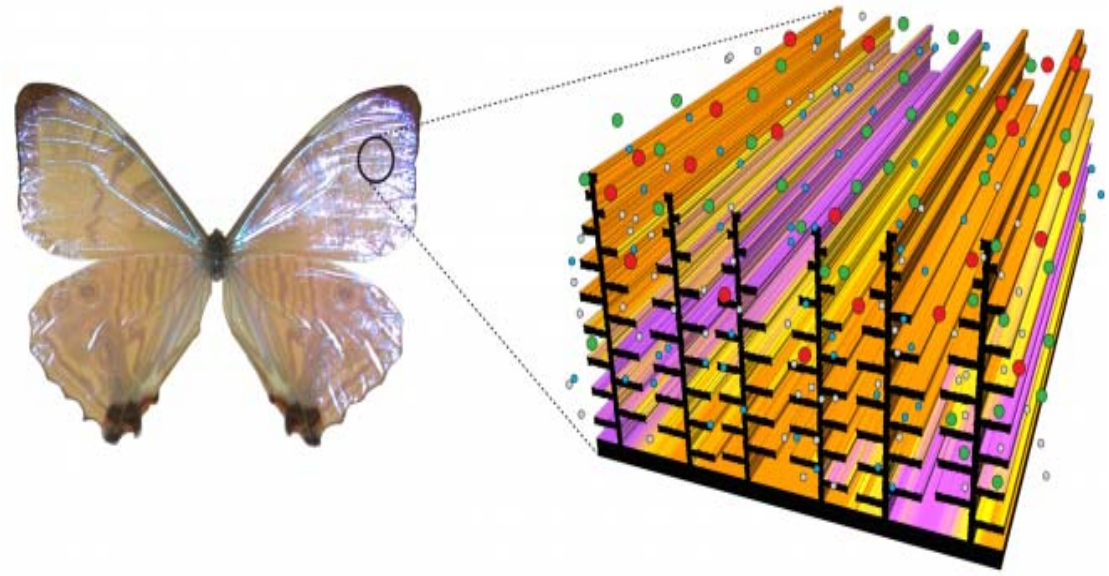
Nearly 60 years ago, a French town was hit by a sudden outbreak of hallucinations, which left five people dead and many seriously ill. For years it was blamed on bread contaminated with a psychedelic fungus - but that theory is now being challenged. [...] That view remained largely unchallenged until 2009, when an American investigative journalist, Hank Albarelli, revealed a CIA document labelled: 'Re: Pont-Saint-Esprit and F.Olson Files. SO Span/France Operation file, inclusive Olson. Intel files. Hand carry to Belin - tell him to see to it that these are buried.' F. Olson is Frank Olson, a CIA scientist who, at the time of the Pont St Esprit incident, led research for the agency into the drug LSD. David Belin, meanwhile, was executive director of the Rockefeller Commission created by the White House in 1975 to investigate abuses carried out worldwide by the CIA. Albarelli believes the Pont-Saint-Esprit and F. Olson Files, mentioned in the document, would show - if they had not been 'buried' - that the CIA was experimenting on the townspeople, by dosing them with LSD. The conclusion drawn at the time was that one of the town's bakeries, the Roch Briand, was the source of the poisoning. It's possible, Albarelli says, that LSD was put in the bread. [...] But American academic Professor Steven Kaplan, who published a book in 2008 on the Pont-Saint-Esprit incident, insists that neither ergot nor LSD could have been responsible. Ergot contamination would not, he says, have affected only one sack of grain in one bakery, as was claimed here. The outbreak would have been far more

widespread. He rules out LSD on the grounds that the symptoms people suffered, though similar, do not quite fit the drug.

Darpa's Butterfly-Inspired Sensors Light Up at Chem Threats

Source: http://www.wired.com/dangerroom/2010/08/pentagons-butterfly-inspired-sensors-light-up-at-chemical-threats/#ixzz0xtZe7JDv

The Pentagon's got a new game plan to detect deadly chemical threats: tiny, iridescent sensors that are designed to mimic one of nature's most colourful creatures. It's the latest in a series of Darpa-funded efforts to use insects to spot weapons. Last year, the agency tapped researchers at Agiltron Corporation to implant larvae with micromechanical chemical sensors.



In 2005, Darpa-backed scientists started training honey bees to become bomb sniffers. This time, Darpa's interested in the chemical-sensing talents of butterflies. The agency's awarded $6.3 million to a consortium, led by GE Global Research, that'll develop synthetic versions of the nanostructures found on the scales of butterfly wings. The project's lead researcher, Dr. Radislav Potyrailo, likens the nanostructures on the butterfly wing scales, which each measure around 50 by 100 microns, to "tiles on a roof." The science of chemical response behind the structures is based on photonics. The wings of Morpho butterflies change spectral reflectivity depending on the exposure of the scales to different vapors. As Potyrailo and his team write in a 2007 paper, published in Nature Photonics, "this optical response dramatically outperforms that of existing nano-engineered photonic sensors." "This is a fundamentally different approach," he tells Danger Room. "Existing sensors can measure individual gases in the environment, but they suffer, big time, from interferences. This approach overcomes that hurdle." A single sensor would be tailored to detect certain types of chemical agents or explosives, and do so without hindrance from other chemicals, airborne molecules or even humidity. Water molecules, Potyrailo points out, can overload a dangerous gas that's sparsely distributed but "is still able to have actionable effects in a military setting." And, much like their biological inspiration, the sensors would do the job with remarkable specificity. "It would be science fiction to say 'here is my sensor, it can selectively detect 1,000 different chemicals'," he says. "But what we're saying is that we can detect and distinguish between several important chemicals — without making mistakes, without false responses." At around 1 x 1 cm apiece, the sensors are also small enough to be attached to clothing, installed in buildings or deployed "like confetti" over widespread regions. And they'd have helpful civilian uses, as well, from food safety and water purification tests to emissions monitoring at power plants. So be careful, the next time you swat an insect. It just might save your skin.

DHS doesn't know how toxic gases would disperse after a catastrophic release

Source: http://www.gsnmagazine.com/node/21181?c=disaster_preparedness_emergency_response

DHS admits that currently it doesn't have the ability to accurately predict the impact of a large-scale release of "Toxic Inhalation Hazard" materials, such as chlorine or ammonia gases, which might be dispersed over a wide area following a terrorist attack or a major accident. Experts thought they knew how TIH gases would disperse if they were suddenly released from a rail tank car, for example, but discovered that the gases followed unexpected patterns. "Deficiencies were brought to light after the rail tank car accidents in Graniteville, SC (2005) and Macdona, TX (2004) where the released chemical cloud behavior was not consistent with accepted scientific predictions," explained the TSA in an online posting on August 4. Earlier releases of much smaller quantities of TIH gases had led dispersion modeling experts, government regulators, emergency responders and chemical and rail industry executives to reach incorrect conclusions. "Using chlorine as an example, it was expected that, with a sufficiently large hole in a rail tank car, the liquid chlorine would exit the damaged rail tank car within minutes, immediately vaporize from a liquid to a vapor, mix with the surrounding air and be transported by the wind," said the TSA. However, the TIH gases actually behaved quite differently during the Graniteville and Macdona chemical releases. "Unexpectedly, the released material appears to have had most of its impact in the area close to the release point with little downwind effects." Because it recognizes that it has a great deal to learn about the real-world dispersion patterns of TIH gases following a terrorist attack or an accident, TSA is preparing to undertake a major study of this phenomenon. It wants to find a contractor that can conduct what it is calling a "Toxic Inhalation Hazard materials accidental study." A key element in that study will be organizing and hosting a two-day seminar (no earlier than January 2011) in which chemical and rail industry experts and the response teams who were actually involved in the Graniteville and Macdona accidents would come together to discuss precisely what occurred during those incidents and what lessons were learned. TSA envisions a total small business set-aside contract will be awarded to one firm on a firm-fixed price basis. The study would be designed to improve the understanding a rapid large-scale releases of 60 to 90 tons of pressurized, liquefied TIH gases from a railcar. "It is critical for DHS and TSA to understand the nature of such releases because of the potential for catastrophic accidents, and railcars transporting TIH materials could be attractive targets to terrorists," says the statement of work accompanying TSA's solicitation for such a vendor. Millions of tons of toxic industrial chemicals are produced, shipped and consumed in the U.S. every year. "Thousands of rail tank cars containing up to 90 tons of TIH materials travel routinely through highly populated U.S. cities such as Chicago, Los Angeles, Baltimore, and Houston to such an extent that movement of TIH materials is the primary security risk in freight rail transportation," declares TSA. Prospective small business contractors have until August 12 to submit their quotations to TSA. The selected vendor will be expected to compile a comprehensive history of the Graniteville and Macdona releases as well as earlier TIH tank car releases that took place in Alberton, MT, in 1996 and Minot, ND, in 2002. "It is critical that information presented at the seminar include details that were derived directly from individuals who were near the accident site at the time of the event or participated in the early phase of the response to the incident," says the statement of work.

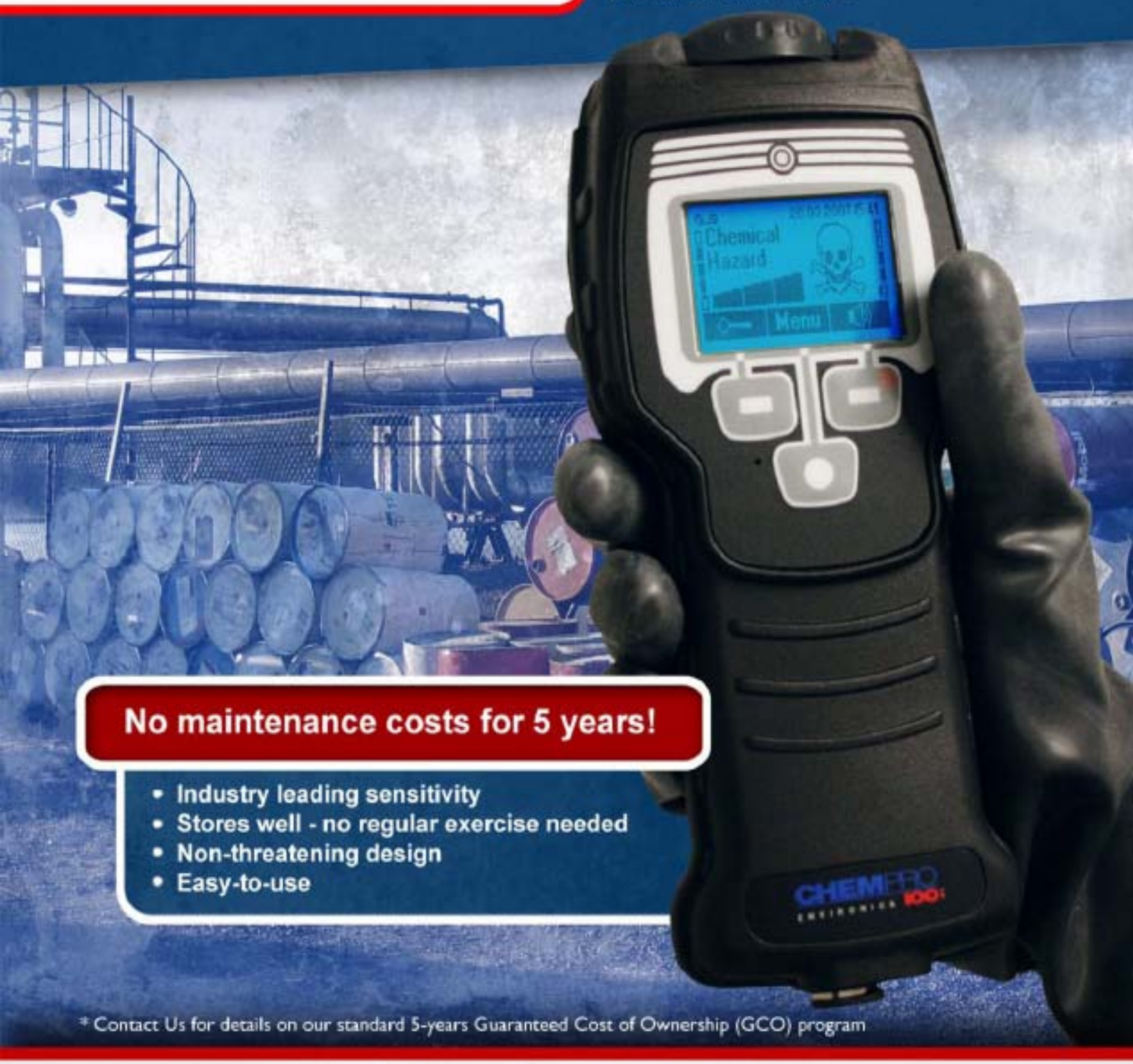
Accident in Graniteville, SC

NEW

CHEMPRO 100i

Handheld Chemical Detector

ChemPro100i is a handheld vapor detector for classification of Chemical Warfare Agents (CWAs) and Toxic Industrial Chemicals (TICs). The ChemPro100i adds 6 more sensors to increase the number of chemicals that it can detect and to decrease the potential for false alarms.



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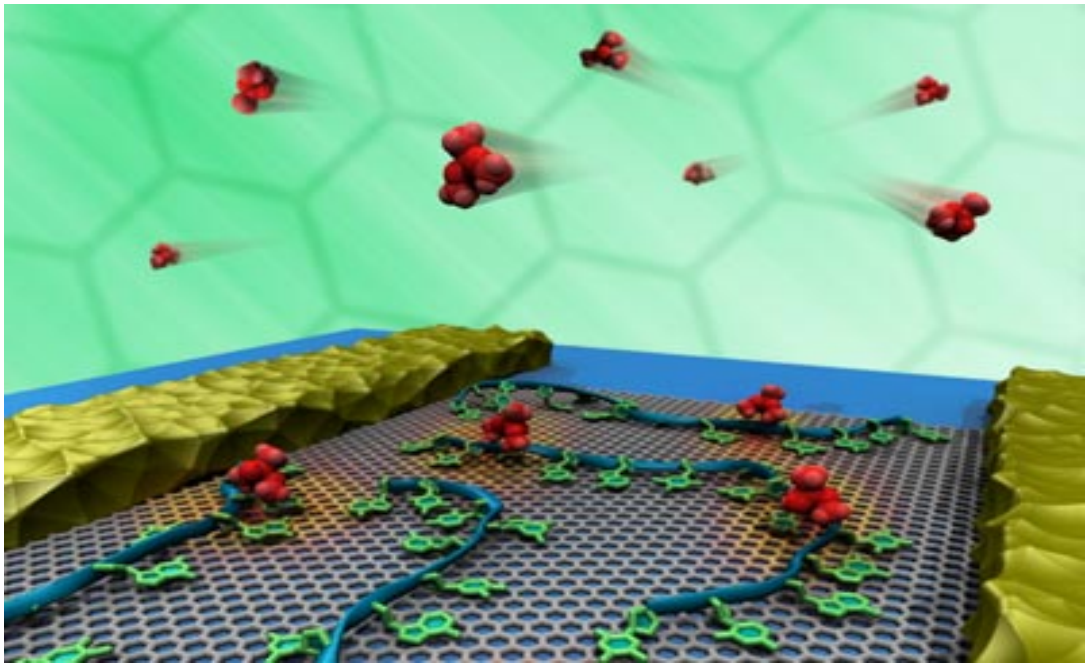
DNA helps turn graphene into a chemical sensor

Source: http://physicsworld.com/cws/article/news/43643



DNA-decorated graphene sensor

A new chemical sensor based on just two materials, graphene and DNA, has been unveiled by researchers in the US. The device is simple, highly sensitive and easy to make and the scientists believe that it could be used to make an electronic "nose" capable of sensing a variety of molecules. Eventually, such sensors could be used in hospitals to detect disease, at security checkpoints to pinpoint dangerous chemicals and even by rescue teams to find lost people. Like their biological counterparts, electronic noses are sensitive to a large number of different molecules. To achieve this, they usually consist of hundreds, or even thousands, of sensors on the same chip. Each sensor reacts to a specific molecule, just like the olfactory receptor proteins in mammal noses do. However, the need to fabricate thousands of different sensors – and the challenges of converting chemical reactions into electronic signals – can make electronic noses expensive and complicated devices. Now, A T Charlie Johnson of the University of Pennsylvania and colleagues Ye Lu, Brett Goldsmith and Nick Kybert have come up with a simple way of sensing chemicals by showing that the electronic properties of DNA-coated graphene change in when exposed to certain molecules.

Begin with graphene transistors

Graphene is a sheet of carbon just one atom thick and the team based its devices on graphene transistors made using the standard "sticky tape" method, which involves exfoliating individual atomic layers of carbon from graphite. Next, the researchers thoroughly cleaned the graphene to remove any residue on the surface that can cause unwanted signals. Each transistor was then soaked in a solution of a specific sequence of single-stranded DNA, which self-assembles into a pattern on the surface of the graphene. DNA is made from four different bases – adenine (A); cytosine (C), thymine (T); and guanine (G) – and an example of a sequence used is GAG TCT GTG GAG GAG GTA GTC. "We only tested a few sequences but the number of possible sequences is essentially endless," explained Johnson. The researchers selected their DNA sequences based on the ability of the sequence to work as a chemical sensitizing agent – a role very different from the function of DNA in living organisms. Each sequence behaves a little differently on the surface of graphene because it has a different shape, pH and hydrophilic properties. This means that every sequence interacts differently with different volatile organic chemicals (VOCs).

Change in resistance

When the DNA/graphene reacts with a chemical in its environment, the resistance of graphene changes. This change, which can be as large as 50%, can easily be measured using simple equipment. And, because this is a direct electronic measurement, it is very fast – complete responses can be seen in less than 10 seconds and the sensors recovers in about 30.

"By making an array of such DNA-graphene devices, we believe that we could exploit this property of DNA/graphene to detect explosives, chemical weapons (like nerve gas agents) or even toxic compounds that might be accidentally released at a plant," Johnson told physicsworld.com. "One of the great things about this research is that there is nothing really expensive about any of the sensor components, given the continual advances being made in graphene production," said Johnson.

Putting dogs out of business

The team's next big challenge is to scale up production of its sensors. "We need to test more DNA sequences, fit more devices on a chip and make sure we understand all the signals when a big array of sensors is exposed to a mixture of chemicals," adds Johnson. "We have high hopes for these sensors but there are still lots of hurdles to overcome. Eventually, we would like to put dogs out of the chemical sensing business, and with proper development, sensors like ours might be able to do that." The research paper describing this work can be seen for free on arXiv. It has also just been published in Applied Physics Letters.

Leaked documents suggest Taliban chemical strike on U.S. soldiers

Source: http://www.globalsecuritynewswire.org/gsn/nw_20100727_9487.php

"Information gleaned from this week's giant unauthorized release of tens of thousands of U.S. military documents suggests soldiers in Afghanistan might have been exposed to a chemical weapon, Wired magazine reported. One document addresses a special operations forces effort to clear an area of multiple improvised explosive devices and battle insurgents on Feb. 14, 2009. After one bomb was detonated 'a yellow cloud was emitted and personnel began feeling nauseous,' according to the combined Joint Special Operations Task Force field log. Dust samples were gathered and the team went back to its base. 'A total of 7x US MIL, 1x Interpreter and 1x K-9 dog reporting symptoms,'according to the document. 'Will inform if chemical attack is confirmed.' A subsequent document, issued six hours afterward, stated the team was undergoing medical care and examination. 'Initial medical assessment is that none of the personnel are currently experiencing symptoms .... CJSOTF surgeon assessed no need to MEDEVAC (medical evacuate) any personnel,' the report said. 'The individuals have been placed on 24 hour stand down. SSE Team from KAF (Kandahar Air Field) will fly to FB Cobra on 15FEB09 to conduct testing for any residual chemicals or materials on personnel and equipment. The results of this testing will confirm or deny this event as a CBRN [chemical biological radiological nuclear] attack.' No reports from the WikiLeaks data dump indicate the military concluded the soldiers had been subjected to a chemical strike. [...] Another military field report stated that in June 2007 U.S. soldiers in eastern Afghanistan reported being tipped off to an extremist plot to contaminate the food supply of allied troops in the country by stealing coalition food trucks. 'The plan is to inject the bottles or the packages of food with unidentified chemicals, or recreate the same type of packages with contaminated versions of the same product,' the report said, adding 'the source 'supplied no further information.' [...] Another unverified WikiLeaks military report stated that al-Qaeda was plotting to produce

chemical warfare agents to be disseminated by rocket-propelled grenades, the London Guardian reported. A source told U.S. forces that Mohammad Hamzah Ahmadzai was looking into acquiring uranium for undetailed explosive uses. While the nuclear material could be purchased from an undisclosed facility in Lahore, Pakistan, the scientist found the asking price -- $538 for 10 grams -- too expensive, the source said."

The EMS Role on FAST Teams & HazMat Assignments

Source: http://www.domesticpreparedness.com/First_Responder/EMS/The_EMS_Role_on_FAST_Teams_%26_HazMat_Assignments/

Firefighter Assist and Search Teams (FASTs) are basically teams of responders positioned as an on-site "just in case" resource – suited, equipped, and ready to go into action on short or no notice – on a mission to "rescue the rescuer(s)." First responder duties – particularly in firefighting and/or on hazmat (hazardous materials) missions – are inherently dangerous, so there is always a chance on any response that the responders may suddenly find themselves in a life-threatening situation from which they are unable to extricate themselves. In short: Being a responder is about taking controlled risks to save the lives of others; however, controlled or not, it still entails some risks. FAST teams are an outgrowth of the former fire-suppression teams and as a result were originally conceived of, more or less, as a fire-apparatus asset – similar in some ways to a ladder truck or engine, but with a crew to operate it, enter a burning building, and rescue any imperiled responders already inside the building. The just-in-case concept, of course, can be and has been extended to other situations such as hazmat missions and police-unit tactical responses. Preferably, the members of FAST teams should possess the same skills as the responders who are already operating on scene. The principal reason for this guideline is that the skills and experience of responders should, if possible, reflect the specific type of hazard involved. Nonetheless, it is imperative that a FAST team of any type should be augmented with an on-site EMS (emergency medical services) resource. Two In/Two Out – Plus Dedication & Control
One of the most important operational missions of a SWAT team, usually, is to rescue hostages. For that reason, every SWAT program should include training in the rescue and/or extrication of individual SWAT members themselves. By creating a dedicated "entry team" whose job it is to rescue responders who find themselves in an uncontrolled situation, command imposes a needed measure of control back over the incident. Within the overall hazmat community the usual standard is "two in, two out" – in other words, two responders in protective gear within the operation zone should be backed by a two-responder entry team suited up and ready to go into the zone to support the responders already there. That support is focused on: (a) rescuing the fallen, endangered, or otherwise imperiled hazmat operators inside; and (b) removing them to the outside of the hot or high-hazard zone. At the edge of any scene is the interface between the scene's operational area, or hot zone, on the one hand – and the rest of the world outside. On a hazmat scene this "warm" zone is usually where the rescued personnel are decontaminated and cleansed of any hazardous materials on themselves, their protective gear, and/or their equipment.

The Combined Stress of Hostility & Excessive Heat

Any high-risk event requires having EMS personnel on-scene; to maximize their effectiveness, though, EMS personnel must be waiting and ready for any victim or patient who enters or is carried into the warm zone. Another planning consideration is that the protective gear that hazmat responders must wear into and at the scene of a hazmat incident – to separate them from the hostile chemicals – results in additional stresses, both of carrying the extra weight and enduring an excessive heat build-up. Having EMS on-scene has one major compensating advantage, though: It allows for the rapid treatment of responders. An EMS component therefore should be considered an essential part of the FAST team responding to any hazmat incident and for that reason should be available only for the support of the responders on-scene; however, the members should be assigned to and serve in the decontamination area, rather than serving as part of the entry team. Another important hazmat

guideline is that any contaminated patient must be decontaminated prior to receiving care – otherwise, the contaminating chemical may well spread and come into further contact with the patient by and during the act of providing medical care. That precautionary rule applies even more to paramedic-level treatments – which are, in general, somewhat more invasive. A final but essential point: Having the resources available to rescue and treat responders who themselves are in deadly peril because of their efforts to rescue others is not only a good practice within the response community itself; it is also an ethical imperative for their leaders.

Understanding Surge Capacity: A Much-Needed Primer

Source: http://www.domesticpreparedness.com/Medical_Response/Public_Health/ Understanding _Surge_Capacity%3a_A_Much-Needed_Primer/

No matter what the disaster – natural, man-made, or technological – there is a very real possibility that the health care infrastructure of a municipality, county, region, and/or state will be overwhelmed at one time or another. Health care systems are "first receivers" for incidents of all sizes and varieties and can easily be thrown into chaos because of their typical inability to respond both quickly and effectively. Most U.S. health care systems are already stretched to their limit on a daily basis, and for that reason alone the additional stress of an unexpected surge from a catastrophic event can quickly stretch their capacity beyond the normal breaking point. The American College of Emergency Physicians (ACEP) defined surge capacity – in a 2004 Policy Statement (Health Care System Surge Capacity Recognition, Preparedness, and Response) – as "a measurable representation of a health care system's ability to manage a sudden or rapidly progressive influx of patients within the currently available resources at a given point in time." Surge capacity also can be defined as the maximum delivery of services that a system can provide if all available, or potential, resources – e.g., beds, equipment, supplies, pharmaceuticals, and personnel – are mobilized. The surge of patients entering a hospital or emergency medical services (EMS) system following any large-scale incident has the potential, therefore, to be overwhelming to even the well-prepared system. In today's world, unfortunately, the creation of adequate surge capacity in a health care system is an absolute necessity, just as the ultimate goal during a surge situation is to do the most good for the most people – as well and as rapidly as possible. In the post-9/11 era there has been, in fact, a definitive shift away from individual care to population care. To facilitate that shift, hospitals and other patient-care facilities should develop and institute the triage protocols required for the prompt recognition and isolation of those needing immediate care. This is particularly urgent in the event of an influx of patients presenting themselves to an emergency department/clinic with a communicable disease of public health significance that is either suspected or confirmed – e.g., an outbreak of severe acute respiratory syndrome (SARS) or pandemic influenza, or following a bioterrorist attack involving the plague or smallpox.

Acute, Chronic, and the Outward Characteristics of Each

When examining the requirements for surge situations themselves and/or the capacity of health systems to handle such situations, one must consider two different types of incidents – "acute" and "chronic" – that could lead to those situations. Following is a brief description of each:

- Acute Events – e.g., chemical attacks, explosive events, and even meteorological events such as tornadoes – will usually be defined by the following characteristics: hard hitting, immediate impact, the majority of casualties in a very short time frame, trauma to the health care system itself, and responses/reactions based on previous planning.
- Chronic Events – e.g., a biological attack, a radiological release, and even a natural event such as flooding – will usually (but not always) display the following operational characteristics: slower moving, a gradually expanding impact, increasing effects, exponential increases in casualties, a surprised (and sometimes overwhelmed) health care system, responses/reactions based on planning, and an adaptation capability.

Both types of events have the potential to force a large number of patients, and their relatives, into the health care system. For the most part, therefore, an effective surge plan should focus on:
(a) Material resources – supplies and equipment including, but not necessarily limited to, beds, ventilators, and a broad and varied inventory of other health care instruments and devices; and
(b) Staff (personnel) – the critical points here include ensuring that the staff has been cross-trained to handle a surge event and that there are enough staff members who are able to, and will, report to work even during an event that might affect them and/or their families personally.
Meeting the latter requirement involves:
(1) knowing how quickly the facility can notify and assemble additional necessary staff during a surge event; and
(2) maintaining the appropriate training – particularly ICS (Incident Command System) training; HICS (Hospital Incident Command System) training; and PPE (Personal Protective Equipment) training – for all levels of staff.

Structural Requirements – Plus the Overall Good of the Community
The physical structure of a building is another extremely important planning factor. Obviously, surge facilities should have the physical space needed to adequately handle not only the surge but also the management infrastructure needed to support surge operations, including planning for the implementation of alternative care sites (ACSs). It is particularly important to remember that surge capacity in health care is about much more than simply having a few extra collapsing beds available and/or possessing the ability to recall personnel in the event of a large-scale incident. It is about having both a plan and a system already in place; about the training of personnel (utilizing the full spectrum of exercises – table top, functional, and full-scale) available; about understanding what went right and wrong during those exercises; and about having the ability, and the willingness, to modify the plan based on the lessons learned. Experience also has shown the need for close collaboration between EMS systems, hospitals, emergency management, and health departments to begin to build a realistic approach to surge capacity. The processes involved, however, require not only early assessments and meticulous curriculum development but also both effective training and outreach capabilities. Developing a realistic surge capacity is clearly easier said than done. It involves a significant commitment of funds, time, public support, and political buy-in. Health system leaders must therefore be prepared to argue – and prove – that the development of a surge capacity is not simply a health issue but also, and primarily, a major community issue. Having a surge capacity plan in place, well before a worst-case situation, will ultimately benefit the public under normal busy conditions as well as in the event of local or regional disasters that threaten the very survival of the community. The ultimate vision must be a seamless system of health care surge capacity, throughout the country, that is capable of responding effectively and efficiently to public health emergencies of all types and all sizes, ranging from small but significant incidents to large-scale multi-casualty disasters.

Preparing for Unexpected Hospital Surges

Source: http://www.domesticpreparedness.com/Medical_Response/Public_Health/Preparing_for_Unexpected_ Hospital_Surges/

Any public health emergency will cause a rush on hospitals for medical assistance, but this is especially true with influenza pandemics and outbreaks of other infectious diseases. Hospitals and local public health departments therefore must work together so that they are prepared to handle a surge of patients. Before the Severe Acute Respiratory Syndrome (SARS) outbreak affected 29 countries in 2003, hospitals in the Toronto, Canada, area had surge support plans in place. Nearly half of the nursing positions in the area at the time were staffed by part-time

nurses who frequently rotated between medical facilities, and each of these facilities included these part-time nurses in their surge support plans. However, during the SARS outbreak in

Canada, approximately 40 percent of possible infectious and quarantined patients were health-care workers themselves. To curb the spread of SARS, many hospitals were placed under quarantine, restricting the movement of the part-time nurses who were needed to help out at other facilities. To fill the gaps left by rotating nurses who were not permitted to leave one facility and report to another, some hospitals offered double and sometimes triple pay to nurses who had not been quarantined. Although this tactic enabled some hospitals to fulfill their staffing needs, there were other hospitals that could not follow suit. After the quarantine ended, the hospitals in the Toronto area agreed to develop surge support plans that take into account the possible depletion of available part-time nurses as well as other potential restrictions on movement throughout the area.

Pre-Planning, Alternative Triage, and a Cooperative Approach

In addition to patients requiring antivirals and treatment, medical facilities may also experience a surge in mental health patients during a disease outbreak. In January 2007, the Region III Office of Public Health of the Louisiana Department of Health and Hospitals hosted a tabletop exercise to test its pandemic-influenza response plans. During the exercise, participants noted that the demand for mental health services in Louisiana has remained high ever since Hurricane Katrina – during which time Region III employed only one pediatric psychologist and could not keep up with the demand. Exercise participants expressed concern that a pandemic influenza outbreak would only add to the problem, completely overwhelming mental health facilities in the area. To address that problem, the state's Office of Public Health and Office of Mental Health agreed to develop a regional mental-health surge support plan that would consider all in- and out-patient facilities in the area as potential alternate facilities. Another problem addressed during the tabletop exercise was the delay in hospital services caused by overflow issues. The exercise participants worried that, even with surge support in place, many citizens would rush to hospitals that distribute antivirals, overwhelming the staff members at those hospitals. The overflow also would significantly

extend the wait times experienced by EMS (emergency medical services) personnel after they deliver patients to the hospital. To resolve that problem – and to ensure that ambulances are available to those who need them, instead of waiting empty at the hospital – region officials agreed to consider alternative triage strategies. Regional plans now may include, for example: (a) establishing a telephone triage system to condense ambulance runs; and/or (b) engaging firefighters as alternate EMS providers. In addition, hospitals are permitted to create holding areas where patients may be dropped off (which would free the ambulance for other duties), or they may send health-care providers with the ambulances to conduct home-based triage. Even with surge support plans in effect, of course, medical facilities may still be overwhelmed by the demand for their services. Nonetheless, only by planning for alternative scenarios in advance, and by working closely with other facilities in the region, can hospitals hope to meet the needs of their patients.

FACT OR FICTION?

New 'Emergency Bra' is sexy, supportive and doubles as a gas mask

Source: http://www.nydailynews.com/tech_guide/2010/09/29/2010-09-29_new_emergency_bra_is_sexy_supportive_and_doubles_as_a_gas_mask.html#ixzz11B0PoEKw

Dr. Elena Bodnar demonstrates her 'Emergency Bra' at the MIT Museum. Now this is a wonder bra. It's sexy. It's supportive. And if somebody tosses a dirty bomb, it doubles as a gas mask for you - and a friend. It's called the "Emergency Bra" and you now can buy one for $29.95 at ebbra.com, said its inventor, Dr. Elena Bodnar. "We're just starting and there already is a huge interest," Bodnar told the Daily News. "Right now it's available just in B and C cup sizes and just in what I call 'original red'," she said. "But in two months, we will be selling it in classic black and white as well."

Breathe deep: Prize-winning invention combines sexy and safety. Born in Ukraine, Bodnar said she was inspired by the Chernobyl nuclear accident and by photographs of 9/11 victims running through the ash with rags over their faces to come up with "such a personal protective device." "I thought evacuating would be easier if people had a readilly available face mask," she said. So Bodnar went to work and unveiled her prototype - in hot

pink - last year at Harvard University. It won her an Ig Nobel prize, which recognizes eemingly ridiculous research that's actually useful. Share a cup: Inventor was inspired by the Chernobyl disaster. Bodnar, whose day job is director of the Trauma Risk Management Research Institute in Chicago, said she's also working on something for the gents - a dress shirt that converts into a rescue device. "You can never be too prepared," she said.

Have you ever thought of that?

A good solution when working in a contaminated environment

The Use of a Powered Device for Intraosseous Drug and Fluid Administration in a National EMS: A 4-Year Experience [Original Articles]

Schwartz, Dagan MD; Amir, Lisa MD; Dichter, Reuven MA; Figenberg, Zvi MD

From the MDA Medical Division (D.S., R.D., Z.F.), Tel-Aviv, Israel; Emergency Medicine Department, Ben Gurion University, Israel; and Emergency Medicine Department, Schneider Children's Hospital, Israel.

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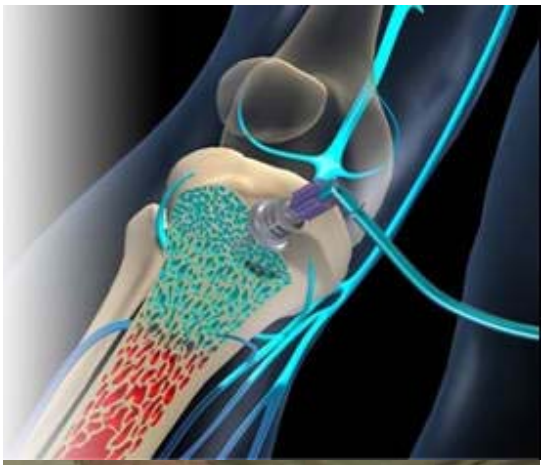
Address for reprints: Dagan Schwartz, MD, MDA Medical Department, 60 Ygal Allon Street, Tel-Aviv 67062, Israel; email: dagans@mdais.co.il.



Collection

CBRNE-TERRORISM Newsletter

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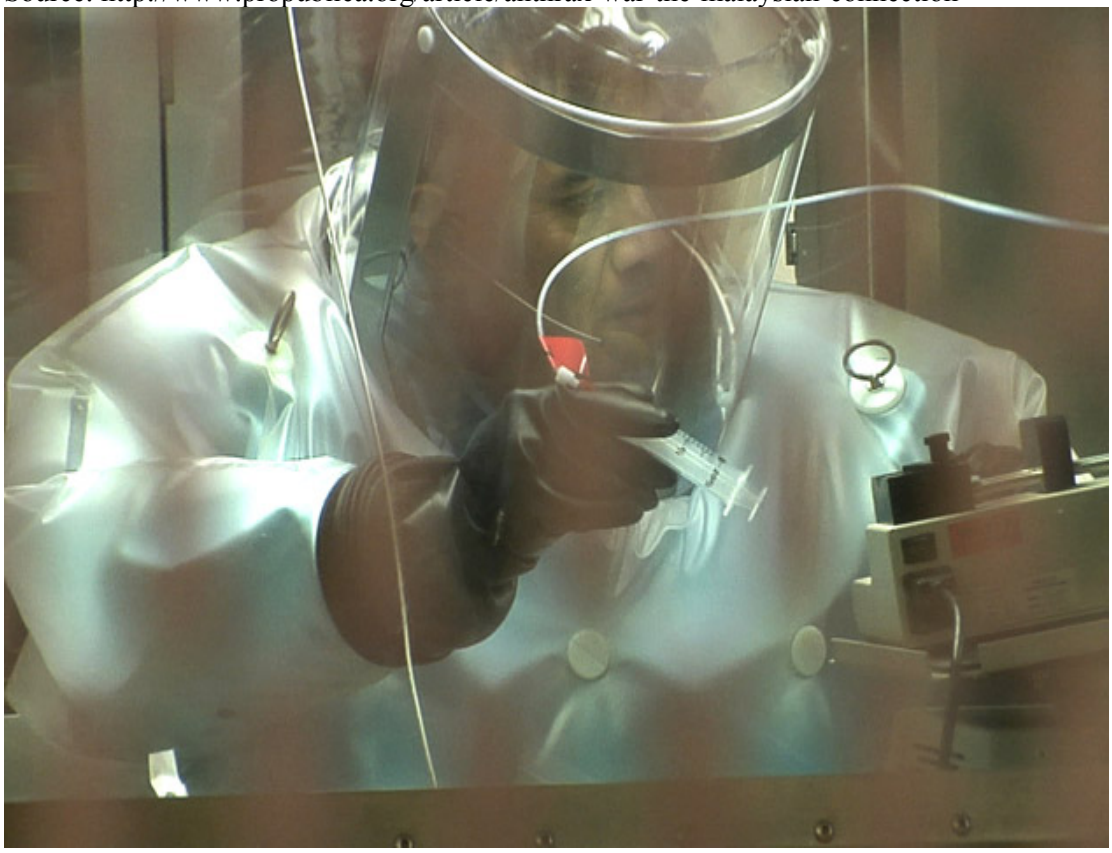
BIO –News

Anthrax War—the Malaysian Connection

Source: http://www.propublica.org/article/anthrax-war-the-malaysian-connection



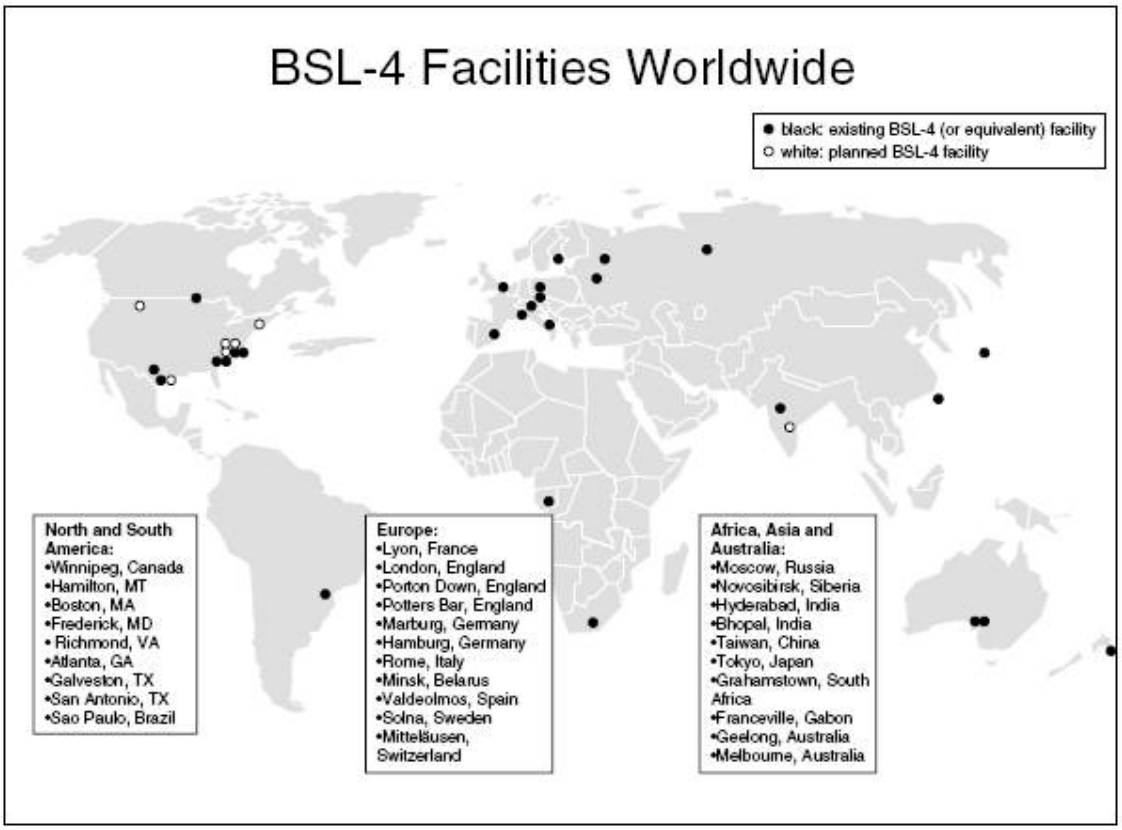
A scientist works inside a high-security lab at the Dugway Proving Ground in Utah. (Transformer Films)

Top of Form

Fears about bioterrorism have prompted new efforts by corporations and governments worldwide to build defenses against germ attacks. But some of these arrangements themselves raise security issues. Consider the spirited global contest to corner the franchise on providing halal inoculations against anthrax and other deadly pathogens to the world's 1.7 billion Muslims. Devout Muslims have an understandable aversion to being injected with vaccines grown in pig cells or alcohol, the methods traditionally used by the world's leading pharmaceutical firms to manufacture such drugs. The reluctance of Muslims to accept non-halal polio injections has been linked to the re-emergence of polio in 27 countries that had been free of the debilitating disease, including Pakistan and Afghanistan. Enter Emergent BioSolutions, a Rockville, Md., firm with expanding multinational operations that sells a vaccine against anthrax to the U.S. government. In January 2008, in a little-noticed deal, Emergent, or EBS, announced a joint venture with a firm funded by the Malaysian Health Ministry to build 52,000 square feet of "vaccine development and manufacturing infrastructure" on a 62-acre site in an industrial park just outside of Kuala Lumpur. "It is our belief that this joint venture will not only expand the use of our anthrax vaccine in this market, but will also serve as a platform for joint product development and manufacturing activities," Fuad El-Hibri, chief executive of Emergent (the majority partner), said of the deal with Ninebio Sdn Bhd. "It is anticipated that the joint venture will also supply such products and services to certain member countries of the Organization of the Islamic Conference ("OIC") and other countries within Asia," an EBS press release said. The facility was originally scheduled to open this year, but is now set to begin operations in 2013. On a Web page describing architectural plans for the Malaysian venture is a sentence that has raised some eyebrows. It says the companies plan to build a "biocontainment R&D facility that includes BSL ... 3 and 4 laboratories." Biosafety Level 3 ("high-containment") labs are for

disease-causing organisms that can cause death in humans, such as anthrax, plague and SARS. Malaysia already has three BSL-3 labs, and there are several thousand worldwide (1,356 in the U.S. alone). Biosafety Level 4 (BSL-4) labs are for diseases that are one step up in the pathogen chain -- invariably fatal, highly contagious and for which no known vaccine or cure exists. Within these labs, the most-dangerous "select agents" -- Ebola virus, Marburg virus, Lassa fever and other hemorrhagic fevers -- are used in countermeasure research, including vaccines, to thwart 21st-century delivery systems and genetic manipulation of these natural horrors. BSL-4's have special safety features, including the use of full-body suits equipped with life support systems. These would be Malaysia's first BSL-4 labs. Proliferation experts note that these high-security laboratories -- fewer than three dozen are currently operating worldwide -- are themselves valuable items. The specialized engineering that allows scientists to safely handle such deadly germs is coveted by terrorists as much as the pathogens within carefully secured walls. Geography also counts. In March, Assistant Secretary of State Vann H. Van Diepen told the House Foreign Affairs Subcommittee on Terrorism that one key component of the new "biological threat" is "the growing biotechnology capacity in areas of the world with a terrorist presence." Malaysia, where six in 10 citizens are Muslims, was tied to several terrorist plots earlier in the decade. Al-Qaida leaders used Kuala Lumpur as the "primary operational launch pad" for the 9/11 attacks, the FBI says. An organization known as Jemaah Islamiyah operating out of Malaysia bombed a disco in neighboring Bali in 2002, killing 202 people; the group's leaders were subsequently arrested and executed by Indonesian authorities. More disturbing are recent revelations that Kuala Lumpur was a crucial base of operations in the lucrative black-market nuclear centrifuge network put together by Pakistani scientist A.Q. Khan. For some experts, this raises a question of whether it is wise to encourage the creation of a BSL-4 lab there. Building such a facility in Malaysia does have benefits for American interests in the region. Security analysts see the development of an advanced biotech sector in the developing world as inevitable. A U.S. partner allows the American government to have some measure of influence and control on foreign "biodefense" efforts. Malaysian officials say they want the advanced labs to deal with local outbreaks of SARS, dengue, Japanese encephalitis and the lethal Nipah virus, as well as to develop possible bioterrorism vaccines. Such regional self-sufficiency is embraced by the World Health Organization. "The question for (U.S. officials) is, 'How can we ensure a 'responsible' biotech sector in places like Malaysia, which are Muslim and are cranking out capable and well-educated scientists and have the money to build state-of-the-art facilities?'" says Edward Hammond, who used to head the Sunshine Project, which monitors biosecurity efforts. Hammond has long criticized lax U.S. government oversight of facilities handling dangerous bio-agents. He said strategic imperatives have, by and large, trumped security concerns about new overseas labs. In Malaysia, says Hammond, U.S. officials are especially wary of China's biotech industries (Chinese vaccine exports to the developing world shot up 20 percent last year.): "The argument is, of course we have the best technology, but the Chinese can make respectable vaccines ... We certainly don't want budding Malaysian biotech companies to turn to China for equipment and expertise." Instead, the Malaysian government turned to EBS -- which holds the exclusive U.S. government contract to supply the controversial anthrax vaccine to the military and the National Strategic Stockpile. Despite FDA approval, health complaints about the vaccine, called BioThrax, persist among those vaccinated. From a modest $24 million investment in 1998, EBS, formerly known as BioPort, has signed U.S. government vaccine contracts worth almost $1 billion, and today operates subsidiaries in 15 countries. Its BioThrax vaccine sets the pace in the expanding anthrax market. Customers

include the military, first responders, mail carriers and, potentially, the general public under threat scenarios now being drafted on the local, state, federal and international levels. Booster shots of BioThrax are recommended every year during possible exposure to anthrax. EBS can claim a special feel for the Muslim world. El-Hibri, its CEO, is a prominent Muslim businessman born of a Lebanese father and a German mother. He grew up in Lebanon and Europe before coming to the U.S. and earning a bachelor's degree in economics from Stanford and a master's in public and private management from Yale. In addition to his biotech labors,



he has worked for Citigroup in New York and Saudi Arabia and in telecommunications in Russia and Venezuela. His British holding -- Porton International -- provided the anthrax vaccine to Saudi Arabia during the first Persian Gulf War. El-Hibri brought his vaccine operations to America in the late 1990s, cultivating U.S. military, intelligence and political support. One of the original investors/partners in BioPort was the late Adm. William J. Crowe, chairman of the Joint Chiefs of Staff under Ronald Reagan and later Bill Clinton's ambassador to Britain. Today, EBS directors include Louis Sullivan, the Health and Human Services secretary under President George H.W. Bush, and Jerome Hauer, the emergency preparedness czar under former New York Mayor Rudolph Giuliani. In the anxious days after 9/11, Michigan Gov. John Engler ordered the National Guard to surround BioPort's anthrax vaccine plant in Lansing because anthrax bacteria were present there. There have been persistent reports that al-Qaida has an interest in producing bioweapons. In 2003, coalition forces raiding a safe house believed to be used by al-Qaida in Iraq discovered a copy of the 1997 environmental assessment of renovations to BioPort's anthrax manufacturing plant in Lansing. Malaysia has promised to be vigilant, which would set it apart from some Asian counterparts. In 2006, Sandia National Laboratories surveyed Asian scientists, including some from Malaysia, and half of them reported that they had no guards at the entrances of their facilities. Only half said there was restricted access to laboratories, and just 54 percent kept a current inventory of toxins and infectious agents they handled. To its credit, the Malaysian government has begun crafting new biosecurity rules and regulations in line with U.S. standards, with the help of Sandia and the encouragement of the State Department. We asked EBS if it had begun the application process for licensing the transfer of sensitive biological commodities administered by the Departments of Commerce, State and Defense. The Export

Control Act and the International Trafficking in Arms Regulations require companies to get permission when exporting material useful for biowarfare and bioterrorism.
We also asked the company some questions about what will be happening in its BSL-3 and BSL-4 labs in Malaysia:

- What biological agents will be handled?
- How will the pathogens get on site?
- Will the work include genetic manipulation or DNA recombination of select agents?
- Will any of that work be classified?

EBS hasn't responded to written questions and phone messages. Its Malaysian partner, Ninebio, likewise refused to answer inquiries. The U.S. government also declined to comment. The State Department redirected our inquiry to the Commerce Department, which wouldn't say anything about the EBS-Malaysia deal: "Pursuant to Section 12(c) of the Export Administration Act, the Department of Commerce does not publicly release any information on export license applications, including whether any particular transactions were the subject of license applications." Arms control experts in Europe and the United States are pushing for more effective oversight on deals like the Malaysia project. These include: tougher export controls; a "harmonizing" of international guidelines for securing dangerous pathogens; and international inspection of biological production facilities under the Biological Weapons Convention. The latter is opposed by the U.S. and Russia on commercial as well as effectiveness grounds. The prospects for such reforms are uncertain, and approvals for potentially dangerous deals apparently keep on coming.

Why the rush?
Well, there's the money of course -- $70 billion in U.S. government money alone this past decade for programs for battlefield defense, civilian preparedness and response, and countermeasures including vaccines. Francis Boyle, a law professor at the University of Illinois, suspects that more than just commercial considerations may be at play. Professor Boyle helped to draft the Biological Weapons Anti-Terrorism Act of 1989, which makes it a federal crime to develop or produce biological weapons. He wonders if projects like the Malaysian lab could be used to circumvent U.S. rules against biological projects with offensive applications. Since the 9/11 attacks, the government, via the USA Patriot Act (2001) and the Bioterrorism Preparedness and Response Act (2002), tightened controls over dangerous pathogens and toxins stored, used and transferred within the United States. "It seems to me that this could be a very dangerous end-run by EBS and its government funders around the numerous legal restrictions now put in place since 9/11 making it difficult to research, develop and test bioweapons domestically," says Boyle. Boyle says it's reasonable to ask if the Kuala Lumpur operation will be part of the U.S. government's controversial "laboratory threat characterization research" programs, under which scientists are charged with developing and testing newly bioengineered pathogens under the rubric of developing medical countermeasures for a potential threat. This type of research, mandated by a presidential directive in April 2004, is conducted within classified "Black Projects" sponsored by the Pentagon and the CIA and carried out by private contractors. For its part, the Defense Department says it's not ruling anything out. Asked if such efforts could take place in these Malaysian BSL-4 labs, a spokesman said, "We currently do not have labs in Malaysia but we would be happy to collaborate with the government of Malaysia on bio surveillance, safety and security in the future." Suspicions are further fueled by the addition of Ronald Richard to the EBS board of directors. Richard used to head In-Q-Tel (IQT), the high-tech venture capital arm of the CIA. IQT, started by the CIA in 1999 as an independent, not-for-profit private company, has a unique mission, according to its website, to "attract and build relationships with technology startups outside the reach of the Intelligence community." All of this could be coincidental. But until the government lifts some of the limits imposed by trade laws and national security rules, the risks and benefits of this project remain difficult to assess. In this instance, a little transparency would go a long way. Filmmakers Bob Coen and

Eric Nadler's documentary "Anthrax War," www.anthraxwar.com, will be broadcast on the ARTE Network in Europe Tuesday night.

Synthetic pathogens might pose bioterror[ism] threat

Source: http://www.globalsecuritynewswire.org/gsn/nw_20100910_5762.php

"The newfound ability of scientists to produce disease materials from scratch has led to concerns that extremists might seek the same capabilities to carry out acts of bioterrorism. Synthetic pathogens are man-made infectious agents that are produced either from the manufacture or adaptation of DNA, cells and other biological structures. While scientists have been engineering genetic sequences for decades and commercial gene sequencing has been around for years, the field continues to move into uncharted territory. This year, researchers for the first time were able to design and produce cells that do not exist in nature without using pre-existing biological matter -- marking the latest evolution in the rapidly advancing field of synthetic biology. Additionally, recent technological advances and lower equipment costs now allow amateur scientists to conduct complex biological experiments such as DNA duplication outside of institutional settings and with machinery purchased online. The developments could pave the way for advancements in medicine, energy and agriculture, but also could put sensitive materials in the wrong hands, analysts warn."

Castor Bean Genome Published

Source: http://www.medicalnewstoday.com/articles/198657.php

A research team co-led by scientists from the J. Craig Venter Institute (JCVI) and the Institute for Genome Sciences (IGS), University of Maryland School of Medicine, published the sequence and analysis of the castor bean (Ricinus communis) genome in Nature Biotechnology. Agnes P. Chan, Ph.D., JCVI, and Jonathan Crabtree, Ph.D., IGS were co-lead authors on the paper describing the 4.5X coverage of this important oilseed crop. The availability of the castor bean genome also has important biodefense implications since the plant produces the powerful toxin, ricin. The castor bean, a tropical perennial shrub found in Africa and other tropical and subtropical regions in the world, is a member of the Euphorbiaceae family. There are approximately 6,300 species in this family that includes the cassava, rubber tree, ornamental poinsettias and jatropha. While the castor bean genome is the first to be sequenced and published from this family, the jatropha genome has been sequenced by JCVI and the company Synthetic Genomics Inc. Jatropha is also an oilseed crop. The sequencing of the castor bean genome to 4.5 X coverage was conducted at JCVI. The results of this work show that the genome is 350 Mb and has an estimated 31,237 genes. Because of the potential use of castor bean as a biofuel and its production of the potent toxin ricin, the team focused efforts on genes related to oil and ricin production. They analyzed important metabolic pathways and regulatory genes involved in the production and storage of oils in the castor bean. The analyses could be important for comparative studies with other oilseed crops, and could also allow for genetic engineering of castor bean to produce oil without ricin. Identifying and understanding the ricin producing gene family in castor bean will be important in preventing and dealing with potential bioterrorism events. Genomics enables enhanced diagnostic and forensic methods for the detection of ricin and precise identification of strains and geographical origins. The team discovered that the ricin gene family was larger than previously thought, and they revealed approximately 28 genes in the ricin producing family. As a next step, the group suggest further comparative genomic studies with the close relative cassava, a major crop in the developing world, to further elucidate their disease resistance aspects. Dr. Chan stated, "The availability of the castor bean genome will encourage more research into the positive aspects of this oilseed crop as a potential biofuel. Further study will also elucidate many aspects about ricin and enable researchers to potentially eliminate the bioterrorism threat of this natural toxin."

Clinicians' Biosecurity Network Report

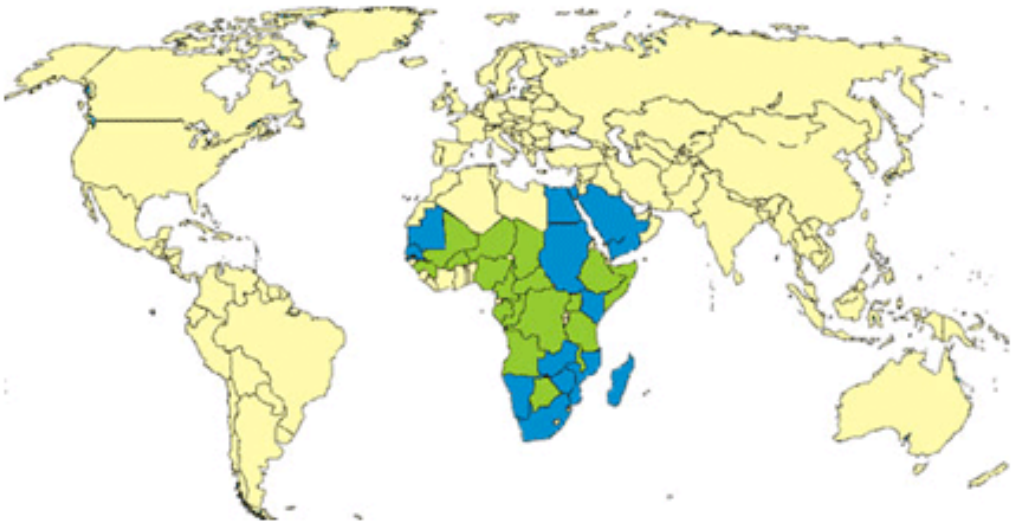
Presenting analysis of recent events in biosecurity for healthcare providers.

Is Rift Valley Fever Virus a Real Risk for the United States?

Source: http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/rvf/rvfmap.htm

Fears that Rift Valley fever virus (RVFV) could spread to North America were recently renewed during the FIFA World Cup soccer tournament. RVFV is caused by a hemorrhagic fever virus spread by mosquitoes, and the virus is endemic in South Africa, where the World Cup was hosted. With extensive travel occurring between this RVFV-affected area and the U.S., a reappraisal of the risk of this disease in the U.S. is warranted.

Rift Valley Fever Distribution Map



Countries with endemic disease and substantial outbreaks of RVF:	Gambia, Senegal, Mauritania, Namibia, South Africa, Mozambique, Zimbabwe, Zambia, Kenya, Sudan, Egypt, Madagascar, Saudi Arabia, Yemen
Countries known to have some cases, periodic isolation of virus, or serologic evidence of RVF:	Botswana, Angola, Democratic Republic of the Congo, Congo, Gabon, Cameroon, Nigeria, Central African Republic, Chad, Niger, Burkina Faso, Mali, Guinea, Tanzania, Malawi, Uganda, Ethiopia, Somalia

Clinical Manifestations Vary

RVFV is a phlebovirus that is concentrated in Africa. It is spread by contact with infected blood from sick livestock (usually affecting veterinarians, farmers, etc.) or through the bite of an Aedes mosquito that is carrying the virus. In most patients, infection usually causes a nonspecific febrile illness after a 2- to 6-day incubation period. However, in 10% of patients, the virus can cause retinitis and vasculitis that may result in permanent blindness, and in 1% it can cause fulminant disease, with hepatitis, encephalitis, and hemorrhagic manifestations, and may be fatal. Because of the varied presentation, differential diagnosis is broad and includes any febrile viral syndrome, especially those that cause hepatitis, meningitis, or encephalitis. A definitive diagnosis can be made acutely from blood specimens using antigen-based assays or PCR. Retrospective diagnosis can be made through serological testing.

A Vaccine Exists, and Ribavirin May Be Effective
Although not FDA approved, investigational vaccines exist for RVFV, and in vitro/animal studies of the antiviral ribavirin have shown some promise for severe RVFV. Animal vaccines are also available. Most important, though, is avoidance of the mosquito vector.

Risk of Spread in U.S. Is Small
While it is true that mosquitoes in North America are able to transmit the virus that causes RVFV, there is a small (but not negligible) risk that an outbreak could emerge in the U.S. In the context of the World Cup, for instance, a traveler would have to be infected in South Africa, travel to the U.S., and be bitten by the appropriate mosquito. That mosquito then would have to bite other susceptible hosts in the U.S. Because this is possible, and it may be what occurred with West Nile virus, veterinarians, farm workers, and physicians will have to be vigilant to detect the unexpected arrival of the RVFV virus.

Nanotechnology sensor can detect anthrax spores

Source: http://www.nanowerk.com/news/newsid=17231.php

"Nanotechnologists at University of Twente's MESA+ research institute have developed a sensor that can detect anthrax spores. The invention is more sensitive and efficient than existing detection methods. The research is being published in the leading scientific journal Angewandte Chemie ('Ratiometric Fluorescent Detection of an Anthrax Biomarker at Molecular Printboards'). [...] Like other detection techniques, the UT sensor measures the presence of dipicolinic acid (DPA), a substance that accounts for between five and fifteen per cent of the dry weight of the spores. The sensor consists of a glass plate to which DPA-sensitive receptors have been attached. When the receptors are brought into contact with anthrax spores, the DPA binds with them. The concentration of the spores can be calculated with fluorescence spectroscopy, by shining ultraviolet light on to the sensor. DPA-bonded receptors will absorb this light and emit blue light, whereas receptors that have no DPA bonding will emit red light. By measuring the ratio of red to blue light in a sample, it is possible to determine the concentration of anthrax spores. The advantage of the sensor is that it does not need calibrating and is more finely tuned than other current methods."

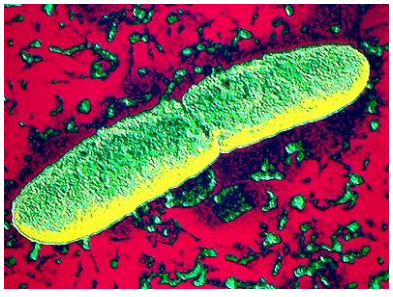
WHAT IS GOING ON WITH PLAGUE ?

BioPrepWatch.com
keeping you well informed

Mysterious plague outbreak among Syrian army

Source: http://www.bioprepwatch.com/news/213633-mysterious-plague-outbreak-among-syrian-army

An outbreak of plague, which is considerd a potential bioweapon, among the Syrian military may be raising more questions than answers. Syrian President Bashar al-Assad recently ordered the shutdown of all Syrian military exercises due to a plague that currently affects a large number of military personnel, according to Examiner.com. The Syrian president has told Syrian news sources that food and drinking water in military bases, coupled with one of the country's worst droughts in over 40 years, are responsible for the outbreak of plague. Hundreds of thousands of Syrians are experiencing food shortages, nearly 60,000 small livestock owners have lost all their animals and 50,000 others have lost 50 to 60 percent of their cattle. The infectious bacterium Yersinia pestis causes the infectious disease plague, which is commonly found worldwide in rats and



other rodents. Fleas often serve as common vectors of plague. There are three forms of human plague - bubonic, septicemic and pneumonic. Humans may also be infected by direct contact with an infected animal, through inhalation and, if it is pneumonic plague, by person to person contact. Drinking water, food and a heat wave are not common causes of plague, Examiner.com says, unless they have increased the contact between humans and plague carriers. Because of this, the article says, questions should be raised about the true cause of the Syrian army plague.

Plague – Myanmanr (Yangon)

Sources: http://www.promedmail.org; http://www.isid.org;

An unspecified number of Yangon (previously called Rangoon) residents have been diagnosed with plague, a contagious disease primarily transmitted by rodents (mostly rats), according to the Burmese Ministry of Health (MOH) in Naypyidaw. An epidemiologist at the MOH who asked to remain anonymous told The Irrawaddy that some people infected with plague were found in Yangon in June 2010 but all survived after treatment by the MOH. "It was the 1st time in decades that we found plague in Yangon," said the MOH official. The MOH has yet to make a public statement regarding the diagnosis of plague. The MOH and other ministries have developed and implemented a project to eradicate rats for the prevention of plague, according to a MOH official in Naypyidaw. "Rat eradication is secretly going on in different departments," he said. An official from the Yangon Municipal Committee said it had formed special task forces for rat eradication and has killed tens of thousands of rats on a daily basis. The MOH reportedly has determined through laboratory experiments that rats migrating to the south from Naypyidaw are carrying bacteria for contagious disease such as the plague, and it was developing a treatment program should the disease spread. A plague awareness program has started among government staff in Naypyidaw, according to a source. State-run newspapers recently warned that the plague can betransmitted to humans by fleas, but it failed to mention that the disease had already infected people in Yangon. An official with the Livestock Breeding and Veterinary Department (LBVD) said people who find rat corpses should take them to the nearest LBVD department for examination.

Plague, pneumonic – Peru

Sources: http://www.promedmail.org; http://www.isid.org

An outbreak of pneumonic plague, a virulent disease with a high mortality rate, was detected in Trujillo. Doctors are striving to save the lives of 3 patients, including a resident doctor and a medical student whose health conditions are serious.

According to the regional manager of Health, Victor Peralta Chavez, this is the 1st time this disease has been recorded in the country. A woman aged 29, from Mariposa Leyva sector, district Chocope (Ascope), 40 minutes north of Trijillo, contracted the disease. The 1st symptoms occurred 5 days prior to her family taking her to Trujillo, where she was admitted at the Regional Teaching Hospital. With a picture of severe pneumonia (high fever, abdominal pain, shortness of breath and other symptoms), the patient was treated for both pneumonia and for potential influenza A (H1N1) (with antibiotics and antivirals), but there was no improvement. The results of a quick test [direct fluorescent antibody stain of sputum? - Mod.LL] to detect possible pneumonic plague were negative. A 32-year-old resident doctor, who treated and intubated the patient during her critical condition, developed the same symptoms as the infected woman. He was immediately hospitalized and treated, but his health is critical. In this regard, Peralta Chavez said that the patient's progress is not good. "This has caused multiple organ failure, i.e. many of [his] vital organs do not work or [have] stopped working properly. The patient is in hospital intensive care at Victor Lazarte Echegaray," he said. Also, last Tuesday [13 Jul 2010], a 4th-year student of Human Medicine at the

Universidad Nacional de Trujillo (UNT), who also had contact with the infected woman, was hospitalized at the Regional Teaching Hospital. This patient took a rapid test and tested positive for pneumonic plague. His condition is also very delicate, Chavez said.With these results, Peralta Chavez summoned the press and warned of a possible outbreak of pneumonic plague at the hospital or in the Trujillo Regional Teaching Hospital, although he clarified that this is an imported case from Chocope, an area where plague spreads silently and is very dangerous. Most cases are due to bubonic plague following the bite of an infected rodent flea causing a swollen and very tender lymph gland. The swollen gland is called a "bubo." Bubonic plague should be suspected when a person develops a swollen gland, fever, chills, headache, and extreme exhaustion, and has a history of possible exposure to infected rodents, rabbits, or fleas. A person usually becomes ill with bubonic plague 2 to 6 days after being bitten. When bubonic plague is left untreated, plague bacteria invade the bloodstream. As the plague bacteria multiply in the bloodstream, they spread rapidly throughout the body and cause a severe and often fatal condition. Infection of the lungs with the plague bacterium causes the pneumonic form of plague, a severe respiratory illness. The infected person may experience high fever, chills, cough, and breathing difficulty and may expel bloody sputum. If plague patients are not given specific antibiotic therapy, the disease can progress rapidly to death. At this stage, as appears to have happened in this posting, person-to-person spread can occur, causing other cases of "primary" plague pneumonia.

Plague history

- Plague - Myanmar: (YA) 20100706.2250
- Plague - Syria (02): military, denied 20100706.2243
- Plague - Syria: military, susp. RFI 20100704.2222
- Plague, bubonic, fatal - China: (GS) 20100618.2052 2005
- Plague - Brazil (Ceara): RFI 20050428.1180 2004
- Plague, fatal - Ecuador (Chimborazo) (02) 20040513.1288
- Plague, fatal - Ecuador: RFI 20040510.1264 2001
- Plague, human - Brazil (Bahia) 20010506.0874 1998
- Pneumonic plague - Ecuador (05) 19980522.0984
- Pneumonic plague - Ecuador 19980501.0852]

Safeguarding Soldiers From Infectious Diseases

Source: http://www.medicalnewstoday.com/articles/201216.php

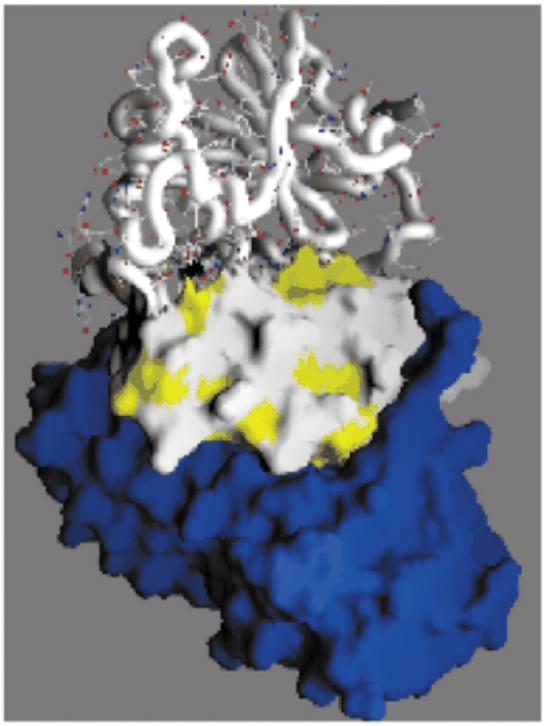
Scientists at the Biodesign Institute at Arizona State University have received a 2-year, $5.3 million grant from the Defense Advanced Research Projects Agency (DARPA) to protect warfighters in the event of exposure to infectious diseases during deployment. Dr. Stephen Albert Johnston and his colleagues at the Biodesign Institute have taken on a daunting test of skill: to develop a potential therapeutic that can protect soldiers against an unknown pathogen - and do it in a week. Any commercially available therapeutic typically requires about a decade or more to go from the benchtop to the marketplace. "Half of this period involves all the research and development of the therapeutic, the chemistry to make it, and so on," said Johnston, director of the Biodesign Institute's Center for Innovations in Medicine. "The other half is all the clinical trials testing and FDA approval." The group's goal will focus on reducing the front end of this process - the research and development phase - to just 7 days. The DARPA challenge was extended to the research community as part of its Accelerated Critical Therapeutics program, a long-standing initiative in response to emerging and novel biological threats. Johnston's research team has developed new technologies that could accomplish this seemingly impossible feat, drastically reducing the time necessary to produce a general agent against a disease-causing invader. In addition to benefiting the warfighter, his team's approach, involving the use of synthetic antibodies or synbodies, may ultimately find its way into a broad range of applications of benefit to the general public, including medical diagnostics and vaccine development and validation. Like their human immune system

counterparts, synbodies can chemically sniff out invasive microbes with very high specificity, binding with and neutralizing them. Synbodies against the selected pathogen can then be rapidly produced and stockpiled using high-throughput technologies. This assortment acts as a sort of master tool kit, enabling researchers to rapidly construct a custom-tailored therapeutic against virtually any disease-associated protein. The group has calculated that around 10,000 randomly constructed synbody components, made from short protein fragments called peptides, would provide sufficient variety to target virtually any biological threat. For the DARPA test however, the pool of synbodies can be dramatically reduced. "Our idea is to screen a large library of possible pathogens, identifying a broad class of effective binders, said assistant research professor Chris Diehnelt. "We would then produce stocks of peptides to be kept waiting in the wings, so that when we have a live fire test, the unknown pathogen can be screened to identifying several low binding affinity peptides. These we will rapidly assemble into a synbody, targeting that pathogen specifically." The first test of their technology will come after the group's initial year of DARPA-funded research, at which time, the group will be presented with a pathogen and required to generate an effective therapeutic within 14 days. The second year goal of the project aims to cut the production time in half. The team estimates that an assortment of just 100 random peptide chains will be sufficient to screen a broad range of pathogen threats, with the certainty of finding multiple low-affinity chains, suitable for use in synbodies. Completion of the current project will open the door to a new approach in the development of therapeutics to conquer one of the major challenges to human health.

Identifying Domains Within The Ricin Toxin A Subunit As Targets Of Protective Antibodies

Source: http://www.medicalnewstoday.com/articles/199837.php

Soligenix, Inc. (OTC Bulletin Board: SNGX) (Soligenix or the Company), a late-stage



biopharmaceutical company, announced the publication of an article online in Vaccine. The article describes the systematic identification of neutralizing and non-neutralizing B-cell epitopes on ricin toxin's enzymatic A subunit (RTA). An inactivated form of RTA is the primary component of RiVax™, the Company's proprietary vaccine against ricin toxin. RiVax™ is currently being evaluated in Phase 1 human safety and immunogenicity trials, as well as non-human primate trials for efficacy. The results of this study indicate that there are "hot spots" on RTA responsible for eliciting neutralizing antibodies associated with protective immunity to ricin toxin. These results suggest that there are distinct regions of RTA that are responsible for eliciting protective immunity. Importantly, the recognition of immunodominant epitopes was similar between mice and rabbits, suggesting that different species including humans develop similar immune response to RTA. The major findings to emerge from this study are as follows:

1. Identification of six immunodominant linear B cell epitopes on RTA

2. Production of monoclonal antibodies (MAbs) against five of the six immunodominant regions
3. Identification of several neutralizing "hot spots" on RTA in specific folding domains (termed domain 1 and 2)
4. Demonstration that non-neutralizing Mabs are directed at domain 3
5. Convergence of immunodominant epitopes recognized by several animal species

"Efforts to develop an effective vaccine against ricin toxin are focused on the engineering of attenuated and stable recombinant forms of the toxin's RTA," stated Dr. Nicholas Mantis, Research Scientist at the Division of Infectious Disease, Wadsworth Center, New York State Department of Health, and senior author of the study. "These data offer insights into the immunodominant and structural determinants on RTA that give rise to protective immunity, and for the first time provide an immunological rationale for ricin vaccine design." "We are providing further detail of the immunological structure of RTA in order to define additional correlates of protective immunity," stated Robert N. Brey, PhD, Chief Scientific Officer of Soligenix, a co-author of the study. "Such correlates are important in understanding immune responses from human studies and how they relate to protective immunity in animals when vaccines cannot be directly tested for efficacy." The article, entitled "Folding domains within the ricin toxin A subunit as targets of protective antibodies," was authored by Drs. O'Hara, Neal, McCarthy, Kasten-Jolly, Brey and Mantis. The article represents a collaborative research effort between Soligenix and the Wadsworth Center, and signifies research was supported by grants to Soligenix and to Wadsworth from the National Institutes of Health.

About Ricin Toxin
Ricin toxin is a plant toxin thought to be a bioterror threat because of its stability and high potency as well as the large worldwide reservoir created as a by-product of castor oil production. Exposure to ricin results in local tissue necrosis, and general organ failure leading to death within several days of exposure. The potential use of ricin toxin as a biological weapon has been highlighted in an FBI terrorism report, which states that "Ricin and the bacterial agent anthrax are emerging as the most prevalent agents involved in WMD investigations"

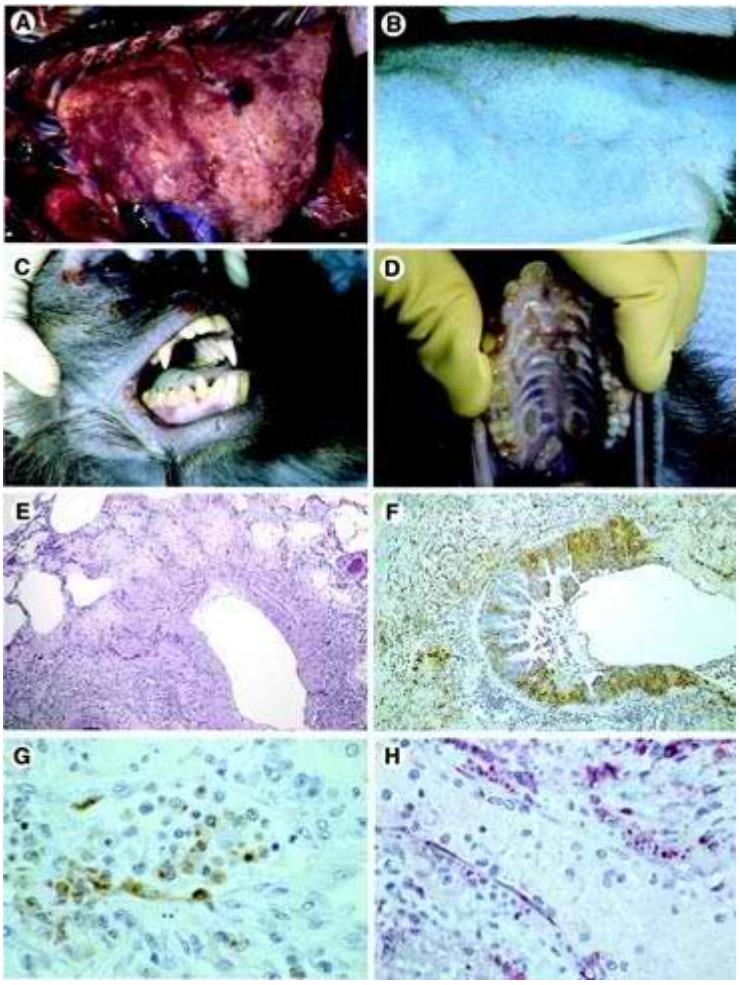
This press release contains forward-looking statements that reflect Soligenix, Inc.'s current expectations about its future results, performance, prospects and opportunities. Statements that are not historical facts, such as "anticipates," "believes," "intends," or similar expressions, are forward-looking statements. These statements are subject to a number of risks, uncertainties and other factors that could cause actual events or results in future periods to differ materially from what is expressed in, or implied by, these statements. Soligenix cannot assure you that it will be able to successfully develop or commercialize products based on its technology, including orBec®, SGX201, RiVax™, and LPM™, particularly in light of the significant uncertainty inherent in developing vaccines against bioterror threats, manufacturing and conducting preclinical and clinical trials of vaccines, and obtaining regulatory approvals, that its cash expenditures will not exceed projected levels, that product development and commercialization efforts will not be reduced or discontinued due to difficulties or delays in clinical trials or due to lack of progress or positive results from research and development efforts, that it will be able to successfully obtain any further grants and awards, maintain its existing grants which are subject to performance, enter into any biodefense procurement contracts with the US Government or other countries, that the US Congress may not pass any legislation that would provide additional funding for the Project BioShield program, that it will be able to patent, register or protect its technology from challenge and products from competition or maintain or expand its license agreements with its current licensors, or that its business strategy will be successful. Important factors which may affect the future use of orBec® for gastrointestinal GVHD include the risks that: the FDA's requirement that Soligenix conduct additional clinical trials to demonstrate the safety and efficacy of orBec® will take a significant amount of time and money to complete and positive

results leading to regulatory approval cannot be assumed; Soligenix is dependent on the expertise, effort, priorities and contractual obligations of third parties in the clinical trials, manufacturing, marketing, sales and distribution of its products; orBec® may not gain market acceptance if it is eventually approved by the FDA; and others may develop technologies or products superior to orBec®. Factors affecting the development and use of SGX201 and LPM™ are similar to those affecting orBec®. These and other factors are described from time to time in filings with the Securities and Exchange Commission, including, but not limited to, Soligenix's reports on Forms 10-Q and 10-K. Unless required by law, Soligenix assumes no obligation to update or revise any forward-looking statements as a result of new information or future events.

Virus related to smallpox rising sharply in Africa, researchers find

Source: http:// www.physorg.com/news202463316.html

In the winter of 1979, the world celebrated the end of smallpox, a highly contagious and often fatal viral infection estimated to have caused between 300 and 500 million deaths during the 20th century. The virus was eradicated through an aggressive worldwide vaccination campaign, which itself ended in 1980. After all, with no virus, there was no longer a need for a vaccine. Now, researchers at UCLA say the elimination of the smallpox vaccine has allowed a related virus to thrive. In the current online edition of Proceedings of the National Academy of Science, Anne Rimoin, an assistant professor of epidemiology at the UCLA School of Public Health, and colleagues report that 30 years after the mass smallpox vaccination campaign ceased, rates of a related virus known as human monkeypox have increased dramatically in the rural Democratic Republic of Congo, with sporadic outbreaks in other African nations and even the United States. Until 1980, Rimoin said, the smallpox vaccine provided cross-protective immunity against monkey-pox, a "zoonotic orthopox-virus," meaning it can be passed from animals to humans. Symptoms of monkeypox in humans include severe eruptions on the skin, fever, headaches, swollen lymph nodes, possible blindness and even death. There is no treatment. "All you can do is provide supportive care," Rimoin said. "There are no antibiotics. If you survive, the illness eventually runs its course." Once the smallpox vaccination program ended, new generations of people who were "vaccine naive" were exposed to the monkeypox virus the Democratic Republic of Congo over time, and the number of people who became infected gradually increased. But the increase went unnoticed



because the nation has little or no health infrastructure and thus no way to monitor the spread of such diseases. That's why, until her recent report, Rimoin said, monkeypox was thought to be very rare. Her research shows, however, that it has become very common. Rimoin travels frequently to the Democratic Republic of Congo, where she has established a research site to study and track cross-species transmission of the disease. For this work, Rimoin and her colleagues conducted a population-based surveillance in nine health zones in the central region of the country between 2006 and 2007, gathering epidemiologic data and biological samples obtained from suspected cases. They then compared the current, cumulative incidences of infection with data gathered in similar regions from 1981 to 1986. The results were startling, showing "a 20-fold increase in human monkeypox in the DRC since smallpox vaccinations were ended in 1980," Rimoin said. Rimoin noted that a monkeypox outbreak in the U.S. in 2003 had more to do with rodents than primates. That year, 93 people were infected throughout the Midwest, and the origin of the disease was later tracked to prairie dogs that had become infected and sold at a single pet store. "The name 'monkeypox' is really a misnomer," Rimoin said. "The disease was first identified in laboratory monkeys, thus providing it with its name. But in its natural state, it seems to infect squirrels and other rodents much more than primates." And that is one of Rimoin's chief concerns — that the virus will spread into the animal population more broadly. "The point is, it doesn't take much for it to spread," she said. Because it is unlikely that smallpox vaccinations would be resumed, Rimoin is calling for improved health care education in the Democratic Republic of Congo and better disease surveillance. There is an urgent need to develop a strategy for reducing the risk of a wider spread of infections, she said.

'Biosensors' on Four Feet Detect Animals Infected With Bird Flu

Source: http://www.sciencedaily.com/releases/2010/08/100824231216.htm

Blood hounds, cadaver dogs, and other canines who serve humanity may soon have a new partner — disease detector dogs — thanks to an unusual experiment in which scientists trained mice to identify feces of ducks infected with bird influenza. Migrating ducks, geese, and other birds can carry and spread flu viruses over wide geographic areas, where the viruses may possibly spread to other species. Reported in Boston at the 240th National Meeting of the American Chemical Society (ACS), the proof-of-concept study may pave the way for development of biosensors-on-four-feet that warn of infection with influenza and other diseases. "Based on our results, we believe dogs, as well as mice, could be trained to identify a variety of diseases and health conditions," said U.S. Department of Agriculture scientist Bruce A. Kimball, Ph.D., who presented the study results. The study was among nearly 8,000 scientific reports scheduled for presentation at the ACS meeting, one of the largest scientific gatherings of 2010. "In fact, we envision two broad, real-world applications of our findings," Kimball added. "First, we anticipate use of trained disease-detector dogs to screen feces, soil, or other environmental samples to provide us with

an early warning about the emergence and spread of flu viruses. Second, we can identify the specific odor molecules that mice are sensing and develop laboratory instruments and in-the-field detectors to detect them." Kimball cited the likelihood that a suite of chemicals, rather than a single compound, are responsible for producing the difference in fecal odor between healthy and infected ducks. His team is investigating the use of instruments in detecting these so-called volatile, or gaseous, metabolites in animal feces. Once accomplished, they can use statistical techniques to sift through the data to determine the pattern of volatiles that indicate the presence of infection. Kimball and colleagues from the Monell Chemical Senses Center trained inbred mice to navigate a maze and zero in on infected duck feces. The mice got a reward of water every time they correctly identified the infected sample and no reward when they zeroed in on feces from healthy ducks. Eventually, the mice became experts at identifying feces from infected ducks. **A mouse earns a water reward for choosing the odor of samples of feces infected with avian flu over a feces sample from ducks that were not infected!**

Army Develops New Plague Detection Method

Source: http://www.globalsecuritynewswire.org/gsn/nw_20100701_3173.php

U.S. Army scientists have devised a new means of spotting deadly plague bacteria through the use of viruses that depend on the potential bioterrorism agent to replicate, says a report published Monday by the Public Library of Science. The detection method, developed at the Walter Reed Institute of Research in Maryland, involves monitoring the rate at which two different viruses propagate, according to the report. The use of separate virus types improves the test's accuracy, the Center for Infectious Disease Research and Policy quotes the article as stating. The test can determine the presence of live plague bacteria within four hours. Present systems can provide results in a similar time frame, but they involve an additional step and cannot differentiate active plague agent from bacteria that is dormant or dead, the report says (Center for Infectious Disease Research and Policy).

Rapid and Sensitive Detection of Yersinia pestis Using Amplification of Plague Diagnostic Bacteriophages Monitored by Real-Time PCR

Kirill V. Sergueev, Yunxiu He, Richard H. Borschel, Mikeljon P. Nikolich, Andrey A. Filippov

Division of Bacterial and Rickettsial Diseases, Department of Emerging Bacterial Infections, Walter Reed Army Institute of Research, Silver Spring, Maryland, United States of America

Background
Yersinia pestis, the agent of plague, has caused many millions of human deaths and still poses a serious threat to global public health. Timely and reliable detection of such a dangerous pathogen is of critical importance. Lysis by specific bacteriophages remains an essential method of Y. pestis detection and plague diagnostics.

Methodology/Principal Findings
The objective of this work was to develop an alternative to conventional phage lysis tests – a rapid and highly sensitive method of indirect detection of live Y. pestis cells based on quantitative real-time PCR (qPCR) monitoring of amplification of reporter Y. pestis-specific bacteriophages. Plague diagnostic phages φA1122 and L-413C were shown to be highly effective diagnostic tools for the detection and identification of Y. pestis by using qPCR with primers specific for phage DNA. The template DNA extraction step that usually precedes qPCR was omitted. φA1122-specific qPCR enabled the detection of an initial bacterial concentration of 103 CFU/ml (equivalent to as few as one Y. pestis cell per 1-µl sample) in four hours. L-413C-mediated detection of Y. pestis was less sensitive (up to 100 bacteria per sample) but more specific, and thus we propose parallel qPCR for the two phages as a rapid

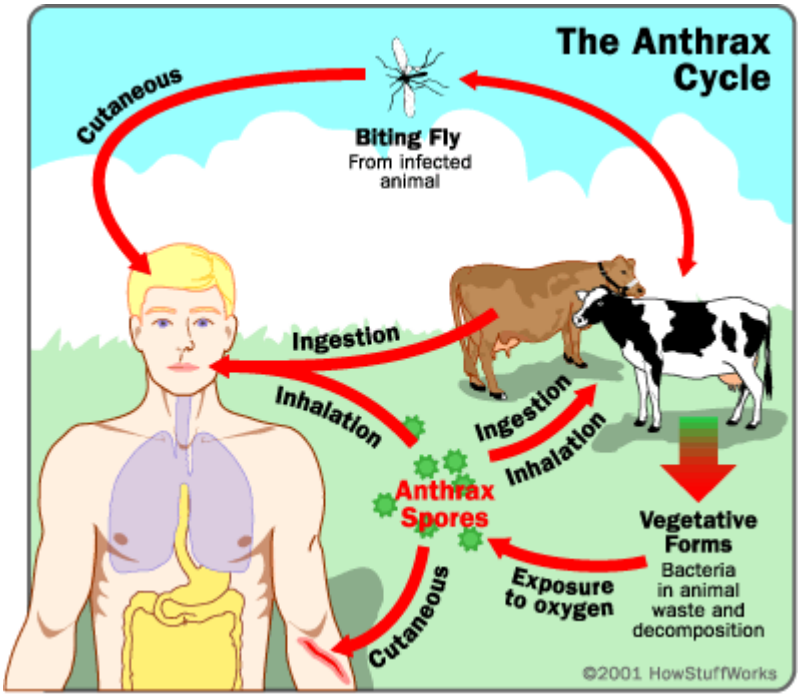
and reliable method of Y. pestis identification. Importantly, φA1122 propagated in simulated clinical blood specimens containing EDTA and its titer rise was detected by both a standard plating test and qPCR.

Conclusions/Significance
Thus, we developed a novel assay for detection and identification of Y. pestis using amplification of specific phages monitored by qPCR. The method is simple, rapid, highly sensitive, and specific and allows the detection of only live bacteria.

Protection Against Anthrax Attacks With New Medical Weapons

Source: http://www.medicalnewstoday.com/articles/192754.php

The 2001 anthrax attacks in the United States are fostering development of a new generation of vaccines, antibiotics, and other medications to protect people against the potentially deadly bacteria in any future bioterrorist incident. That's the conclusion of a sweeping overview of scientific research on medical technology to combat the anthrax threat. It appears in ACS' bi-weekly Journal of Medicinal Chemistry. In the article, Dimitrios Bouzianas notes that several existing antibiotics are available to combat an anthrax infection. However, the emergence of artificially engineered B. anthracis strains, resistant to multiple antibiotics (including the front-line agents ciprofloxacin, doxycycline, and β-lactam antibiotics) has prompted researchers to pursue additional therapeutic options. Such alternatives include small molecules and antibodies against toxins that the lethal bacteria secrete. Passive immunization using a polyclonal or a high-affinity monoclonal antibody may offer adjunctive value to antibiotic therapy. Today's drug arsenal has another weakness: no medications available to fight the dangerous toxin that can circulate in a person's blood when antibiotic treatment begins after the disease has taken hold. Therefore, there is an urgent need for the discovery of antitoxin agents that would be effective at the end stage of anthrax. Bouzianas describes promising new treatments now in various stages of development. They include a new genre of anthrax vaccines that would be more effective and yet require fewer doses than current vaccines. Among them: A long-sought inhalable vaccine that people might self-administer without a needle. Importantly, this powered vaccine would not require refrigeration and would have a long shelf life - ideal for the strategic drug stockpiles kept on hand for rapid distribution in case of national emergencies. Also on the horizon: New antibiotics that are less likely to encounter resistance and medicines that can block the effects of anthrax toxin. Because anthrax is rare as a natural disease in humans, the development of new treatment modalities is seriously hampered by the difficulty in demonstrating their effectiveness in humans.



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Survival Rate Up To 100% For Late Stage Treatment Of Anthrax Infections

Source: http://www.medicalnewstoday.com/articles/192624.php

IQ Therapeutics B.V., Groningen, the Netherlands, announced this week that in collaboration with the University of Texas Medical Branch it has obtained outstanding results for the treatment of inhalation anthrax. In a rabbit model up to 100% survival could be achieved with extended time to treatment (48h post infection) with a combination of two specific monoclonal antibodies developed by IQ Therapeutics. This has significant potential for saving lives of infected people who have no immediate access to treatment. IQ Therapeutics' Chief Scientific Officer Herman Groen states: "The results obtained in the recent studies are unprecedented. We have demonstrated in a rabbit model that we can achieve up to 100% survival after treatment with a single dose of two antibodies (anti-PA and anti-LF), at 48 hours after the infection. Our advanced stage treatment is unique and has a tremendous advantage in real life settings where an infected person might not immediately be aware of the infection or does not have immediate access to proper treatment. Especially in those cases, IQ Therapeutics' dual antibody approach can in the future help saving lives, as there is currently no cure available for that stage of disease." High survival rates with the Dual Antibody Approach (a combination of fully human anti-PA and anti-LF antibodies) have been demonstrated before. However, with the help of Dr. Peterson and his group at the University of Texas Medical Branch (UTMB), several efficacious dose combinations could be established that showed 100% survival. With the efficacy milestone completed, IQ's development of the Dual Antibody Approach will now focus on additional confirmation, human safety and advanced development studies. Anthrax is an acute infectious disease caused by the spore-forming bacterium Bacillus anthracis. Inhalational anthrax is often fatal if not treated immediately with the proper medication, before symptoms have appeared. IQ Therapeutics is focusing on treatment of patients who have become symptomatic and could otherwise not be saved with antibiotics. IQ developed the "Dual Antibody Approach", using a combination of two monoclonal antibodies targeting the toxin produced by the Bacillus anthracis. The efficacy of DAA is being examined in preclinical challenge studies performed by the group of Dr. Peterson (UTMB), through a screening contract from the National Institute of Allergies and Infectious Diseases, part of National Institutes of Health.

Universal Detection Technology Bioweapons Detection Kits Combat Black-Market Botox, Bioterrorists

Source: http://www.medicalnewstoday.com/articles/192570.php

Universal Detection Technology (OTCBB: UNDT), a developer of early-warning monitoring technologies to protect people from bioterrorism and other infectious health threats, and provider of counter-terrorism consulting and training services, commented today on a recent study that said worldwide consumer demand for Botox was driving a black-market of fake versions of the cosmetic. The uncontrolled and unregulated production and distribution of counterfeit Botox could lead to would-be bioterrorists harboring botulinum toxin, the study warns. The study was conducted by Monterey Institute's James Martin Center for Nonproliferation Studies and published in the June issue of Scientific American. According to the authors, "the fake cosmetic products generally contain real toxin, albeit in widely varying amounts." However, while one small vial might not pose a serious threat, the potential for would-be terrorists to purchase the products in bulk, or attempt to manufacture botulinum toxin themselves, is a grave concern. Botulinum toxin is one of the most toxic substances known to man, more toxic than sarin nerve agent. It is estimated that a single gram of crystallized botulinum toxin could kill more than one million people. Botulinum toxin could be used to contaminate food supplies, but a more likely scenario involves dissemination of the toxin as an aerosol. "This biowarfare potential puts the existence of illicit laboratories churning out the toxin and of shady distributors selling it worldwide through the internet into

a more disturbing light than most pharmaceutical fraud," noted the authors. "The growing black-market for counterfeit Botox, while a consumer protection issue, should be a major red flag for our national security," said Jacques Tizabi, CEO of Universal Detection Technology. "Universal Detection Technology is prepared to equip law enforcement, military, special forces and customs agents with the tools necessary to easily detect the lethal bioagent botulinum toxin, as well as a host of other deadly biohazards." Tizabi noted that the company's flagship bioweapons detection kits, certified last year by the U.S. Department of Homeland Security as an "Approved Product for Homeland Security," are ideally suited for law enforcement teams uncovering counterfeit Botox detection labs in the field, as well as rapidly identifying suspicious agents discovered in unsecured locations. The kits are designed to detect and identify up to five separate threats using one sample in a single, easy-to-use device. The kits equip first responders with an effective tool for the rapid onsite detection of up to five biological warfare agents: anthrax, ricin, botulinum toxin, Y. pestis (plague) and Staphylococcal Enterotoxin B (SEB). Detection time is under three minutes.

Army investigators report improved test for plague pathogen

Source: http://www.cidrap.umn.edu/cidrap/content/fs/food-disease/news/jun3010newsscan.html

"US Army researchers have reported the development of a rapid and sensitive test for Yersinia pestis, the plague pathogen, that relies on phages (viruses that infect bacteria). The test employs quantitative polymerase chain reaction (qPCR) to monitor the amplification of two phages that are specific to Y pestis, says the report by investigators at Walter Reed Army Institute of Research in Silver Spring, Md. The use of two phages provides for optimal sensitivity and specificity, and the test detects only live Y pestis cells, yielding results in 4 hours. Existing PCR tests for the pathogen also can yield results in as little as 4 hours, but they require a preliminary step of DNA extraction, and they cannot distinguish between live and dead or dormant Y pestis cells, according to the report, published in PLoS One."

Documents show vast cleanup of Plum Island land [NY]

Source: http://www.google.com/hostednews/ap/article/ALeqM5g4byfUvy8h-s-uKqbZKriHwL-a3gD9GJBKK80

"Government documents obtained by The Associated Press show extensive efforts since 2000 to remove vast amounts of waste and contaminants from Plum Island, site of top-secret Army germ warfare research and decades of studies of dangerous animal diseases. Yet some environmentalists remain concerned about the secrecy surrounding the 840-acre, pork chop-shaped island off northeastern Long Island -- and they're dubious of any claims that pollution has been remedied. [...] The Department of Homeland Security is preparing to sell the island 100 miles east of Manhattan and build a new high-security laboratory in Kansas to study animal diseases. Documents, some obtained by the AP under the Freedom of Information Law, reveal that hundreds of tons of medical waste, contaminated soil and other refuse have been shipped off the island for disposal. Other island sites have been cleaned in compliance with federal regulations, the reports indicate. Also, the U.S. Army Corps of Engineers determined in 2006 that no munitions or ordnance remain from the Army base on Plum Island that once housed as many as 4,000 troops from the Spanish-American War through World War II. And as late as 2007, New York government inspection reports said there is no environmental threat on the island."

Bioterrorism Preparedness in Healthcare

Source: http://www.nursetogether.com/tabid/103/itemid/1963/Bioterrorism-Preparedness-in-Health care.aspx

How can you prepare your facility and yourself for the threat of such bioterrorism agents as anthrax, botulism, plague, and smallpox? Though you may not be able to completely avoid

an attack, if you P-R-E-P-A-R-E, you can mitigate the ill effects…

P: PLAN/POLICY: The first step in preparing for a bioterrorism attack is to have a viable up-to-date policy in place. This is not a top-secret plan placed in a shiny new binder and stored in the CEO's office. This must be an INTERACTIVE WORKING PLAN that has been developed for your particular facility, with input from all key personnel within the organization. All employees of the facility must be trained on the plan and updated on any changes as they occur. The policy should include (at a minimum) detection methods, shelter in place information, patient care information, bioterrorism agent specifics (mode of transmission, treatment, etc.), and follow-up tasks.

R: REASONS: What are the reasons behind having such a plan? Know why you need to shelter in place. Know how these bioorganic agents are spread. Know what to look for in your environment. Remember: knowledge is power. If you know why you need to prepare and how to prepare, you will be better able to better help your patients and peers in a real event.

E: EVERYONE: This preparedness applies to everyone…from the housekeeper to the brain surgeon in a healthcare setting. One person not following the plan can inadvertently create the spread of a bioorganism.

P: PRACTICE: Practicing the plan both at a facility and unit levels are key to the success in the event of an actual bioterrorism attack. Practice allows you to work out the kinks in the plan, make adjustments to the plan as necessary, and to get everyone onboard with plan specifics in the event of an actual attack.

A: AWARENESS: Be constantly aware of your surroundings, suspicious packages, envelopes, or individuals in your area. Don't be afraid to question or investigate. If you are a nurse-manager or have employees working with you, make sure THEY are AWARE of the plan and of what to look for as well.

R: RESPONSIBILITY OF INDIVIDIUALS: Know the plan. Know how to take care of your patients in a bioterrorism situation, and know the "other R" (reasons)!

E: EDUCATION: I can't leave out education. Know what bioterrorism is. Know what to look for and the routes of exposure. Know how to protect yourself, your patients, and your loved ones in the event of a bioterrorism attack. Taking a course on bioterrorism agents and/or researching on the internet are great ways to familiarize yourself with the information.

Sue Heacock, RN, MBA, COHN-S is the author of Inspiring the Inspirational: Words of Hope From Nurses to Nurses, a compilation of stories from nurses around the country, with a sprinkling of inspirational quotes. Sue is a Certified Occupational Health Nurse Specialist and has worked in a variety of areas of nursing including pediatrics and research. Before entering the nursing profession, Sue worked in human resources and equal employment opportunity.

Bioterrorism: a Medical Student's Perspective

A. Amin (Second Year Medical Student, Ziauddin Medical University, Karachi)

Source: http://www.jpma.org.pk/full_article_text.php?article_id=2207

Are we better off today than we were a century ago? In most respects, we were worse off. For instance, we have been neglectful of the microbes and they are coming back to haunt us with a new name called "bioterrorism" or "biological warfare". Biological weapons are agents whose intended target effects are due to the

infectivity of disease-causing microorganisms and other replicative entities, including viruses, infectious nucleic acids and prions. In the wake of the recent anthrax cases in the United States, many questions have arisen and many concerned organizations are being unveiled. Viewed from an ostensible perspective, the whole scenario implores us to lay emphasis on establishing coherent policies and improving current surveillance systems to handle such an incident. The 'fragmented, under-funded and vulnerable' public health system of many a nation is being focussed and physicians, nurses and emergency medical technicians are undergoing training and preparedness drills. Improvement in forensic investigation and clinical laboratory facilities especially those affiliated with major trauma centers, as availability of reliable diagnostic tests for detection and identification of specific agents4,5 has become an essential pre-requisite. It has also become imperative for every medical personnel to have a reliable approach for early identification and management of a patient, suspected of being a victim of such an attack. As a medical student and a future doctor it is imperative that I understand the behavior, pathogenesis, mode of transmission, physiological effects, diagnostic modalities and available treatment options. But, if I look at these pathogens and poisons from a 'bioterrorism' point of view my academic and clinical knowledge lags like my senior colleagues. I have to have a special training to be on a lookout for unusual cases or cluster of cases with identical signs and symptoms that may be the first indication of a biological attack-a strategy called "syndromic surveillance". I should also have to be informed about the preventive measures and precautions that I need to take so that I may be able to prevent casualties. Moreover, I should be aware of the concept of "sociogenic illness" which highlights the psychological impact of chemical and biological weapon on the population. This will be a requirement for me in the future and the doctors in the hospitals today should have been already prepared with these above mentioned skills.
So what is my task? The missing piece of the puzzle for me is not only to find ways to horn my clinical skills but also to convince my mentors to improve the technology and work for advancement in science and medicine. We can start focussing on developing effective immunization techniques against infectious pathogens. Vaccines to me offer the greatest opportunity to reduce the number of deaths caused by these agents. There is a strong need of new types of vaccines that not only are potent overall, but also induce either a stronger humoral response or a cell-mediated response. The world has given us a lead, recently scientists have been able to develop an antibiotic for the Plague by mapping all the genes in the plague bacterium, namely Yersinia pestis. Knowledge of gene sequences should provide a catalogue of the genes that code for every virulence factor and potential immunogens, either as target for neutralizing antibodies on the basis of their structural characteristics or as a source of T-cell epitopes10. We can secure our future by focussing on genetic research. The medical field has wasted a lot of time and effort and of-course money in probing into ethically disputed issues such as cloning humans, producing smart babies, euthanasia and corrupt medical practices. We have overlooked the creatures and poisons that we are now facing as our predators. While the human race battles itself, fighting over ever-scarcer resources, the advantages have moved to the microbes' court. Should we just wait and see or should we do something about it?

The Psychological Impacts of Bioterrorism

Source: http://www.medscape.com/viewarticle/458656

Introduction

Since September 11, 2001, federal, state, and local government agencies' emergency response planning has focused on possible terrorist attacks using chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) weapons. Shortly after the destruction of the World Trade Center and the attack on the Pentagon, letters containing anthrax spores were mailed to media outlets and government officials. Twenty-two people became ill and five died. Although these acts of bioterrorism were limited, millions of people were made anxious and the routine act of opening the mail became dangerous. The U.S. Postal Service was

disrupted, a Senate office building was shut down, and widespread psychological, behavioral, and social impacts were felt in affected communities. Before September 11, 2001, government agencies and public health leaders in states from representative regions of the country had not incorporated mental health as a component of their overall response plan to bioterrorism. Anticipating the psychological and behavioral consequences of a bioterrorist attack is now an urgent task facing our government's leaders and our nation's health-care system. Understanding and planning for the public's psychological response to terrorism has far-reaching implications for the practical management of a bioterrorist event. Bioterrorism raises special issues such as administering vaccination programs, distributing prophylactic medication, evacuation, isolation, and quarantine, all of which demand skilled psychosocial management. Developing a risk communication and public education program that addresses these concerns is essential to sustain the public trust and ensure people will follow directions that help control the spread of disease. CBRNE terrorist acts may be motivated by any number of objectives: wielding power to achieve a political goal, exacting revenge, punishing nonbelievers, or enacting an apocalyptic vision. The victims who are killed, injured, or even directly affected are rarely the primary target. It is the fear and terror instilled in the public's psyche, the loss of one's sense of personal and community safety, and the disruption of critical social infrastructure that can cripple a nation's economy and leadership. In the immediate aftermath of a terrorist attack, individuals and communities may respond in adaptive, effective ways based on information and directions from trusted leaders or they may make fear-based decisions, resulting in unhelpful behaviors or even panic. Understanding the psychological responses to a CBRNE attack enables leaders and medical experts to talk to the public, promoting resilient healthy behaviors and sustaining the social fabric of the community. Recognizing the influence that psychological distress has on physical symptoms, illness, and injury allows medical personnel to more effectively triage and treat patients. Managing psychological distress that will be ubiquitous, as distinct from psychiatric illness, is appropriate and restorative and decreases the likelihood of future mental health problems.

CBRNE Weapons and Fear

CBRNE weapons are especially effective at causing terror. As is the case with radiation, biological agents are invisible, odorless, and imperceptible to humans. Their effects are not immediate but delayed and often protracted. Dormant biological agents such as anthrax spores can persist undetected for years in the environment. Ongoing risk of exposure or contracting the illness is difficult to assess, which heightens a sense of vulnerability, loss of control, and anxiety. Biological agents such as smallpox that cause disfigurement and deformity amplify horror. The potential for person-to-person transmission of contagious illnesses is even more terrifying. In the face of these fears, government and health officials must be prepared with a crisis response mentality at the start. Rumors and misinformation quickly establish public mistrust and, coupled with a response that is perceived to be slow or ineffective or one that appears to protect some but not others, may lead to desperate measures by desperate people. The risk of panic is heightened when people believe that there is a small chance of escape, that they are likely to become infected, and that there are limited resources available on a first come, first served basis. A range of negative outcomes are possible including a vulnerable population's refusal to accept preventative measures or treatment regimens such as isolation and quarantine; inappropriate, ineffective, or dangerous use of prophylaxis; social disruption; and civil violence. Beyond the immediate human health toll, there is the damage inflicted by ethnic stereotyping, stigmatization, and finally staggering business and economic losses. By the last week of April 2003, citizens began to flee Beijing, China, a city with a population of 14 million and just under 700 confirmed cases of SARS, ignoring official appeals for people to avoid travel. People surged into grocery stores, emptying shelves, in spite of the government's televised reassurances that stocks were not threatened. A gowned and masked man was photographed escaping from a window of the Taipei Municipal Hospital in Taiwan after the facility had been closed. A riot broke out in the rural community of Chagugang, China, when the townspeople responded to false news that a school, recently closed with no explanation, was to become a hospital for patients ill with SARS. In the event of a bioterrorist

attack, the public must rely on media and opinion from medical and scientific experts who may disagree and increase public fear and anger. Most biological weapons produce diseases that are rarely seen in American medical practice. Physicians have limited experience with diagnosis, treatment, and outcome. Availability of medical treatment may be limited; there is uncertainty about efficacy and there are concerns that some vaccines may be ineffective or dangerous. As was seen during the anthrax attacks, the infectivity of the spores differed from what was expected, spread and aerosolization was underestimated, and the pulmonary form of the illness responded to treatment in some cases. The majority of postal workers offered the anthrax vaccine declined, electing continued treatment with antibiotics instead. Biological agents, like radiation, are viewed as dreaded, catastrophic, and likely to be fatal. As the threat is continuous and unpredictable, the fear becomes more pervasive, and ordinary life more constricted. The recent sniper attacks in Washington, DC, in the fall of 2002, occurred in a city that had endured a series of terrorist events, including the anthrax mailings. The sniper attacks embodied all of the characteristics of situations we fear most and evaluate as highest risk. No one was safe and there was no pattern that would have allowed people to reasonably change behavior to decrease risk. Victims included adults and children, both genders, and multiple racial and ethnic groups. The sniper attacks generated more fear and distress, caused more behavioral change, and had more severe social and economic consequences than the anthrax attacks. Fifty percent of those surveyed about the sniper were very worried or somewhat worried about becoming a victim while 33% surveyed about anthrax in the Washington, DC, area were very or somewhat worried that they would contract anthrax. In response to threat, people change their behavior and develop routines that they believe minimize risk. Forty-four percent of people threatened by the sniper significantly altered or eliminated outdoor activities, while 34% of people questioned in the wake of the anthrax mailings were taking some precautions opening the mail.

Terrorism and Distress

In the wake of terrorism most people will experience some level of psychological distress including an altered sense of safety, hypervigilance, sadness, anger, fear, decreased concentration, and difficulty sleeping. Others will be distressed and will alter their behavior, travel less, stay at home, keep children out of school, or increase smoking and alcohol use. Psychological effects are not limited to those experiencing the trauma directly; nationwide, millions of ordinary people will suffer as well. In the earliest study conducted after September 11, an interview of 560 adults nationwide, 90% reported at least one stress symptom and 44% had several symptoms of stress. In another survey conducted days later, 71% reported feeling depressed, 49% had difficulty concentrating, and 33% were sleeping poorly. Subsequent survey-based studies estimated that almost half a million people in New York State were experiencing symptoms that would meet criteria for acute post-traumatic stress disorder (PTSD), and in Manhattan the estimated prevalence of acute PTSD was 11.2%, increasing to 20% in people living close to the World Trade Center. In a mental health needs assessment by the District of Columbia Department of Mental Health conducted between November 26 and December 14, 2001, 70% of 161 focus group participants reported an adverse health impact or psychological symptom, although less than 10% had sought care. This included low-level depression, fear and anxiety, and heightened sensitivity to normal events such as a plane passing overhead. Alcohol and tobacco use increased as did incidents of domestic violence. The study noted that DC city youth, who already expressed fatalism about their future, now reported engaging in riskier behaviors and caring less. People altered normal day-to-day routines such as shopping or using the Metro, and 50% reported disrupted work schedules including changed number of hours and job loss. A striking theme that emerged in all 19 focus groups was that many had not made the connection between the terrorist attacks and the psychological distress they were experiencing. Differentiating psychological distress from psychiatric illness is a critical public health intervention. In the days and weeks following a terrorist event, well-planned public education and information campaigns are invaluable. Distress is universal and the accompanying symptoms will abate for most people over several weeks. Educating the public and emphasizing the natural recovery process is important.

Linking anticipated reactions and behaviors provides a measure of individual control and improves coping. Active coping strategies can be presented in multiple media forums, particularly as this has been shown to be one of the most protective strategies against ongoing distress. The education and preparation of healthcare providers to evaluate and recognize the manifestations of distress and make simple interventions is important. Following the 2001 anthrax attacks, 77% of a representative sample of Americans reported that they would trust their own doctor most as a reliable source of information.

Early Management of Casualties

There have been a number of disasters, terrorist attacks, and the use of novel weapons in the context of war which suggest that hospitals, medical clinics, and offices of healthcare providers may be deluged with patients seeking evaluation and care. Arousal and intense anxiety may be experienced as multiple, varied somatic symptoms such as heart racing, shortness of breath, flushing, and nausea. Virtually any organ system may be involved. Acutely traumatized, frightened individuals may easily attribute these physical sensations to the CBRNE agent. During the Iraqi scud missile attacks on Israel between January and February 1991, over 1,000 people presented for emergency care but only 22% had been directly injured. The overwhelming majority of patients were behavioral and psychological casualties, suffering from acute anxiety, side effects of auto-injected atropine, injuries sustained running to safety, suffocation from incorrect gas mask use, or acute myocardial infarction. Following the 1995 Aum Shinrikyo sarin gas attacks in Tokyo, which killed 11 people, over 4,000 people who showed no signs of exposure sought emergency medical care. Triage of patients who are primarily distressed and may have somatic symptoms from those who may have been exposed or injured is a critical and challenging first step in emergency care. The term "worried well" is disparaging and should never be used. The patient immediately feels that their health concerns have not been taken seriously and that they have been told "it's all in your head." A nonstigmatizing triage labeling system such as high risk, moderate risk, and minimal risk conveys concern and promises continued monitoring, which is reassuring to patients. Ideally, psychiatrists, or psychiatrists working with other mental health professionals, should be an integral part of the teams performing initial screening and triage. It is important to maintain mental health care in conjunction with other medical assessment and care. Patients who remain fearful and are not reassured by negative findings may be best cared for in a set aside area co-located with the emergency department. This allows for continued evaluation and easy return to the emergency department if necessary. Establishing a clinical registry to follow up patients who are distressed is a sound public health intervention as well as a psychological intervention, assuring patients that their concerns are being taken seriously. The most important element of psychological first aid is good medical care. This applies to communities as well as to individuals. A well-organized, effective medical response instills hope and confidence and reduces fear and anxiety. Initial psychological interventions should be focused on well-being rather than mental health. Encouraging sufficient rest and sleep, normalizing eat-sleep-work cycles, and limiting exposure to media reports and traumatizing images and sounds are all measures that facilitate coping and recovery.

Psychiatric Illness and Primary Care

Although most people do not develop psychiatric disorders following a disaster or a terrorist attack, some people will become ill. The risk of developing post-traumatic stress disorder is highest in those individuals who are directly exposed to high magnitude, severely disturbing events. These individuals may or may not have other risk factors such as a preexisting psychiatric condition or recent negative life events. Of exposed individuals in the Oklahoma City bombing who developed PTSD and depression, 40% had no predisposing psychiatric illness. More commonly, disorders such as depression, generalized anxiety, panic, and somatization develop and are most likely to be seen in primary care settings. Increased alcohol, nicotine, or other substance use as well as family conflict and family violence may occur. People at increased risk to develop these disorders are those directly exposed to an

event, including medical personnel caring for victims of bioterrorism, those who were more vulnerable before the event due to existing mental illness, and those who suffered acute losses and other negative life events after the event. In a follow-up study by the New York Academy of Medicine, people suffering from continuing PTSD symptoms 15 months after the attack had experienced subsequent stressful events such as divorce or loss of a family member. Studies of the impacts of September 11 have shown that distress and ongoing stress symptoms are not predicted simply by the dose of traumatic exposure, degree of injury, or other loss. Individuals not directly exposed may suffer more than some who were directly affected. An important recent finding points to the fact that early abandonment of active coping, or an early "giving up" and denial of an ongoing threat, appears to increase the likelihood of ongoing distress and PTSD. In addition to anticipating that there may be more patients presenting with psychiatric symptoms, primary care clinics should routinely assess the degree of concern about exposure-related illness regardless of whether a known exposure occurred. A helpful screening question might ask whether or not the patient's visit is related to terrorism or bioterrorism concerns. If the answer is positive, extra time could be devoted to exploring the nature of these concerns in order to develop recommendations for additional testing, clinic visits, and patient education. Medically unexplained physical symptoms pose a clinical and management challenge. Scheduled follow-up visits in conjunction with the development of a clinical contact registry communicates compassion and concern. Early triage into this level of follow-on care may mitigate the later development of persistent medically unexplained syndromes such as Gulf War syndrome.

Risk Communication and Bioterrorism

Distress, changes in behavior, psychiatric conditions, and medically unexplained physical symptoms reflect the psychological burden of terrorism. Interventions range from public health education and information campaigns to clinical care of individual patients. Response to a biological attack or other terrorism event requires effective risk communication from government and medical leadership to manage rumor and scapegoating as well as other fear-based behaviors. This in turn rests on an incident management system with effective information processing, a response not well developed in the public health and medical arena in contrast to fire response and military systems. Information management is an active planning process that allows proactive development of response objectives, strategies, and priorities. Communication or conveying information is one component of information management. Risk communication is a scientifically based method for communicating effectively under high-threat conditions. Many of the difficulties in the anthrax event could have been avoided with a clear information management system -- notably conflicting recommendations from different jurisdictions in the national capital area on prophylaxis and vaccination. Consistent, accurate information that does not mix reassurance with facts is critical to authorities' credibility and the public's confidence.Well developed, well thought out risk communication and public education can lessen many of the psychological responses that might hamper disease containment or undermine the nation's ability to respond to bioterrorism. A bioterrorism event presents unique challenges for risk communication efforts to sustain personal and community confidence in a time of great uncertainty and unpredictability. Although prosocial behavior is the norm in natural and manmade disasters, a bioterrorism attack employing a contagious, disfiguring, lethal organism like smallpox would increase the likelihood of fear-based behaviors and even panic. Bioterrorism poses a threat that encompasses elements of our highest risk perceptions and the accompanying fear and anxiety are intense. Strong emotions influence how individuals receive and understand information, and high levels of stress may lead to decision-making that is more urgent, less willing to consider options or alternatives, and driven to premature closure. Identification of an outbreak that may be a terrorist attack, when there are more questions than answers, is a time of heightened vulnerability for inaccurate information, speculation, worst-case scenarios, and hype. Simple restraint and acknowledging that one "does not yet know but the following steps are being taken to find out" is much safer and more helpful than having to reverse misstatements later. The medical and scientific community must actively reach out to the

media and keep the press engaged as well as direct attention to stories that will inform and help the public respond. It would have been very helpful, for instance, had the role of nasal swabbing for spores been made clear during the anthrax attacks. The presence of spores in the nasal passages was not a measure of infection and did not translate to spores in the lung. Nasal swabs were collected from Capitol Hill workers and not Brentwood postal employees because in the former group, the timing and spread of spores could be tracked back to a known time of release -- when the letter was opened. Coordinated information sharing is vital. Credible scientific authority, a clear news media message, and timely, accurate information from government leaders providing the rationale behind difficult decisions is critical. Health care providers and the health care system are first responders in bioterrorist events. In the 1994 outbreak of pneumonic plague in Surat, India, 80% of the private physicians fled the city. Absenteeism can result from the conflicted loyalties of the hospital staff, divided between caring for their own families and taking care of patients. Developing plans to ensure that employees' families are cared for in the wake of a bioterrorist attack may diminish this absenteeism. Demoralization is also a concern if there are high mortality rates and an inability to provide adequate care for advanced illness. It is important to be aware of these issues and incorporate them into planning and exercise scenarios.

Vaccination and Quarantine

The current smallpox vaccination program has faced many challenges. Medical professionals remain largely unconvinced of the need to reintroduce smallpox vaccinations to counter a terrorist threat that has not been disclosed in detail outside speculation about possibility. The first phase of the vaccination program called for 500,000 volunteer healthcare workers to be inoculated in the first 30 days, by February 24. By the first week of March, only 12,404 healthcare workers had received the vaccine. Hundreds of hospitals have refused to have their employees vaccinated, and many major unions have declined as well. Reasons cited include known serious side effects; worries about litigation; increased risk to family members, pregnant women, infants, and people with certain medical conditions; lack of compensation in the event of adverse effects; and perhaps most concerning, lack of evidence that the risk of a bioterrorist attack using smallpox is highly likely. All of these factors make risk communication a very challenging endeavour. Quarantine of individuals at no or low risk of exposure, forced evacuation, mandatory vaccination, and mandated treatment are all issues that may arise in a bioterrorism scenario. The tendency to use these draconian means increases as fear and anxiety increase. The demand for these actions as well as the failure to use them may contribute to community conflict and erode the public's confidence in the government. Large-scale quarantine is rarely likely to be an effective strategy in disease containment. Case-by-case isolation is appropriate in conjunction with the separation of individuals known to have been exposed to a highly contagious infection during the incubation period, but imposing quarantine on large groups of individuals who are at low risk or who were not exposed is usually not feasible. The risk of unintended consequences is high and there is little data supporting its efficacy. Medical indications are usually not present and other steps are available such as rapid vaccination and treatment programs, measures to minimize exposure, voluntary home curfew, and restrictions on assembly of groups.

Conclusion

Anticipating the psychological impact of bioterrorism raises many issues that go beyond traditional mental health roles and interventions. Managing the immediate psychological casualties and providing treatment for mental health disorders that may arise in the wake of an attack are important. Preparing the nation for terrorism is a larger task and demands an understanding of the public's psychological and behavioral reactions to this unique threat. Understanding the terror in terrorism and the contagion of fear in different circumstances will promote interventions that can be tailored to a specific incident. Human beings, institutions, and communities have vulnerabilities as well as adaptive capacities. In the event of bioterrorism, effective risk communication and risk management must address the intense emotional responses to an invisible, unpredictable, life-threatening enemy. Based on topics

introduced in this article, response planning must include the preparation of leaders, the media, and the medical and scientific communities to credibly engage the public to prevent panic, to encourage rapid restoration of community functioning, and to sustain the people's trust.

Molly J. Hall, MD, is an Associate Professor, Ann E. Norwood, MD, is an Associate Professor and Associate Chair, Robert J. Ursano, MD, is Chair, and Carol S. Fullerton, PhD, is a Research Associate Professor, all in the Department of Psychiatry, Uniformed Services University, Bethesda, Maryland.

Federal officials okay emergency transport plans for infected workers

Source: http://www.bioprepwatch.com/news/214400-federal-officials-okay-emergency-transport-plans-for-infected-workers

Federal officials from the National Institutes of Health have given the green light to emergency plans to transport laboratory workers potentially infected with some of the world's deadliest diseases 40 miles down Interstate 270 in cases of exposure. Workers at an integrated research facility at the NIH National Interagency Biodefense Campus at Fort Detrick in Frederick, Maryland, would be taken to the agency's main campus and Special Clinical Studies Unit in Bethesda, Maryland, by ambulance with the support of local authorities, the Associated Press reports. The Fort Detrick facility contains bio-safety level-2, bio-safety level-3 and bio-safety level-4 laboratories as well as animal research facilities used to conduct biodefense and emerging diseases research. Critics fear that, should the ambulance meet with an accident, dangerous pathogens could be released into the local atmosphere. The NIH responded that, should there be an infection at Fort Detrick, local hospitals would not be prepared and could, likewise, support the spread of the infection, the Federal Register reports. If necessary for the public's protection, the NIH said, any patients could be transported on stretchers encased in vinyl and ventilated through high-efficiency filters. The NIH concluded that any risk involved in transport was negligible in accordance with federal regulations set forth by the Federal Emergency Management Agency, and any transport would be coordinated with the Frederick County Police, Montgomery County Police and the Maryland State Police.

Lysozyme can protect anthrax contamination in processed foods

Source: http://www.news-medical.net/news/20100827/Lysozyme-can-protect-anthrax-contamination-in-processed-foods-Study.aspx

An antibacterial enzyme found in human tears and other body fluids could be applied to certain foods for protection against intentional contamination with anthrax [bacteria], scientists reported here today at the 240th National Meeting of the American Chemical Society (ACS). 'Data from this study could be used in developing safer foods for human consumption,' said Saeed A. Khan, Ph.D. 'The data from our study shows that lysozyme application has the potential to eliminate anthrax [caus]ing bacteria in processed foods.' Khan and colleagues knew from almost a century of lysozyme research that the enzyme kills certain bacteria. It does so by destroying bacteria cell walls, the rigid outer shell that provides a protective coating. Lysozyme was discovered in 1922 by Alexander Fleming during the search for antibiotics that eventually led to penicillin. A drop of mucus (which contains lysozyme) from Fleming's nose fell into a culture dish of bacteria. Much to his surprise, it

killed the bacteria. Since then, scientists have shown that lysozyme has far-reaching roles in protecting against disease-causing microbes.

Ebola drug breakthrough

Source: http://www.theaustralian.com.au/news/world/ebola-drug-breakthrough/story-e6frg6so-1225909070242

US scientists claim to have cleared a key hurdle in the quest to treat the African virus Ebola, a feared future bioterrorism weapon. A treatment administered to rhesus monkeys within an hour of being infected by the deadliest strain of Ebola was 60 per cent effective, and a companion drug was 100 per cent effective in shielding cynomolgus monkeys against Ebola's cousin, the Marburg virus, the scientists said. After studying the findings, the US Food and Drug Administration has given the green light for trials on a small group of human volunteers, the scientists said yesterday. [...] The drugs are in a class of compound called PMO, for phosphorodiamidate morpholino oligomers. They are designed to hamper the virus's replication in cells, thus buying time for the immune system to mount a response and crush the invader. The research, appearing online in the journal, Nature Medicine, was conducted by the US Army Medical Research Institute of Infectious Diseases in collaboration with a biotech firm, AVI BioPharma. The Pentagon pumped funding into research for a vaccine and treatment for Ebola-type viruses in the wake of the September 11, 2001, terror[ist] attacks on the US.

Genomic test developed to prevent bioterrorism

Source: http://news.softpedia.com/news/Genomic-Test-Developed-to-Prevent-Bioterrorism-152458.shtml

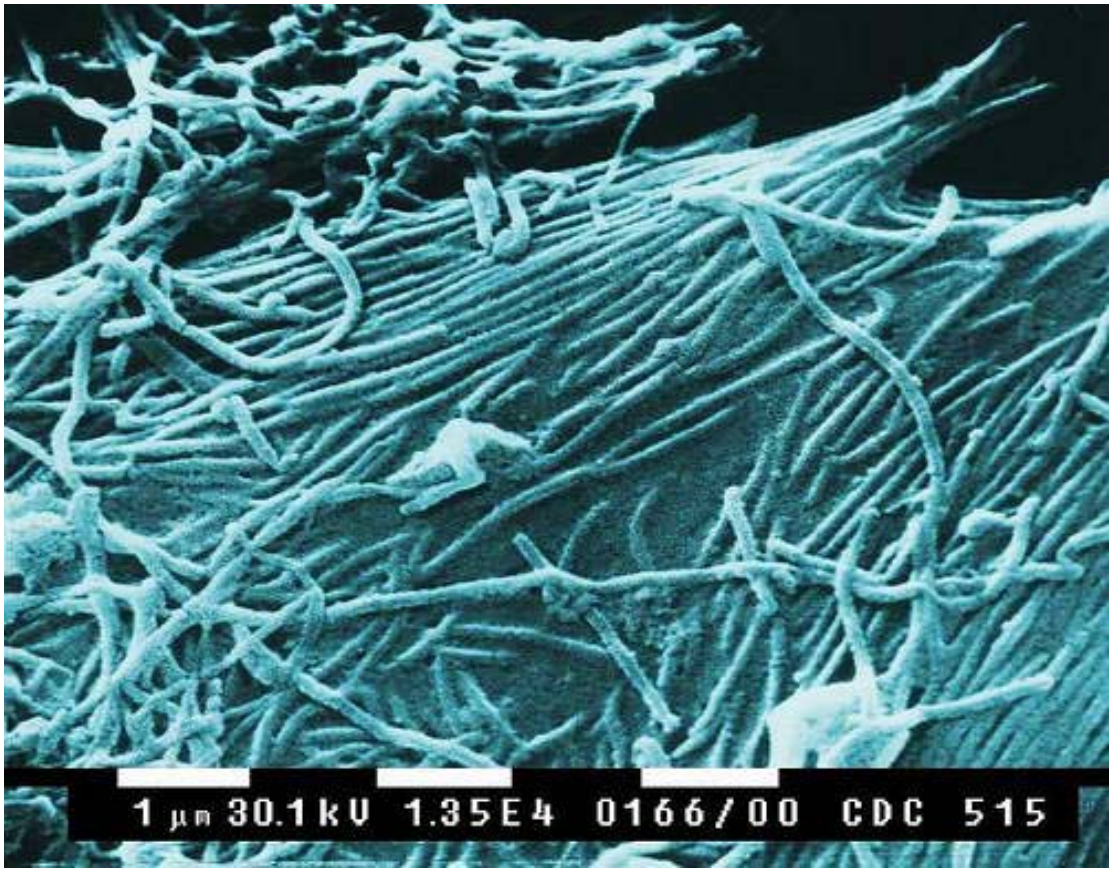
"With funding from federal agencies, scientists at the Rice University have begun a three-year study, which will result in the creation of a new type of genomic test. The test will be able to inform experts whether a disease outbreak is caused by natural causes, or by bioterrorists. Knowing the difference between the two is essential towards developing accurate and relevant emergency responses, authorities say. Over the past few years, conflicts that the United States had with its enemies no longer took place on the battlefield, face-to-face, but rather under the shadow of anonymity. Terrorism, bioterrorism, and chemical warfare – all forms of asymmetric conflicts – are now the norm, and the US is seeking to defend itself against threats both foreign and domestic. As part of this effort, the Defense Threat Reduction Agency (DTRA) decided to fund the Rice team, in producing this early detection test for biological warfare."

PMO Compounds Show Promise Against Deadly Ebola, Marburg Viruses

Source: http://www.medicalnewstoday.com/articles/198586.php

US scientists have discovered two compounds from a family known as antisense phosphorodiamidate morpholino oligomers, or PMOs, can protect monkeys infected with Ebola and Marburg viruses from going on to develop lethal hemorrhagic fever, which has a 90 per cent fatality rate in humans; and they are now proceeding with clinical trials. The "proof of concept" study that led to these findings was a collaboration between the US Army Medical Research Institute of Infectious Diseases (USAMRIID) based at Fort Detrick, Maryland, and AVI BioPharma, a Washington-based biotechnology firm, and was published in the 22 August advanced online issue of Nature Medicine. There are currently no vaccines or effective treatments for the Ebola and Marburg filoviruses, which are commonly transmitted through blood and bodily fluids. However, infection can also occur via the aerosol route, which is why they are a cause of grave concern as potential weapons in biological

warfare or terrorism. When scientists research these viruses they have to work in special maximum containment labs and follow Biosafety level 4 procedures where they have to wear positive-pressure biohazard suits and breathe filtered air. In their paper, first author Travis K. Warren of USAMRIID and colleagues describe how one PMO compound AVI-6002, from a group they called PMOplus (short for positively charged phosphorodiamidate morpholino oligomers), protected 60 per cent of monkeys infected with the Ebola virus and another called AVI-6003 protected 100 per cent of monkeys infected with Marburg. Moreover, they showed that the PMOplus compounds protected the monkeys even when they were given one hour after exposure to the viruses, suggesting they could be used to treat people who accidentally become infected in labs and hospitals. Warren said in a statement that the compounds block critical genetic viral sequences, halting virus replication long enough to give the host immune system time to mount a defence and eliminate it from the body. To begin with, Warren and colleagues tested various PMO compounds on mice and guinea pigs infected with Ebola, until they found one called AVI-6002 that resulted in a survival rate of 90 per cent and over in



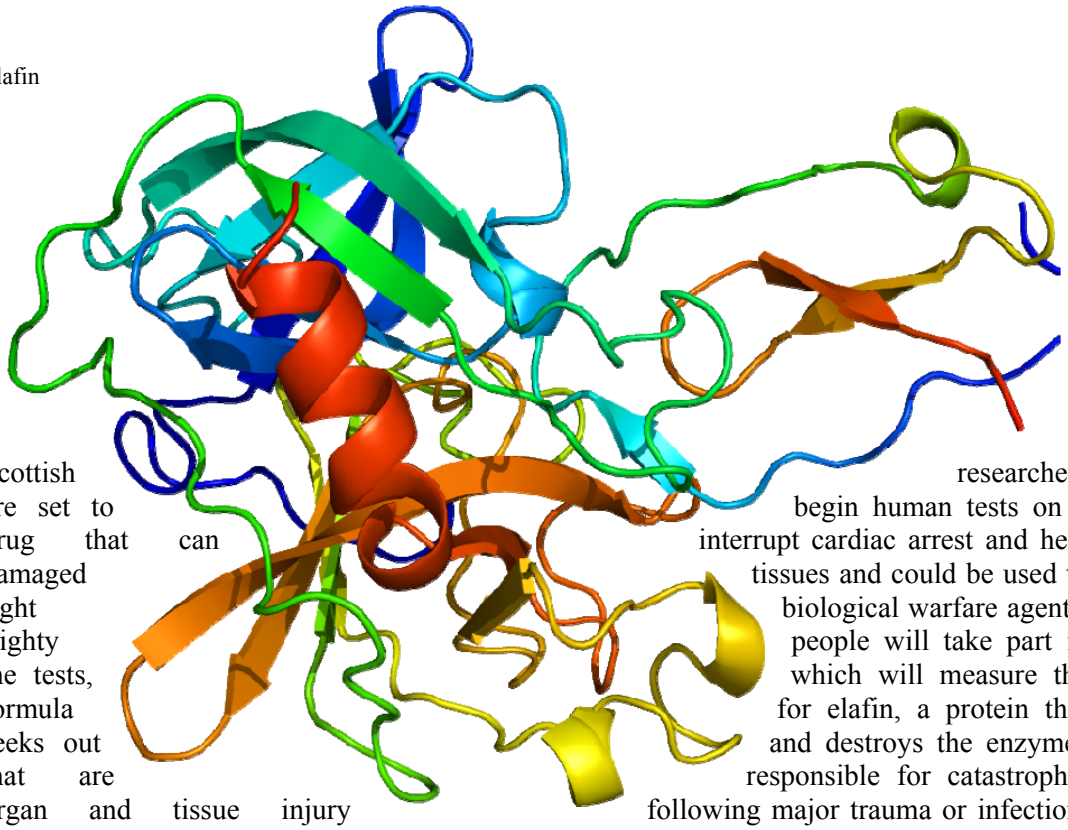
animals treated either before or just after exposure. They then proceeded to prove the concept in a series of studies on monkeys. First they exposed 9 monkeys to Ebola virus and gave 8 of them AVI-6002 within half to one hour later. 5 of the 8 survived. In a second set of experiments, 3 of 5 monkeys in each group survived when given a dose of 40 mg of AVI-6002 per kg of body weight. Warren and colleagues then turned to the Marburg virus (more specifically the Lake Victoria Marburg virus, MARV): as before, they screened potential candidate compounds in mice and guinea pigs, until they found AVI-6003, which was more than 90 per cent effective at preventing Marburg infection in both animals. In a further set of experiments on cynomolgus monkeys (crab eating macaques), they showed that AVI-6003 was 100 per cent effective, if given 30 to 60 minutes after infection with a dose of 40 mg per kg body weight. They concluded that: "PMOplus may be useful for treating these [Ebola and Marburg] and other highly pathogenic viruses in humans." The reason the USAMRIID and AVI BioPharma team set out to investigate these compounds in the first place was because in February 2004, a USAMRIID scientist accidentally stuck her thumb with a needle while

treating Ebola-infected mice. The researcher went into quarantine following recommendation by USAMRIID medical experts that she be isolated for 21 days to check if she had been infected. The unfortunate incident coincided with a visit by Dr. Patrick Iversen from AVI BioPharma, and the company immediately volunteered to try and find compounds to treat her if she should need it. The team at AVI worked four days solid to develop human-grade anti-Ebola compounds, and in the meantime a team of experts from AVI and USAMRIID put together a request to seek emergency approval from the US Food and Drug Administration (FDA) to use the experimental drugs if necessary. Five days after the exposure the compounds were in the hands of the USAMRIID medical team. However, the scientist was luckily not infected and the drugs did not have to be used. But the two organizations decided to press ahead and test them on animals, and that is how these studies got off the ground. USAMRIID commander Colonel John P Skvorak told the press that: "This report of successful early post-exposure treatment of filovirus hemorrhagic fever is significant on its own." "But the drug characteristics of these PMOs also support investigation of potentially broader therapeutic applications," he added. The researchers have submitted investigational new drug applications (IND) for AVI-6002 and AVI-6003 to the US Food and Drug Administration (FDA) and are proceeding with clinical trials.

Scottish researchers testing drug to fight bioterrorism

Source: http://www.bioprepwatch.com/news/214395-scottish-researchers-testing-drug-to-fight-bioterrorism

Elafin



Scottish researchers are set to begin human tests on a drug that can interrupt cardiac arrest and heal damaged tissues and could be used to fight biological warfare agents. Eighty people will take part in the tests, which will measure the formula for elafin, a protein that seeks out and destroys the enzymes that are responsible for catastrophic organ and tissue injury following major trauma or infection, HeraldScotland.com reports. “It is a beautiful protein," Dr. Peter Henriksen, a cardiac specialist, told HeraldScotland.com. "Elafin has a neutralizing effect and a very destructive effect on enzymes, which break down other proteins and are central to the initial inflammatory response in many diseases. “It seems not only to be able to neutralize the effects but it has an effect of directly removing or killing off bacteria." Elafin is a protein that aids the skin and lungs in healing. The body naturally creates elafin to protect the organs that are most frequently attacked by outside infection. In addition to its potential to fight biological warfare agents, including anthrax and the plague, the elafin pill is being tested as an asthma treatment and to improve survival rates following liver transplants. Proteo Biotech

owns the world rights to produce elafin compounds for humans. Edinburgh University recently signed an agreement the company to develop the elafin drug.

Study: Hospital Workers May Not Show During Outbreak

Source: http://www.biomedcentral.com/content/pdf/1471-2458-10-436.pdf

More than one-in-four hospital workers indicated they were not willing to respond to an influenza pandemic

The results of a new study, Characterizing Hospital Workers' Willingness to Report to Duty in an Influenza Pandemic Through Threat- and Efficacy-based Assessment, just published in BMC Public Health, concluded that "significant gaps exist in hospital workers' willingness to respond" in the event of a severe influenza pandemic. The willingness of critical hospital staff to report to work during an influenza pandemic is a critical but under-studied phenomenon, the authors of the new study pointed out, noting that "the Extended Parallel Process Model (EPPM) is a useful framework to assess these gaps." The study reported that "several attitudinal indicators can help to identify hospital employees unlikely to respond," noting that "he findings point to certain hospital-based communication and training strategies to boost employees' response willingness, including promoting pre-event plans for home-based dependents; ensuring adequate supplies of personal protective equipment, vaccines and antiviral drugs for all hospital employees; and establishing a subjective norm of awareness and preparedness." "Overall," the study found that "more than one-in-four (28 percent) hospital workers indicated they were not willing to respond to an influenza pandemic scenario if asked but not required to do so." "Only an additional 10 percent were willing if required," and "one-third (32 percent) of participants reported they would be unwilling to respond in the event of a more severe pandemic influenza scenario," the study found, noting that "these response rates were consistent across different departments, and were one-third lower among nurses as compared with physicians." These percentages are very close to the numbers of hospital and emergency public health preparedness workers authorities have estimated in recent years would not show up for work during a serious flu pandemic. Authorities have predicted that between 30 percent and 45 percent of hospital workers would not report for duty during a severe influenza pandemic. According to the new study, "respondents who were hesitant to agree to work additional hours when required were 17 times more likely to be unwilling to respond during a pandemic if asked. Sixty percent of the workers perceived their peers as likely to report to work in such an emergency, and were ten times more likely than others to do so themselves. Hospital employees with a perception of high efficacy had 5.8 times higher declared rates of willingness to respond to an influenza pandemic." In the event of an "all hands on deck" pandemic, the study's authors stated that "worker absenteeism can be expected not solely due to illness among employees and their families, but also due to voluntary absenteeism. Indeed, a growing body of research points to response willingness rates that are far from universal, with the extent of these willingness gaps varying across different healthcare workforce cohorts, countries, and scenario contexts. "With regard to hospital workers' views toward pandemic influenza response, for example, a 2006 survey conducted among employees at a Level II trauma center revealed that 42 percent of respondents answered 'maybe' and 8

percent answered ‘no’ to a question on willingness to respond to this threat." “These ambivalent or negative responses suggest that hospital workforce absenteeism may be due, in substantial measure, to attitudinal and related perceptual factors apart from direct illness. Such findings also point toward the need for enhanced understanding of response willingness among other responder cohorts whose failure to report to work (for reasons other than illness), could further compromise the surge capacity of an already-strained healthcare system,” the report of the study stated. The study was administered as an anonymous online EPPM-based survey about attitudes and beliefs toward emergency response, to all 18,612 employees of the Johns Hopkins Hospital from January to March 2009. Responses were received from 3,426 employees (18.4 percent), approximately one third of whom were health professionals. “The survey tool, entitled ‘Disaster preparedness and emergency response survey,’ was an anonymous online instrument consisting of two main sections: a demographic section and an attitude/belief section that focused on hospital workers' attitudes and beliefs toward emergency response,” the study’s authors explained.

Collection

CBRNE-TERRORISM Newsletter

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RAD-NUKE –News

A Quarter Century after Chernobyl

Radioactive Boar on the Rise in Germany

Source: http://www.spiegel.de/international/zeitgeist/0,1518,709345,00.html

Anyone have a Geiger counter?

As Germany's wild boar population has skyrocketed in recent years, so too has the number of animals contaminated by radioactivity left over from the Chernobyl nuclear meltdown.

Government payments compensating hunters for lost income due to radioactive boar have quadrupled since 2007. It's no secret that Germany has a wild boar problem. Stories of marauding pigs hit the headlines with startling regularity: Ten days ago, a wild boar attacked a wheelchair-bound man in a park in Berlin; in early July, a pack of almost two dozen of the animals repeatedly marched into the eastern German town of Eisenach, frightening residents and keeping police busy; and on Friday morning, a German highway was closed for hours after 10 wild boar broke through a fence and waltzed onto the road. Even worse, though, almost a quarter century after the Chernobyl nuclear meltdown in Ukraine, a good chunk of Germany's wild boar population remains slightly radioactive -- and the phenomenon has been costing the German government an increasing amount of money in recent years. According to the Environment Ministry in Berlin, almost €425,000 ($555,000) was paid out to hunters in 2009 in compensation for wild boar meat that was too contaminated by radiation to be sold for consumption. That total is more than four times higher than compensation payments made in 2007.

'Boar Boom'

The reason for the climbing payments, of course, has more to do with Germany's skyrocketing wild boar population than with an increase in radioactive contamination. "In the last couple of years, wild boar have rapidly multiplied," a spokesman from the Environment Ministry confirmed to SPIEGEL ONLINE. "Not only is there more corn being farmed, but warmer winters have also contributed to a boar boom." Numbers from the German Hunting Federation confirm the population increase. In the 2008/2009 season, a record number of boar were shot, almost 650,000 against just 287,000 a year previously. Many of the boar that are killed land on the plates of diners across Germany, but it is forbidden to sell meat containing high levels of radioactive caesium-137 -- any animals showing contamination levels higher than 600 becquerel per kilogram must be disposed of. But in some areas of Germany, particularly in the south, wild boar routinely show much higher levels of contamination. According to the Environment Ministry, the average contamination for boar shot in Bayerischer Wald, a forested region on the Bavarian border with the Czech Republic, was 7,000 becquerel per kilogram. Other regions in southern Germany aren't much better. Germany's Atomic Energy Law, which regulates the use of nuclear energy in the country,

mandates that the government in Berlin pay compensation to hunters who harvest contaminated animals.

Contaminated Wild Pig

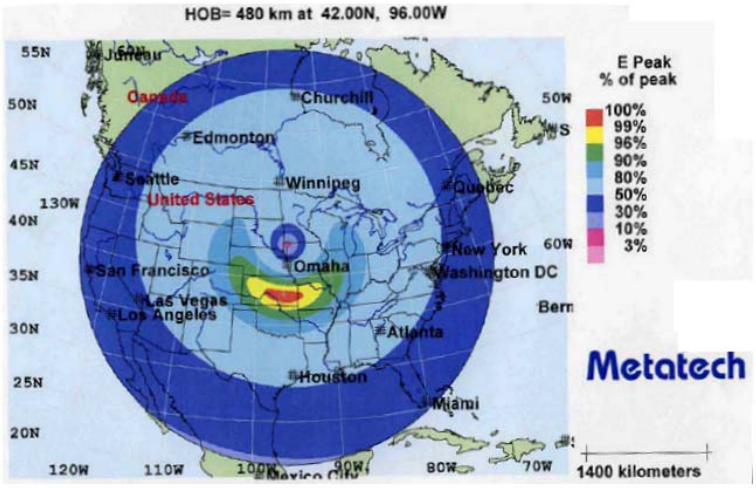
Wild boar are particularly susceptible to radioactive contamination due to their predilection for chomping on mushrooms and truffles, which are particularly efficient at absorbing radioactivity. Indeed, whereas radioactivity in some vegetation is expected to continue declining, the contamination of some types of mushrooms and truffles will likely remain the same, and may even rise slightly -- even a quarter century after the Chernobyl accident. "In the regions where it is particularly problematic, all boar that are shot are checked for radiation," reports Andreas Leppmann, from the German Hunting Federation. There are 70 measuring stations in Bavaria alone. In addition, for the last year and a half, Bavarian hunters have been testing ways to reduce the amount of caesium-137 absorbed by wild boar. A chemical mixture known as Giese salt, when ingested, has been shown to accelerate the excretion of the radioactive substance. Giese salt, also known as AFCF, is a caesium binder and has been used successfully to reduce radiation in farm animals after Chernobyl. According to Joachim Reddemann, an expert on radioactivity in wild boar with the Bavarian Hunting Federation, a pilot program in Bavaria that started a year and a half ago has managed to significantly reduce the number of contaminated animals. Government compensation payments to hunters remain a small part of the €238 million recompense the German government has shelled out for damages relating to Chernobyl since reactor IV exploded on April 26, 1986. Furthermore, there is some relief in sight. Even as wild boar continue to show a fondness for making the headlines, the recent hard winter has had its effect on population numbers. So far this year, Berlin has only had to pay out €130,000 for radioactive boar. But radioactivity in wild boar isn't likely to disappear soon. "The problem has been at a high level for a long time," says Reddemann. "It will likely remain that way for at least the next 50 years."

Gauging the threat of an electromagnetic pulse (EMP) attack

Source: www.stratfor.com

By Scott Stewart and Nate Hughes

Over the past decade there has been an ongoing debate over the threat posed by electromagnetic pulse (EMP) to modern civilization. This debate has been the most heated perhaps in the United States, where the commission appointed by Congress to assess the threat to the United States warned of the dangers posed by EMP in reports released in 2004 and 2008. The commission also called for a national commitment to address the EMP threat by hardening the national infrastructure. There is little doubt that efforts by the United States to harden infrastructure against EMP -- and its ability to manage critical infrastructure manually in the event of an EMP attack -- have been eroded in recent decades as the Cold War ended and the threat of nuclear



conflict with Russia lessened. This is also true of the U.S. military, which has spent little time contemplating such scenarios in the years since the fall of the Soviet Union. The cost of remedying the situation, especially retrofitting older systems rather than simply regulating that new systems be better hardened, is immense. And as with any issue involving massive amounts of money, the debate over guarding against EMP has become quite politicized in recent years. We have long avoided writing on this topic for precisely that reason. However, as the debate over the EMP threat has continued, a great deal of discussion about the threat has appeared in the media. Many STRATFOR readers have asked for our take on the threat, and we thought it might be helpful to dispassionately discuss the tactical elements involved in such an attack and the various actors that could conduct one. The following is our assessment of the likelihood of an EMP attack against the United States.

Defining Electromagnetic Pulse

EMP can be generated from natural sources such as lightning or solar storms interacting with the earth's atmosphere, ionosphere and magnetic field. It can also be artificially created using a nuclear weapon or a variety of non-nuclear devices. It has long been proven that EMP can disable electronics. Its ability to do so has been demonstrated by solar storms, lightning strikes and atmospheric nuclear explosions before the ban on such tests. The effect has also been recreated by EMP simulators designed to reproduce the electromagnetic pulse of a nuclear device and study how the phenomenon impacts various kinds of electrical and electronic devices such as power grids, telecommunications and computer systems, both civilian and military. The effects of an EMP -- both tactical and strategic -- have the potential to be quite significant, but they are also quite uncertain. Such widespread effects can be created during a high-altitude nuclear detonation (generally above 30 kilometers, or about 18 miles). This widespread EMP effect is referred to as high-altitude EMP or HEMP. Test data from actual high-altitude nuclear explosions is extremely limited. Only the United States and the Soviet Union conducted atmospheric nuclear tests above 20 kilometers and, combined, they carried out fewer than 20 actual tests. As late as 1962 -- a year before the Partial Test Ban Treaty went into effect, prohibiting its signatories from conducting aboveground test detonations and ending atmospheric tests -- scientists were surprised by the HEMP effect. During a July 1962 atmospheric nuclear test called "Starfish Prime," which took place 400 kilometers above Johnston Island in the Pacific, electrical and electronic systems were damaged in Hawaii, some 1,400 kilometers away. The Starfish Prime test was not designed to study HEMP, and the effect on Hawaii, which was so far from ground zero, startled U.S. scientists. High-altitude nuclear testing effectively ended before the parameters and effects of HEMP were well understood. The limited body of knowledge that was gained from these tests remains a highly classified matter in both the United States and Russia. Consequently, it is difficult to speak intelligently about EMP or publicly debate the precise nature of its effects in the open-source arena. The importance of the EMP threat should not be understated. There is no doubt that the impact of a HEMP attack would be significant. But any actor plotting such an attack would be dealing with immense uncertainties -- not only about the ideal altitude at which to detonate the device based on its design and yield in order to maximize its effect but also about the nature of those effects and just how devastating they could be. Non-nuclear devices that create an EMP-like effect, such as high-power microwave (HPM) devices, have been developed by several countries, including the United States. The most capable of these devices are thought to have significant tactical utility and more powerful variants may be able to achieve effects more than a kilometer away. But at the present time, such weapons do not appear to be able to create an EMP effect large enough to affect a city, much less an entire country. Because of this, we will confine our discussion of the EMP threat to HEMP caused by a nuclear detonation, which also happens to be the most prevalent scenario appearing in the media.

Attack Scenarios

In order to have the best chance of causing the type of immediate and certain EMP damage to the United States on a continent-wide scale, as discussed in many media reports, a nuclear

weapon (probably in the megaton range) would need to be detonated well above 30 kilometers somewhere over the American Midwest. Modern commercial aircraft cruise at a third of this altitude. Only the United States, United Kingdom, France, Russia and China possess both the mature warhead design and intercontinental ballistic missile (ICBM) capability to conduct such an attack from their own territory, and these same countries have possessed that capability for decades. (Shorter range missiles can achieve this altitude, but the center of the United States is still 1,000 kilometers from the Eastern Seaboard and more than 3,000 kilometers from the Western Seaboard -- so just any old Scud missile won't do.) The HEMP threat is nothing new. It has existed since the early 1960s, when nuclear weapons were first mated with ballistic missiles, and grew to be an important component of nuclear strategy. Despite the necessarily limited understanding of its effects, both the United States and Soviet Union almost certainly included the use of weapons to create HEMPs in both defensive and especially offensive scenarios, and both post-Soviet Russia and China are still thought to include HEMP in some attack scenarios against the United States. However, there are significant deterrents to the use of nuclear weapons in a HEMP attack against the United States, and nuclear weapons have not been used in an attack anywhere since 1945. Despite some theorizing that a HEMP attack might be somehow less destructive and therefore less likely to provoke a devastating retaliatory response, such an attack against the United States would inherently and necessarily represent a nuclear attack on the U.S. homeland and the idea that the United States would not respond in kind is absurd. The United States continues to maintain the most credible and survivable nuclear deterrent in the world, and any actor contemplating a HEMP attack would have to assume not that they might experience some limited reprisal but that the U.S. reprisal would be full, swift and devastating. Countries that build nuclear weapons do so at great expense. This is not a minor point. Even today, a successful nuclear weapons program is the product of years -- if not a decade or more -- and the focused investment of a broad spectrum of national resources. Nuclear weapons also are developed as a deterrent to attack, not with the intention of immediately using them offensively. Once a design has achieved an initial capability, the focus shifts to establishing a survivable deterrent that can withstand first a conventional and then a nuclear first strike so that the nuclear arsenal can serve its primary purpose as a deterrent to attack. The coherency, skill and focus this requires are difficult to overstate and come at immense cost -- including opportunity cost -- to the developing country. The idea that Washington will interpret the use of a nuclear weapon to create a HEMP as somehow less hostile than the use of a nuclear weapon to physically destroy an American city is not something a country is likely to gamble on. In other words, for the countries capable of carrying out a HEMP attack, the principles of nuclear deterrence and the threat of a full-scale retaliatory strike continue to hold and govern, just as they did during the most tension-filled days of the Cold War.

Rogue Actors

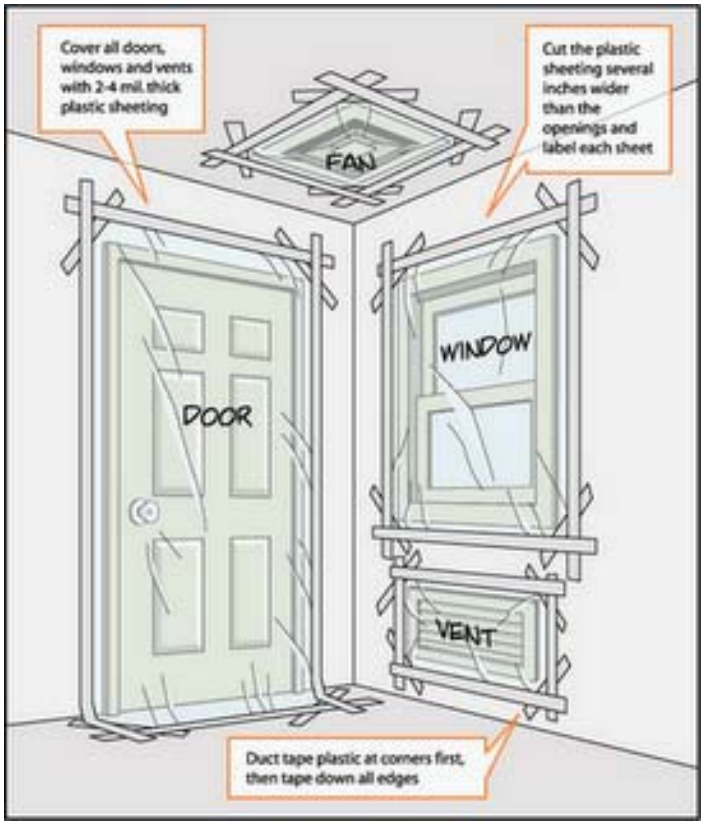
One scenario that has been widely put forth is that the EMP threat emanates not from a global or regional power like Russia or China but from a rogue state or a transnational terrorist group that does not possess ICBMs but will use subterfuge to accomplish its mission without leaving any fingerprints. In this scenario, the rogue state or terrorist group loads a nuclear warhead and missile launcher aboard a cargo ship or tanker and then launches the missile from just off the coast in order to get the warhead into position over the target for a HEMP strike. This scenario would involve either a short-range ballistic missile to achieve a localized metropolitan strike or a longer-range (but not intercontinental) ballistic missile to reach the necessary position over the Eastern or Western seaboard or the Midwest to achieve a key coastline or continental strike. When we consider this scenario, we must first acknowledge that it faces the same obstacles as any other nuclear weapon employed in a terrorist attack. It is unlikely that a terrorist group like al Qaeda or Hezbollah can develop its own nuclear weapons program. It is also highly unlikely that a nation that has devoted significant effort and treasure to develop a nuclear weapon would entrust such a weapon to an outside organization. Any use of a nuclear weapon would be vigorously investigated and the nation that produced the weapon would be identified and would pay a heavy price for such an attack

(there has been a large investment in the last decade in nuclear forensics). Lastly, as noted above, a nuclear weapon is seen as a deterrent by countries such as North Korea or Iran, which seek such weapons to protect themselves from invasion, not to use them offensively. While a group like al Qaeda would likely use a nuclear device if it could obtain one, we doubt that other groups such as Hezbollah would. Hezbollah has a known base of operations in Lebanon that could be hit in a counterstrike and would therefore be less willing to risk an attack that could be traced back to it. Also, such a scenario would require not a crude nuclear device but a sophisticated nuclear warhead capable of being mated with a ballistic missile. There are considerable technical barriers that separate a crude nuclear device from a sophisticated nuclear warhead. The engineering expertise required to construct such a warhead is far greater than that required to construct a crude device. A warhead must be far more compact than a primitive device. It must also have a trigger mechanism and electronics and physics packages capable of withstanding the force of an ICBM launch, the journey into the cold vacuum of space and the heat and force of re-entering the atmosphere -- and still function as designed. Designing a functional warhead takes considerable advances in several fields of science, including physics, electronics, engineering, metallurgy and explosives technology, and overseeing it all must be a high-end quality assurance capability. Because of this, it is our estimation that it would be far simpler for a terrorist group looking to conduct a nuclear attack to do so using a crude device than it would be using a sophisticated warhead -- although we assess the risk of any non-state actor obtaining a nuclear capability of any kind, crude or sophisticated, as extraordinarily unlikely. But even if a terrorist organization were somehow able to obtain a functional warhead and compatible fissile core, the challenges of mating the warhead to a missile it was not designed for and then getting it to launch and detonate properly would be far more daunting than it would appear at first glance. Additionally, the process of fueling a liquid-fueled ballistic missile at sea and then launching it from a ship using an improvised launcher would also be very challenging. (North Korea, Iran and Pakistan all rely heavily on Scud technology, which uses volatile, corrosive and toxic fuels.) Such a scenario is challenging enough, even before the uncertainty of achieving the desired HEMP effect is taken into account. This is just the kind of complexity and uncertainty that well-trained terrorist operatives seek to avoid in an operation. Besides, a ground-level nuclear detonation in a city such as New York or Washington would be more likely to cause the type of terror, death and physical destruction that is sought in a terrorist attack than could be achieved by generally non-lethal EMP. Make no mistake: EMP is real. Modern civilization depends heavily on electronics and the electrical grid for a wide range of vital functions, and this is truer in the United States than in most other countries. Because of this, a HEMP attack or a substantial geomagnetic storm could have a dramatic impact on modern life in the affected area. However, as we've discussed, the EMP threat has been around for more than half a century and there are a number of technical and practical variables that make a HEMP attack using a nuclear warhead highly unlikely. When considering the EMP threat, it is important to recognize that it exists amid a myriad other threats, including related threats such as nuclear warfare and targeted, small-scale HPM attacks. They also include threats posed by conventional warfare and conventional weapons such as man-portable air-defense systems, terrorism, cyberwarfare attacks against critical infrastructure, chemical and biological attacks -- even natural disasters such as earthquakes, hurricanes, floods and tsunamis. The world is a dangerous place, full of potential threats. Some things are more likely to occur than others, and there is only a limited amount of funding to monitor, harden against, and try to prevent, prepare for and manage them all. When one attempts to defend against everything, the practical result is that one defends against nothing. Clear-sighted, well-grounded and rational prioritization of threats is essential to the effective defense of the homeland. Hardening national infrastructure against EMP and HPM is undoubtedly important, and there are very real weaknesses and critical vulnerabilities in America's critical infrastructure -- not to mention civil society. But each dollar spent on these efforts must be balanced against a dollar not spent on, for example, port security, which we believe is a far more likely and far more consequential vector for nuclear attack by a rogue state or non-state actor.

Study Calls for Sheltering In-Place in Aftermath of Nuclear Attack

Source: http://www.ncbi.nlm.nih.gov/pubmed/20545894

Research predicts higher survival rates with sheltering than evacuation plans. People in large metropolitan areas are better off sheltering in-place in basements for 12 to 24 hours in the aftermath of a nuclear detonation rather than trying to evacuate immediately, unless a lengthy warning period is provided, according to a new study by Stanford University engineering and science researchers. The study titled Analyzing Evacuation Versus Shelter-in-Place Strategies After a Terrorist Nuclear Detonation , published in the current issue of Risk Analysis: An International Journal published by the nonprofit Society for Risk Analysis (SRA), modeled the impacts of a detonation in downtown Washington DC using the scenario of a surface blast of a 10 kilotont improvised nuclear device (IND) in the Washington, DC Mall at 10 a.m. on a weekday. The analysis found there would be almost 80,000 fatalities in the immediate aftermath of such a detonation . Of the estimated 360,000 survivors without access to a vehicle, they estimate 43,000 would die if they immediately tried to evacuate on foot. In contrast, sheltering in a basement (or near the middle of a large building) would save a third of them. Acknowledging that their finding might at first glance seem counter-intuitive, the researchers explained that "while one would think that escaping the fallout zone is the best way to avoid injury or death, when even a small fraction of people attempts to do so, such creates traffic queues that in effect cause much greater exposure to radiation than would occur if people stayed inside and below ground. Combining this logistical observation with the facts that means of communications between the government and its citizens will be limited after the detonation, situational awareness of both the plume location and travel times will be low, and shelter/evacuation compliance has been low in past events and in recent surveys, we conclude that the only robust strategy is to advise everyone to shelter in place." "The results of this article suggest that the government needs an aggressive outreach program that educates the public about this issue, encouraging them to shelter in place in their basement, and to store several days of food and water at home," the researchers conclude. "The government should also encourage the private sector to develop a basement shelter strategy and to store food and water and perhaps antibiotics and blankets at their facilities that are located near large cities. This educational outreach would appear to be much more cost effective than other approaches (e.g., the $877M contract for an anthrax vaccine) for mitigating the impact of catastrophic terrorist threats." The study also notes sheltering "would save many more lives in New York city than in Washington for three reasons: New York city's population density is much greater and so the population affected by the fallout would increase by nearly an order-of-magnitude; New York city has many more



tall buildings; which would allow for greater protection for those who shelter; and New York city has few roadways that exit the city, which would greatly exacerbate both pedestrian and vehicle evacuation."

The Real Threat Posed by a Dirty Bomb Terrorist Attack

Scott Steward
Source: www.stratfor.com

For several years media coverage of the threat posed by dirty bombs runs in a perceptible cycle with distinct spikes and lulls. We are currently in one of the periods of heightened awareness and media coverage. A number of factors appear to have sparked the current

interest, including the recently concluded Nuclear Security Summit hosted by U.S. President Barack Obama. Other factors include the resurfacing rumors that al Qaeda militant Adnan El Shukrijumah may have returned to the United States and is planning to conduct an attack, as well as recent statements by members of the Obama administration regarding the threat of jihadist militants using weapons of mass destruction (WMD). A recent incident in India in which a number of people were sickened by radioactive metal at a scrap yard in a New Delhi slum also has received a great deal of media coverage. In spite of the fact that dirty bombs have been discussed widely in the press for many years now — especially since the highly publicized arrest of Jose Padilla in May 2002 — much misinformation and disinformation continues to circulate regarding dirty bombs. The misinformation stems from long-held misconceptions and ignorance, while the disinformation comes from scaremongers hyping the threat for financial or political reasons. Frankly, many people have made a lot of money by promoting fear since 9/11. Recently, a leading newspaper published a purported expert interviewed by the reporter discussed how a dirty bomb would "immediately cause hundreds or even thousands of deaths." This is simply not true. A number of radiological accidents have demonstrated that a dirty bomb will not cause this type of death toll. Indeed, the panic generated by a dirty bomb attack could very well result in more immediate deaths than the detonation of the device itself. Unfortunately, media stories hyping the threat of these devices may foster such panic, thus increasing the death toll. To counter this irrational fear, we feel it

is time once again to discuss dirty bombs in detail and provide our readers with a realistic assessment of the threat they pose.

Dirty Bombs Defined

A dirty bomb is a type of radiological dispersal device (RDD), and RDDs are, as the name implies, devices that disperse a radiological isotope. Depending on the motives of those planning the attack, an RDD could be a low-key weapon that surreptitiously releases aerosolized radioactive material, dumps out a finely powdered radioactive material or dissolves a radioactive material in water. Such surreptitious dispersal methods would be intended to slowly expose as many people as possible to the radiation and to prolong their exposure. Unless large amounts of a very strong radioactive material are used, however, the effects of such an exposure will be limited. People are commonly exposed to heightened levels of radiation during activities such as air travel and mountain climbing. To cause adverse effects, radiation exposure must occur either in a very high dose over a short period or in smaller doses sustained over a longer period. This is not to say that radiation is not dangerous, but rather the idea that the slightest amount of exposure to radiation causes measurable harm is not accurate. By its very nature, the RDD is contradictory. Maximizing the harmful effects of radiation involves maximizing the exposure of the victims to the highest possible concentration of a radioisotope. When dispersing the radioisotope, by definition and design the RDD dilutes the concentration of the radiation source, spreading smaller amounts of radiation over a larger area. Additionally, the use of an explosion to disperse the radioisotope alerts the intended victims, who can then evacuate the affected area and be decontaminated. These factors make it very difficult for an attacker to administer a deadly dose of radiation via a dirty bomb. It is important to note that a dirty bomb is not a nuclear device, and no nuclear reaction occurs. A dirty bomb will not produce an effect like the nuclear devices dropped on Hiroshima or Nagasaki. A dirty bomb is quite simply an RDD that uses explosives as the means to disperse a radioactive isotope, and the only blast effect will be from the explosives used to disperse the radioisotope. In a dirty bomb attack, radioactive material not only is dispersed, but the dispersal is accomplished in an obvious manner, and the explosion immediately alerts the victims and authorities that an attack has taken place. The attackers hope that notice of their attack will cause mass panic — in other words, the RDD is a weapon of fear and terror. The radioisotopes that can be used to construct an RDD are fairly common. Even those materials considered by many to be the most likely to be used in an RDD, such as cobalt-60 and cesium-137, have legitimate medical, commercial and industrial uses. Organizations such as the International Atomic Energy Agency warn that such radioisotopes are readily available to virtually any country in the world, and they are almost certainly not beyond the reach of even moderately capable non-state actors. Indeed, given the ease of obtaining radiological isotopes and the ease with which a dirty bomb can be constructed, we are surprised that we have not seen one successfully used in a terror attack. We continue to believe that it is only a matter of time before a dirty bomb is effectively employed somewhere. Because of this, let's examine what effectively employing a dirty bomb means.

Dirty Bomb Effectiveness

Like a nonexplosive RDD, unless a dirty bomb contains a large amount of very strong radioactive material, the effects of the device are not likely to be immediate and dramatic. In fact, the explosive effect of the RDD is likely to kill more people than the device's radiological effect. This need for a large quantity of a radioisotope not only creates the challenge of obtaining that much radioactive material, it also means that such a device would be large and unwieldy — and therefore difficult to smuggle into a target such as a subway or stadium. In practical terms, a dirty bomb can produce a wide range of effects depending on the size of the improvised explosive device (IED) and the amount and type of radioactive material involved. (Powdered radioisotopes are easier to disperse than materials in solid

form.) Environmental factors such as terrain, weather conditions and population density would also play an important role in determining the effects of such a device. Significantly, while the radiological effects of a dirty bomb may not be instantly lethal, the radiological impact of an RDD will in all likelihood affect an area larger than the killing radius of the IED itself, and will persist for far longer. The explosion from a conventional IED is over in an instant, but radiation released by a RDD can persist for decades unless the area is decontaminated. While the radiation level may not be strong enough to affect people exposed briefly in the initial explosion, the radiation will persist in the contaminated area, and the cumulative effects of such radiation could prove very hazardous. (Here again, the area contaminated and the ease of decontamination will depend on the type and quantity of the radioactive material used. Materials in a fine powdered form are easier to disperse and harder to clean up than solid blocks of material.) In either case, it will be necessary to evacuate people from the contaminated area, and people will need to stay out of the area until it can be decontaminated, a process that could prove lengthy and expensive. Therefore, while a dirty bomb is not truly a WMD like a nuclear device, we frequently refer to them as "weapons of mass disruption" or "weapons of mass dislocation" because they may temporarily render contaminated areas uninhabitable. The expense of decontaminating a large, densely populated area, such as a section of London or Washington, is potentially quite high. This cost would also make a dirty bomb a type of economic weapon.

Historical Precedents

The world has not yet witnessed a successful dirty bomb attack by a terrorist or militant group. That does not necessarily mean that militant groups have not been interested in radiological weapons, however. Chechen militants have perhaps been the most active in the realm of radioactive materials. In November 1995, Chechen militants under the command of Shamil Basayev placed a small quantity of cesium-137 in Moscow's Izmailovsky Park. Rather than disperse the material, however, the Chechens used the material as a psychological weapon by directing a TV news crew to the location and thus creating a media storm and fostering public fear. The material in this incident was thought to have been obtained from a nuclear waste or isotope storage facility in the Chechen capital of Grozny. In December 1998, the pro-Russian Chechen Security Service announced it had found a dirty bomb consisting of a land mine combined with radioactive materials next to a railway line frequently used to transport Russian troops. It is believed that Chechen militants planted the device. In September 1999, two Chechen militants who attempted to steal highly radioactive materials from a chemical plant in Grozny were incapacitated after carrying the container for only a few minutes each; one reportedly died. This highlights another difficulty with producing a really effective dirty bomb: The strongest radioactive material is dangerous to handle, and even a suicide operative might not be able to move and employ it before being overtaken by its effects. Still, none of these Chechen incidents really provided a very good example of what a dirty bomb detonation would actually look like. To do this, we need to look at incidents where radiological isotopes were dispersed by accident. In 1987, in Goiania, Brazil, a tiny radiotherapy capsule of cesium chloride salt was accidentally broken open after being salvaged from a radiation therapy machine left at an abandoned health care facility. Over the course of 15 days, the capsule containing the radioisotope was handled by a number of people who were fascinated by the faint blue glow it gave off. Some victims reportedly even smeared the substance on their bodies. The radiation was then dispersed by these people to various parts of the surrounding neighborhood, and some of it was even taken to nearby towns. In all, more than 1,000 people were contaminated during the incident and some 244 were found to have significant radioactive material in or on their bodies. Still, only four people died from the incident, and most of those who died had sustained exposure to the contamination. In addition to the human toll, the cleanup operation in Goiania cost more than $100 million, as many houses had to be razed and substantial quantities of contaminated soil had to be removed from the area. In a more recent case involving a scrap dealer, this time in a slum outside New Delhi, India, eight people were admitted to the hospital because of radiation exposure after a scrap dealer dismantled an object containing cobalt-60. The material

apparently arrived at a scrap shop March 12, and the owner of the shop was admitted to the hospital April 4 suffering from radiation-poisoning symptoms (again another case involving prolonged exposure to a radiation source). The radiation source was found at the scrap yard April 5 and identified as cobalt-60. Indian authorities hauled away eight piles of contaminated scrap. The cleanup operation was easier in the Indian incident, since the radioactive material was in metallic form and found in larger pieces rather than in powdered form seen in the cesium in Goiania. Intriguingly, a nearby scrap shop also was found to be contaminated April 16, but it appears from initial reports that the second site was contaminated by a second radioactive source that contained a weaker form of cobalt-60. Though we are watching for additional details on this case, so far, despite the long-term exposure to a potent radioactive source, no deaths have been reported. At the other end of the spectrum from the Goiania and New Delhi accidents is the 1986 Chernobyl nuclear disaster in northern Ukraine, when a 1-gigawatt power reactor exploded. It is estimated that more than one hundred times the radiation of the Hiroshima bomb was released during the accident — the equivalent of 50 million to 250 million grams of radium. More than 40 different radioisotopes were released, and there was a measurable rise in cesium-137 levels across the entire European continent. No RDD could ever aspire to anything close to such an effect. Chernobyl wrought untold suffering, and estimates suggest that it may ultimately contribute to the deaths of 9,000 people. But many of those affected by the radiation are still alive more than 20 years after the accident. While STRATFOR by no means seeks to downplay the tragic human or environmental consequences of this disaster, the incident is instructive when contemplating the potential effects of a dirty bomb attack. In spite of the incredible amounts of radioactive material released at Chernobyl, only 31 people died in the explosion and immediate aftermath. Today, 5.5 million people live in the contaminated zone — many within or near the specified EU dosage limits for people living near operational nuclear power plants. It is this type of historical example that causes us to be so skeptical regarding claims that a small dirty bomb will cause hundreds or even thousands of deaths. Instead, the most strategic consequences of this sort of destruction are economic. By some estimates, the Chernobyl disaster will ultimately cost well in excess of $100 billion. Again, in our opinion, a dirty bomb should be considered a weapon of disruption — one that will cause economic loss, but would not cause mass casualties or any real mass destruction.

Fighting Panic

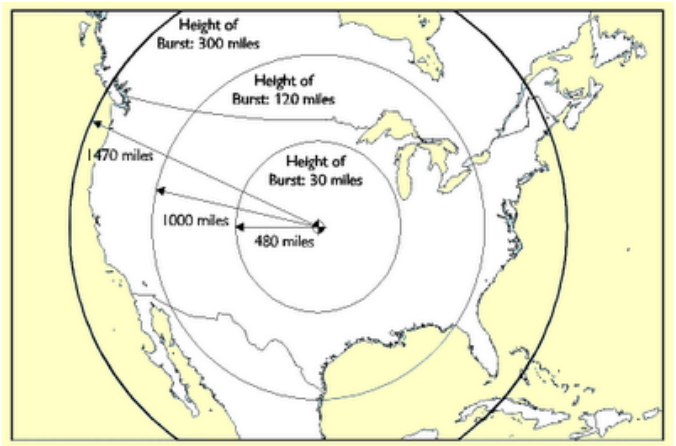
Analytically, based upon the ease of manufacture and the historical interest by militants in dirty bombs — which ironically may in part be due to the way the RDD threat has been hyped — it is only a matter of time before militants successfully employ one. Since the contamination created by such a device can be long-lasting, more rational international actors probably would prefer to detonate such a device against a target outside their own country. In other words, they would lean toward attacking a target within the United States or United Kingdom rather than the U.S. or British embassies in their home country. And since it is not likely to produce mass casualties, a dirty bomb attack would likely be directed against a highly symbolic target — such as one representing the economy or government — and designed to cause the maximum amount of disruption at the target site. Therefore, it is not out of the question to imagine such an attack aimed at a target such as Wall Street or the Pentagon. The device would not destroy these sites, but would limit access to them for as long as it took to decontaminate them. As noted above, we believe it is possible that the panic caused by a dirty bomb attack could well kill more people than the device itself. People who understand the capabilities and limitations of dirty bombs are less likely to panic than those who do not, which is the reason for this analysis. Another important way to help avoid panic is to carefully think about such an incident in advance and to put in place a carefully crafted contingency plan for your family and business. Contingency plans are especially important for those who work in proximity to a potential dirty bomb target. But they are useful in any

disaster, whether natural or man-made, and something that should be practiced by all families and businesses. Such knowledge and planning provide people with the ability to conduct an orderly and methodical evacuation of the affected area. This allows them to minimize their exposure to radioactivity while also minimizing their risk of injury or death due to mass hysteria. For while a dirty bomb attack could well be messy and disruptive, it does not have to be deadly.

End of the world...for real

SOURCE: http://www.washingtonexaminer.com/opinion/columns/End-of-the-world___for-real-488958-100739539.html#ixzz0wtIX9JdG

Last week we were attacked by the sun. For real. Huge solar eruptions sent a blast of radiation toward Earth. Thankfully, the planet's natural magnetic shield warded off the worst effects. Life went on uninterrupted. That won't always be the case. In 1859, Richard Carrington recorded what is now called the "Carrington Effect" -- intense solar activity that can disrupt modern life dramatically. In Carrington's day, there were few electromechanical systems for intense solar radiation to mess with. The new fangled telegraph systems suffered the most. Solar-induced power surges knocked some operators from their chairs and set fire to the paper rolls used to record dashes and dots. Fortunately, no Carrington Effect has occurred since the whole world became electrified. But scientists worry about what might happen when a real solar tsunami hits. It is a real danger. In 2008, the National Academies released a report on the "adverse effects of extreme space weather on modern technology -- power grid outages, high-frequency communication blackouts. ..." Much of the planet's energy and communications infrastructure is just too fragile to weather a massive electromagnetic onslaught. We need to devote a lot more effort to building up resistance to solar tsunamis. Even if there is no intense solar burp in our lifetime, manmade threats can deliver the same damage. A high-altitude nuclear explosion can create an electromagnetic pulse that mimics a solar tsunami, a fact validated in 2004 by the Commission to Assess the Threat to the United States from electromagnetic pulse attack. A massive EMP attack on the United States could produce almost unimaginable devastation by wiping out essential infrastructure. Communications would collapse, transportation would halt, and electrical power would disappear. Not even a global humanitarian effort would be enough to keep hundreds of millions of Americans from dying of starvation or exposure. Nor would the catastrophe stop at our borders. Most of Canada would die, too. Its infrastructure is integrated with the U.S. power grid. Without the American economic engine, the world economy would quickly collapse. Much of the world's intellectual property (half of it is in the United States) would be lost as well. The Earth would likely recede into the "new" Dark Ages. There's nothing we can do to prevent a solar tsunami, but thwarting a nuclear missile attack is well within our capabilities. "Countering the EMP Threat: The Role of Missile Defense," a recent report from the Independent Working Group, offers some practical and readily achievable recommendations and even outlines how we could implement a defense against a short-range seaborne missile attack now. We could take the danger of ballistic missile EMP attacks off the table by building more robust long-range



Area Affected by an Electromagnetic Pulse, by Height of Burst

Source: Gary Smith, "Electromagnetic Pulse Threats," testimony before the House National Security Committee, July 16, 1997.

missile defenses That would require beefing up our domestic ground-based interceptors and dusting off an existing (but currently shelved) plan to put ground-based interceptors in Europe. Both the U.S.- and European-based interceptors are proven, cost-effective systems that could defend us right now. Yet the Obama administration has opted for a "phased and adaptive approach" --a strategy that may start to give us useful capabilities around 2020 or so ... if everything goes right. For the long term, the administration ought to be pushing space-based missile defense, which can provide comprehensive, robust and very cost-effective security against ballistic missile attack. While an ounce of missile defense would be worth a pound of EMP cure, we cannot ignore curative remedies either. Both public and private sectors need to pay more attention to "hardening" truly vital infrastructure to make it more resistant and resilient to natural and manmade threats. It's dangerous to look directly at the sun. But it can be downright catastrophic to avert our eyes from the very real risk of solar tsunami or EMP attack.

New muon detector could find hidden nukes

Source: http://www.wired.com/wiredscience/2010/07/muon-detector/

"A prototype of a device that could someday detect nukes through layers of steel just passed its first test. The detector, which uses technology that was developed for particle physics experiments at the Large Hadron Collider, can tell the difference among iron, lead and other heavy metals. By detecting the signature of heavy elements that could be used to build nuclear weapons, the new machine could someday find nuclear contraband hidden in shielded vehicles. 'This is the first time that we actually built and operated successfully the equipment to actually do this in real life, rather than in a computer,' said high-energy physicist Marcus Hohlmann of the Florida Institute of Technology, a co-author of the study. The device takes advantage of charged particles called muons, which are created in the atmosphere and zip through every square centimeter of material on Earth -- human bodies and armored trucks alike -- at a rate of one per minute. 'They sort of rain upon us like a light drizzle all the time,' Hohlmann said. Despite their high energies, muons don't interact very strongly with matter. 'They can go through 6 to 8 feet of steel without being stopped,' Hohlmann said. 'That's nice for our application, because what we're trying to do is look into things that are shielded.' But though matter typically doesn't stop muons in their tracks, heavy elements like uranium and metals like lead can deflect the charged particles. By tracking the muons' paths, scientists can construct a 3-D image of whatever material got in their way."

Radioactive material removed from closed NYC hospital

Source: http://www.pharmacynews.eu/hospital-industry/radioactive-material-removed-from-closed-nyc-hospital-newsday-melville-n-y

More than just doctors and nurses have left St. Vincent's Hospital Manhattan since it closed in April. In a secret operation last week, a team of federal officials and NYPD counterterrorism cops removed highly radioactive material that potentially could be used in a "dirty bomb" from the Greenwich Village hospital and took it to a secure storage facility run by the U.S. Department of Energy, officials told Newsday. The cesium-137 isotope was part of a blood irradiation device used to treat cancer patients, the officials said. Cesium is highly toxic and can kill a person in a few weeks if ingested. Security experts and law enforcement officials have said cesium is one of the radioactive materials that could be used by terrorists to make a radiological bomb; such bombs cause little damage but can spew dangerous materials in a wide area. Officials said about 1,300 curies, or radioactive units, of the substance were taken to the undisclosed location. The amount of cesium, which is in powdered form, was equivalent to the size of a roll of quarters. The small size made it more important to secure the material, said an official with the National Nuclear Security Administration, part of the Energy Department. There was no indication that terrorists were trying to acquire the cesium, but officials decided to move the material anyway. NYPD cops provided security while

officials with the NNSA secured the cesium. "This recovery is part of NNSA's broad strategy to keep dangerous nuclear and radiological material safe and secure and protect the American people by enhancing our nation's nuclear security," agency official Ken Baker said in a statement. Before the radiation device was taken out of service, St. Vincent's already was part of a special project run by the NNSA to enhance security of its cesium, the agency said. The hospital, long a fixture in the city, closed after a struggle to raise financing.

Cancer Patient Causes Radiological Scare

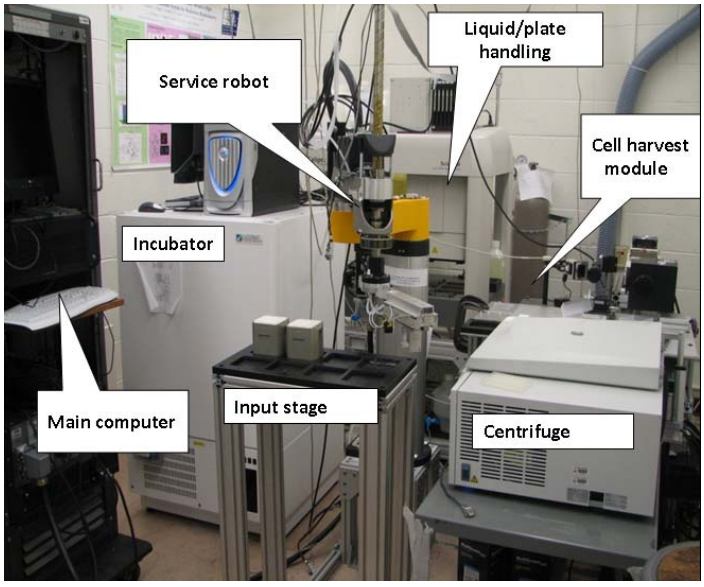
Source: http://globalsecuritynewswire.org/gsn/nw_20100709_4733.php

A 64-year-old British man caused a brief radiological "dirty bomb" scare as he travelled home from a vacation in France, the London Daily Star reported today. Police officers removed Peter Davies from a ferry after it docked in Dover and checked his car for radiation sources. The source turned out to be Davies, who two weeks before the incident had undergone radiation treatment for thyroid cancer. "They thought I had enough radioactive material in my car to make a 'dirty bomb'. I wondered what was going on," Davies said. A dirty bomb would use conventional explosives to disperse radiation.

Rapid "Dirty Bomb" Blood-Test Machine Built in NYC

Source: http://www.globalsecuritynewswire.org/gsn/nw_20100709_6475.php

Scientists at Columbia University in New York have built an experimental blood-testing machine intended to measure radiation levels for as many as 30,000 people each day in the aftermath of a potential radiological "dirty bomb" attack, the New York Times reported yesterday. The Rapid Automated Biodosimetry Tool, developed at the university's Center for Radiological Research, was designed to determine an individual's level of radiation exposure by examining chromosomes in a blood sample small enough to obtain from a pinprick to the finger. Such a test would be necessary to assess what medical treatment to provide any possible victim. Today, blood samples must be drawn from an arm and sent to a facility for manual analysis. "In the best of circumstances, you could do only a few hundred people a day, even with many labs involved," said David Brenner, a radiation biophysics professor who heads the research office. If the U.S. Food and Drug Administration endorses the new blood-testing device following a vetting period that could extend past three years, defense contractor Northrop Grumman Corp. would be expected to begin producing a smaller version of the system. The center was also working on a second radiation measurement involving blood samples and a third that tests urine. The U.S. National Institute for Allergy and Infectious Diseases has granted Brenner's team $25 million since 2005 for the work. The May 1 attempt to detonate a bomb in New York City's Times Square drew attention to the project's importance. "The concern is that it's not that hard to manufacture a dirty bomb," Brenner said. "Basically you just need to get some radioactive materials" that would be dispersed through use of conventional explosives. A means of rapidly assessing radiation exposure would help reduce public anxiety in the wake of a radiological strike,



Brenner added. “The last thing you want is somebody like me going on TV and saying, ‘Don’t panic,’ because everyone will panic,” he said. “The idea is to have some physical test that you can give individuals whereby you can demonstrate what their radiation exposure really is. Most people will get almost no dose." A midsize radiological attack would produce noteworthy radiation levels “only within only a few hundred yards of an actual event, and possibly less,” he said. A larger radiological dispersal device could harm individuals miles from the detonation site. "The bad guys want to create disruption and panic. If you can fight that by reassuring people, then you have defeated the goals of the terrorists," Brenner said. A 1987 release of radioactive cesium in Goiania, Brazil, prompted 130,000 people to flood into hospitals. Only 250 people were found to be contaminated, and only 20 people needed treatment for radiation sickness. “So the lesson from that is you need triage,” Brenner said. “You need to be able to figure out who actually needs treatment, and those are the sort of numbers from a dirty bomb that you might expect — one in 10,000 might need treatment.” After the attacks of Sept. 11, 2001, the New York City Police Department strengthened its efforts to prepare for an attack incorporating radioactive materials. The department has equipped close to 2,000 officers with hand-held radiation sensors, and it possesses additional ground-based and airborne equipment for detecting weapons, spokesman Paul Browne said.

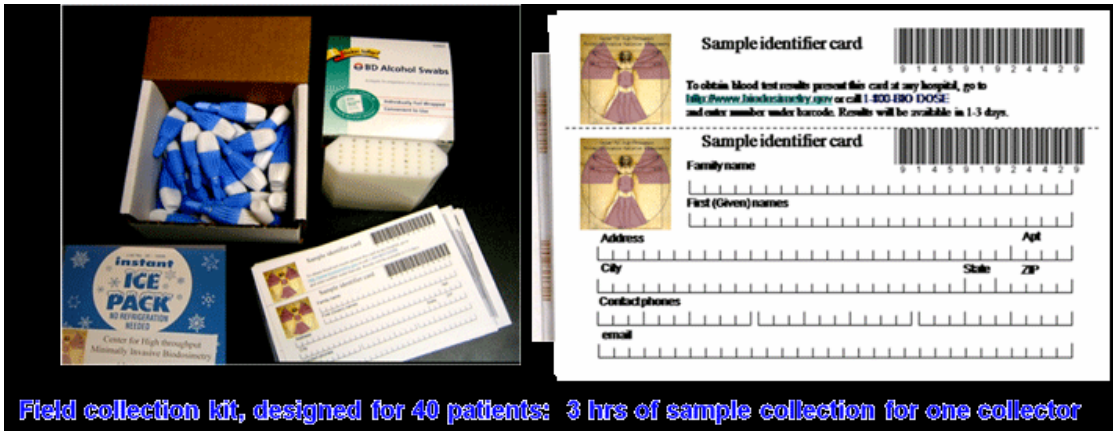
The Nuclear Domino Myth

Source: http://www.foreignaffairs.com/articles/66738/johan-bergenas/the-nuclear-domino-myth?page=show

When considering the dangers of an Iranian nuclear weapons program, those who differ on political ideology find rare common ground. According to nearly everyone, if Iran develops nuclear weapons, its neighbors will inevitably do so, too. Former U.S. Senator Sam Nunn (D-Ga.), for example, said earlier this year, "The governments of the world must understand what a threat it is if the Iranians get nuclear weapons, because there are probably 10 other countries in the Middle East over the next 10 to 20 years that would follow down that road." U.S. policymakers from John Bolton, the conservative former U.S. ambassador to the UN, to Vice President Joe Biden all seem to agree with this dark prediction. But there's one problem with this "nuclear domino" scenario: the historical record does not support it. Since the dawn of the nuclear age, many have feared rapid and widespread nuclear proliferation; 65 years later, only nine countries have developed nuclear weapons. Nearly 20 years elapsed between the emergence of the first nuclear state, the United States, in 1945, and the fifth, China, in 1964. The next 40 years gave birth to only five additional nuclear countries: India, Israel, South Africa, Pakistan, and North Korea. South Africa voluntarily disarmed in the 1990s, as did Belarus, Kazakhstan, and Ukraine following the dissolution of the Soviet Union. After Israel developed a nuclear weapons capability in the late 1960s, no regional nuclear chain reaction followed, even though the country is surrounded by rivals. Nor was there even a two-country nuclear arms race in the region. Similarly, it has now been four years since North Korea became a nuclear weapons state, yet South Korea and Japan have not followed suit, despite the fact that they have a latent nuclear weapons capability -- access to the fissile material necessary for nuclear weapons. These countries' decisions to not go nuclear are largely thanks to extensive U.S. efforts to dissuade them. Both South Korea and Japan enjoy firm and long-standing security

assurances from Washington, including protection under the U.S. strategic nuclear umbrella, obviating the need for their own deterrents. Following North Korea's 2006 nuclear test, U.S. President George W. Bush immediately assured South Korea and Japan that the United States was unequivocally committed to protecting them. The fruit of these efforts to prevent rapid and widespread nuclear proliferation, then, is the very reason a nuclear domino effect remains a myth. In the Middle East, there are no signs that the nuclear dominos will fall anytime soon. Although many governments believe that Iran could be one to three years away from developing a nuclear bomb, all other Middle Eastern countries (besides Israel) are at least 10 to 15 years away from reaching such a capability. This time frame gives Washington ample opportunity to establish or reaffirm security pacts with countries that might be tempted to develop their own nuclear weapons programs in reaction to a potential Iranian bomb. In fact, that work has already begun. In July 2009, U.S. Secretary of State Hillary Clinton spoke of the possibility of the United States extending a "defense umbrella" over the Gulf region and shoring up those countries' military capabilities if Iran goes nuclear. More generally, the United States is trying to reinforce a culture of nonproliferation in the Middle East. In late 2009, Washington concluded an agreement with the United Arab Emirates to forego the enrichment and reprocessing of nuclear fuel -- crucial steps in the development of nuclear weapons. (In return, the United Arab Emirates will receive help developing a civilian nuclear-energy program.) Similar overtures are being made to both Saudi Arabia and Jordan, states that are pursuing civilian nuclear-power programs to diversify their energy supplies. Another achievement came during the 2010 Nuclear Nonproliferation Treaty Review Conference, when the United States endorsed the convening of a regional meeting on establishing a nuclear-weapon-free zone in the Middle East. The summit is due to be held in 2012 and, although Israel's nuclear weapons complicate matters, could serve as another step toward cementing a nonproliferation culture in the region. These are major accomplishments in preventing proliferation in the Middle East, and they contradict the worst-case scenarios about a nuclear Iran. Yet they have done little to reassure those who expect a chain reaction of proliferating states. Such mistaken beliefs are due in part to the West's poor understanding of Iran. After more than 30 years of severed diplomatic, cultural, and educational relations with the country, the West knows little about Iran's leadership, national aspirations, and culture. Because of this, policymakers have a difficult time thinking about the implications of a nuclear Iran and resort to simplistic grandstanding, reprising outdated political fears that lack historical nuance or modern perspective. The exaggerated fears have been useful, too: had the United States not presented Iran's nuclear aspirations in the darkest of lights, it may not have been able to gain support for four rounds of UN sanctions against the Islamic Republic in the last few years. Another reason for the persistence of worst-case thinking is that the domino analogy is often discussed interchangeably with bilateral arms races, such as those between the United States and the former Soviet Union, and between India and Pakistan. These are two distinct concepts, however. The Cold War and South Asian cases represent dyadic arms buildups -- a scenario that cannot be ruled out in the Middle East. Even though this hypothetical should be of great concern, it is far from the nightmare nuclear domino effect, which by definition requires many more countries to speedily develop nuclear weapons. In the Middle East, this type of rapid development is just not technologically feasible. None of this means that the world need not worry about Iran's nuclear program. Slow-bleed proliferation still has profound implications for international peace and security. Most worrisome is the prospect of a terrorist organization gaining access to a nuclear weapon or materials for a dirty bomb -- a possibility more likely in a world with more nuclear states producing fissile materials. Human or technological error is another legitimate reason to worry; on several occasions during the Cold War, the world came close to nuclear war due to miscommunications between nuclear weapon states. More broadly, the world does not need additional nuclear hot spots. Look no further than India and Pakistan, two archenemies that possess nuclear weapons and occasionally come to the brink of nuclear war. Adding a nuclear component to the animosity between Israel and Iran would not improve prospects for lasting peace in the region. Other fears about a nuclear Iran are less convincing. It is often said, for example, that Iran's neighbors will be held hostage to Tehran's atomic tyranny. Undoubtedly,

a nuclear Iran will gain regional prestige and power, and the country would be able to exert increased pressure on other nations. But the offensive utility of nuclear weapons is questionable; they have not been used since Hiroshima and Nagasaki. All other nuclear powers have relied on their nuclear capabilities for deterrence, and there is no reason to believe that Iran would act differently. Any Iranian threats to use nuclear weapons would simply not be credible. And without credibility, Iran -- like any country -- would not be able to hold another country hostage. Others claim that the global nonproliferation regime would quickly crumble if Iran went nuclear. According to them, a nuclear Iran may damage the Nuclear Nonproliferation Treaty (NPT), the agreement under which states endorse nuclear disarmament and pledge not to develop nuclear weapons. If Iran were to emerge as a nuclear weapons state after cheating on its treaty obligations, the NPT's legitimacy would certainly suffer a blow. It would take more than Iran cheating on the treaty, however, to nudge the NPT into the abyss of irrelevance. The NPT is one of the most successful international accords in history, currently enjoying almost universal membership. Its more than 180 committed parties are unlikely to allow Iran's nuclear program to demolish an institution that is -- and has been for four decades -- the foundation of nonproliferation efforts. And if Iran has the power to make the NPT collapse, it is questionable whether the treaty is worth preserving in the first place. Predictions of catastrophic consequences resulting from a nuclear Iran are not only wrong but counterproductive. The assertion that the widespread proliferation is unavoidable could become a self-fulfilling prophecy. The myth of a nuclear domino effect creates an



excuse for other Middle Eastern countries -- expecting that their neighbors will be nuclear powers -- to acquire nuclear weapons themselves. Nightmare scenarios are dangerous for yet another reason: the expected consequences of a nuclear Iran, real or imagined, will determine the policies pursued to prevent Tehran from developing the bomb. If the consequences are out of sync with reality, the methods applied will be disproportional to the threat. Seven years ago, the United States walked into Iraq based on worst-case-scenario predictions about its nuclear program that were far from beyond a reasonable doubt. Washington cannot afford to wage another war on false pretences. There is no question that the world would be better off if Iran did not obtain nuclear weapons, and the international community must use all appropriate measures to prevent Iran -- or any other country -- from doing so. But the case against a nuclear Iran is strong enough without a nuclear domino myth. By invoking worst-case scenarios, policymakers are only clouding nuanced thinking.

Collection

CBRNE-TERRORISM Newsletter

Δελτίο ΧΒΡΠΕ-ΤΡΟΜΟΚΡΑΤΙΑΣ

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CYBER –News

Black Hat: U.S. Infrastructure Vulnerable To Cyber Attack

Source:http://www.informationweek.com/news/government/security/showArticle.jhtml?articleID=226300202&cid=RSSfeed_IWK_All

Cyber terrorists have a number of ways to mount a major cyber attack on U.S. Internet infrastructure due to the general instability of its base, the director of the agency in charge of protecting the federal government's IT network said Wednesday. "With decades of IT infrastructure built to support changing technologies, there is little ability to baseline the entire infrastructure within the United States," said Randy Vickers, director of the United States Computer Emergency Readiness Team (US-CERT), in an interview Wednesday. "This variety of platforms and applications provides many possible vectors by which to attack infrastructure." Zagg's invisible shield uses military-grade plastic to make SmartPhones bulletproof. Vickers is scheduled to join other IT leaders from government agencies for a panel to discuss the threat of cyber war and how to deter it at the Black Hat security conference in Las Vegas on Thursday. US-CERT is a division of the Department of Homeland Security (DHS) responsible for responding to and defending against cyber attacks for the federal government's IT infrastructure. It also is in charge of sharing information and collaborating with state and local governments as well as the private sector to protect critical infrastructure in the U.S. Vickers said that critical infrastructure is not likely to become less prone to attacks anytime soon. He cited ongoing changes in the IT landscape -- such as cloud computing and an increasingly mobile workforce -- as conditions that only open up infrastructure to more threats. "The environment is only going to increase in complexity, and as more threat capabilities are developed the risk to our information infrastructure that we are so heavily dependent upon also increases," he said. To achieve its goal to keep an eye on federal networks, the DHS is currently deploying an intrusion-detection and security system called EINSTEIN 2, Vickers said. The system is currently operational at 12 of 19 federal agencies, providing US-CERT with, on average, visibility into more than 278,000 indicators of potentially malicious activity per month, he said. EINSTEIN 2 should be fully deployed at the federal government by the end of the year, after which the DHS will take security to the next level with EINSTEIN 3, Vickers said. EINSTEIN 3, developed by the National Security Agency, is the third phase of the Comprehensive National Cybersecurity Initiative (CNCI), and will provide intrusion prevention on top of EINSTEIN 2's intrusion-detection capability, he said. The first phase of the system -- EINSTEIN 1 -- is currently in deployment as system that gathers information about network traffic. US-CERT first revealed details about EINSTEIN 3 in March. At the time, the DHS said the system will do real-time, deep packet inspection and make decisions based on threats by examining network traffic at the edge of federal agency networks. This activity will redirect agency Internet traffic to DHS cybersecurity systems, which will determine which traffic might be associated with cyber threats and how to respond, they said. The DHS worked with a commercial Internet service provider to do a test deployment of EINSTEIN 3 earlier this year. Vickers said these types of private-public partnerships will continue as the federal government continues to work to secure its network infrastructure against cyber attacks. "At the end of the day, the architecture for the dot-gov's cyber perimeter defense will be hybrid of government and private technologies," he said. Black Hat USA 2010 presents a unique opportunity for members of the security industry to gather and discuss the latest in cutting-edge research. It happens July 24-29, in Las Vegas.

Hackers target power plants as US, industry scramble to respond

http://www.fox43.com/business/sns-ap-us-cyber-threats-power-plants,0,5835555.story

Computer hackers have begun targeting power plants and other critical operations around the world in bold new efforts to seize control of them, setting off a scramble to shore up aging, vulnerable systems. Cyber criminals have long tried, at times successfully, to break into vital networks and power systems. But last month, experts for the first time discovered a malicious

computer code — called a worm — specifically created to take over systems that control the inner workings of industrial plants. In response to the growing threat, the Department of Homeland Security has begun building specialized teams that can respond quickly to cyber emergencies at industrial facilities across the country. As much as 85 percent of the nation's critical infrastructure is owned and operated by private companies, ranging from nuclear and electric power plants to transportation and manufacturing systems. Many of the new attacks have occurred overseas, but the latest episode magnified worries about the security of plants in the U.S. "This type of malicious code and others we've seen recently are actually attacking the physical components, the devices that open doors, close doors, build cars and open gates," said Sean McGurk, director of control systems security for Homeland Security. "They're not just going after the ones and zeros (of a computer code), they're going after the devices that actually produce or conduct physical processes." Officials have yet to point to any operating system that has been compromised by the latest computer worm. But cyber experts are concerned that attacks on industrial systems are evolving. In the past, it was not unusual to see hackers infiltrate corporate networks, breaking in through gaps and stealing or manipulating data. The intrusions, at times, could trigger plant shutdowns. The threat began to escalate last year, with cyber criminals exploiting weaknesses in systems that control what the industries do. The latest computer worm, dubbed Stuxnet, was an even more alarming progression. Now hackers are creating codes to actually take over the critical systems. In many cases, operating systems at power plants and other critical infrastructure are decades old. Sometimes they are not completely separated from other computer networks used by companies to run administrative systems or even access the Internet. Those links between the administrative networks and the control systems provide gateways for hackers to insert malicious codes, viruses or worms into the programs that operate the plants. Sitting in his office not far from Homeland Security's new state-of-the-art cyber operations center, McGurk recently held out a small blue computer flash drive containing the destructive Stuxnet worm. Experts in Germany discovered the worm, which has since shown up in a number of attacks — primarily in Iran, Indonesia, India, and the U.S., according to Microsoft. Stuxnet had tried to infect as many as 6,000 computers, as of July 15, according to Microsoft data. German officials transmitted the malware to the U.S. through a secure network, and experts at the Energy Department's Idaho National Laboratory began to analyze it. In plain terms, the worm was able to burrow into some operating systems that included software designed by Siemens AG, by exploiting a vulnerability in several versions of Microsoft Windows. On Monday, Microsoft released another update to address the problem, and Siemens has taken similar steps. Annual reports issued by Homeland Security and the Department of Energy have detailed weaknesses in the industrial computer systems, and have repeatedly pressed companies to improve security practices. Reports as recently as this May urged companies to routinely download patches to update software, change and improve passwords, carefully restrict access to critical systems and use firewalls to separate commonly used networks from those that control key systems. A successful attack against a critical control systems, the Energy Department warned in its May report, "may result in catastrophic physical or property damage and loss." Over the past year, Homeland Security has quietly been deploying teams of experts around the country to assess weaknesses in industrial control systems. The agency has created four teams and — with a budget scheduled to increase from $10 million this year to $15 million next year — has plans to grow to 10 teams in 2011. The teams are armed with a $5,000 kit: a black, suitcase-sized bag crammed with cables, converters, data storage and high-tech computer forensic tools. With that equipment, they can download the problem malware, analyze it and work with the companies to correct or clean their systems. So far, said McGurk, the teams have done 50 assessments and have been dispatched 13 times to investigate and help correct cyber incidents and attacks. Nine of those cases involved some type of deliberate cyber intrusion, while the other four were the unintended result of an operator's action. In one of the nine intrusion cases, a company representative had gone to a conference and had the presentation documents downloaded onto a computer flash drive. One of the files was infected with the Mariposa botnet, a malicious software code that has infected 12 million computers worldwide, including hundreds of companies and at least 40 major

banks in 190 countries since appearing in December 2008. When the man returned to his office and connected his laptop to the company's network, the botnet spread, eventually affecting nearly 100 computers. A Homeland Security team was called in and helped the company evaluate the problem and begin to clear up the system.

NSA Program Targets Domestic Cyber Attacks

Source: http://www.foxnews.com/us/2010/07/07/exclusive-number-of-awol-afghans-reaches-46/

A new federal cyber security program reportedly aims to protect nuclear power plants, like this one in Ogle County, Ill., and other critical infrastructure. The U.S. government is launching an expansive program dubbed "Perfect Citizen" to detect cyber assaults on private companies and government agencies running critical infrastructure such as the electricity grid and nuclear-power plants, The Wall Street Journal reported late Wednesday. U.S. intelligence officials have grown increasingly alarmed about what they believe to be Chinese and Russian surveillance of computer systems that control the electric grid and other U.S. infrastructure. Officials are unable to describe the full scope of the problem, however, because they have had limited ability to pull together all the private data. Perfect Citizen will look at large, typically older computer control systems that were often designed without Internet connectivity or security in mind. Many of those systems -- which run everything from subway systems to air-traffic control networks -- have since been linked to the Internet, making them more efficient but also exposing them to cyber attack. The surveillance by the National Security Agency, the government's chief eavesdropping agency, would rely on a set of sensors deployed in computer networks for critical infrastructure that would be triggered by unusual activity suggesting an impending cyber attack, though it wouldn't persistently monitor the whole system, according to people familiar with the program. Defense contractor Raytheon Corp. recently won a classified contract for the initial phase of the surveillance effort valued at up to US$100 million, said a person familiar with the project. A spokeswoman for the NSA said the agency had no information to provide on the program. A Raytheon spokesman declined to comment. Some industry and government officials familiar with the program see Perfect Citizen as an intrusion by the NSA into domestic affairs, while others say it is an important program to combat an emerging security threat that only the NSA is equipped to provide.

Can China Conduct Cyber Warfare Against U.S. Networks?

Source: http://knxas1.hsdl.org/hslog/?q=category/1/12/87

The U.S.-China Economic and Security Review Commission recently commissioned the Northrop Grumman Corporation to produce this document as an investigation into the capability of the People's Republic of China to conduct cyberwar and computer network exploitation on U.S. systems. "The government of the People's Republic of China (PRC) is a decade into a sweeping military modernization program that has fundamentally transformed its ability to fight high tech wars. The Chinese military, using increasingly networked forces capable of communicating across service arms and among all echelons of command, is pushing beyond its traditional missions focused on Taiwan and toward a more regional

defense posture. This modernization effort, known as informationization, is guided by the doctrine of fighting 'Local War Under Informationized Conditions', which refers to the PLA's ongoing effort to develop a fully networked architecture capable of coordinating military operations on land, in air, at sea, in space and across the electromagnetic spectrum."

2010 Threat Predictions

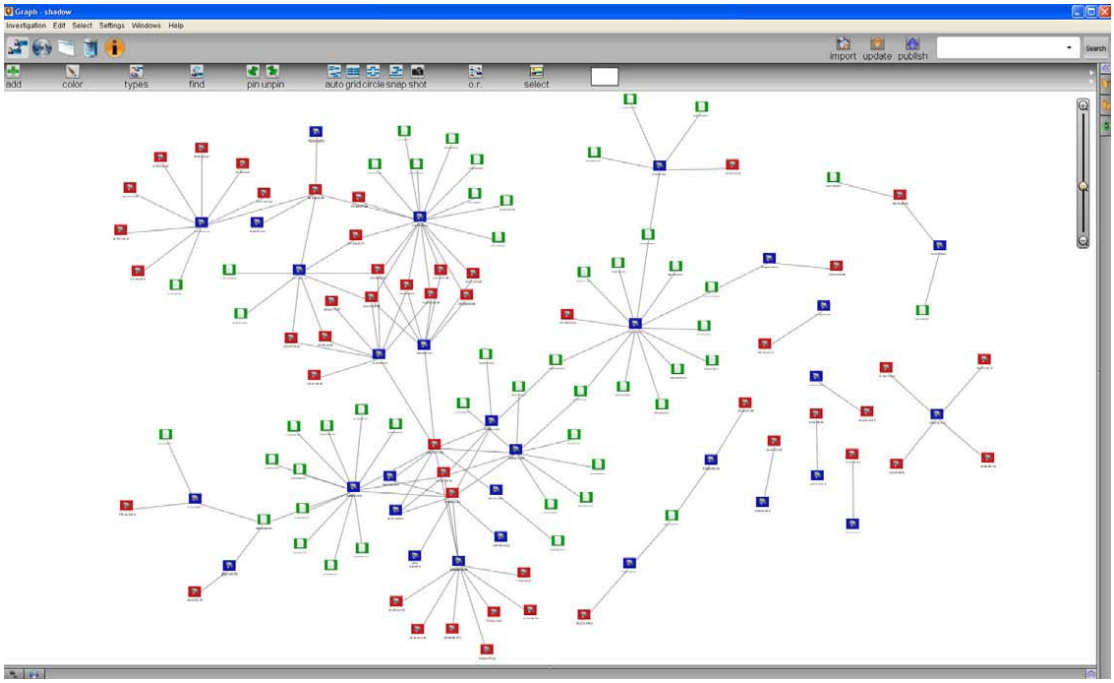
Source: http://knxas1.hsdl.org/hslog/?q=category/1/12/87

McAfee Labs 2010 Threat Predictions
McAfee Labs recently released this report , which "foresees an increase in threats related to social networking sites, banking security, and botnets, as well as attacks targeting users, businesses, and applications." While the report warns that networking sites will be facing more complicated threats and anticipates Adobe software taking the top spot for targeting by cybercriminals, it also predicts more successes in the struggle against all types of cybecrime. McAfee Labs has released a number of technical white papers, which can be found here.

Shadow Network Hacks into Gov Computers Across Globe

Source: http://knxas1.hsdl.org/hslog/?q=category/1/12/87

Shadows in the Cloud: Investigating Cyber Espionage 2.0
A new report from Information Warfare Monitor and Shadowserver describes a intricate



system of cyber espionage that compromised government, business, and academic and computer network systems in India, the offices of the Dalai Lama, the United Nations, and several other countries. Documents that were stolen by the spying operation, which the authors call the Shadow Network, include classified and restricted documents from the Indian Defense Ministry for the past eight months. According to the report, the Shadow Network "leveraged multiple redundant cloud computing systems, social networking platforms, and free web hosting services in order to maintain persistent control while operating core servers located in the People's Republic of China (PRC). Although the identity and motivation of the attackers remain unknown, the report is able to determine the location (Chengdu, PRC) as well as some of the associations of the attackers through circumstantial evidence."

Stuxnet

Source: http://en.wikipedia.org/wiki/Stuxnet

Stuxnet is a Windows-specific computer worm first discovered in June 2010 by VirusBlokAda, a security firm based in Belarus. It is the first discovered worm that spies on and reprograms industrial systems. It was specifically written to attack Supervisory Control And Data Acquisition (SCADA) systems used to control and monitor industrial processes. Stuxnet includes the capability to reprogram the programmable logic controllers (PLCs) and hide the changes. It is the first-ever computer worm to include a PLC rootkit. It is also believed to be the first worm to target critical industrial infrastructure. Furthermore the worm's probable target has been said to have been high value infrastructures in Iran using Siemens control systems. It has also been said that the infestation by this worm might have delayed the start up of Iran's Bushehr nuclear power plant. European digital security company Kaspersky Labs released a statement that described Stuxnet as "a working and fearsome prototype of a cyber-weapon that will lead to the creation of a new arms race in the world." Kevin Hogan, Senior Director of Security Response at Symantec, noted that 60 percent of the infected computers worldwide were in Iran, suggesting its industrial plants were the target. Kaspersky Labs concluded that the attacks could only have been conducted "with nation-state support", making Iran the first target of real cyber warfare.

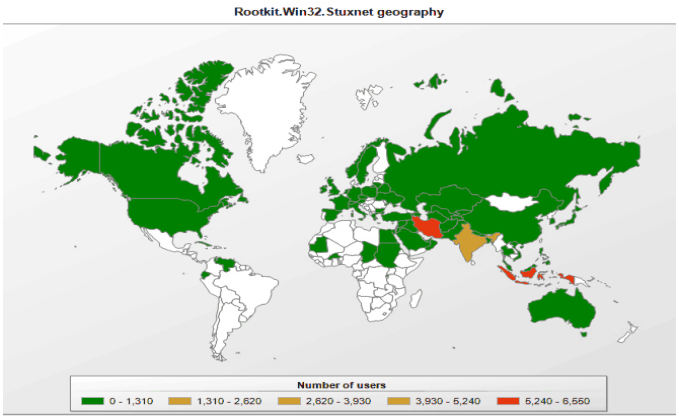
History

It was first reported by the security company VirusBlokAda in mid-June 2010, and roots of it have been traced back to June 2009. The worm contains a component with a build time stamp from 3 February 2010.

Affected countries

A study of the spread of Stuxnet by Symantec showed that the main affected countries as of August 6 2010 were:

Country	Infected Computers
Iran	62,867
Indonesia	13,336
India	6,552
United States	2,913
Australia	2,436
Britain	1,038
Malaysia	1,013
Pakistan	993
Germany	15



Operation

Stuxnet attacks Windows systems using four zero-day attacks (including the CPLINK vulnerability and a vulnerability used by the Conficker worm) and targets systems using Siemens' WinCC/PCS 7 SCADA software. It is initially spread using infected USB flash drives and then uses other exploits to infect other WinCC computers in the network. Once inside the system it uses the default passwords to command the software. Siemens, however, advises against changing the default passwords because it "could impact plant operations". The complexity of the software is very unusual for malware. The attack requires knowledge of industrial processes and an interest in attacking industrial infrastructure.The number of used zero-day Windows exploits is also unusual, as zero-day Windows exploits are valued, and crackers do not normally waste the use of four different ones in the same worm. Stuxnet is unusually large at half a megabyte in size, and written in different programming languages (including C and C++) which is also irregular for malware. It is digitally signed with two authentic certificates which were stolen from two certification authorities (JMicron and Realtek) which helped it remain undetected for a relatively long period of time. It also has the capability to upgrade via peer to peer, allowing it to be updated after the initial command and control server was disabled. These capabilities would have required a team of people to program, as well as check that the malware would not crash the PLCs. Eric Byres, who has years of experience maintaining and troubleshooting Siemens systems, told Wired that writing the code would have taken many man-months, if not years. A Siemens spokesperson said that the worm was found on 15 systems with five of the infected systems being process manufacturing plants in Germany. Siemens claims that no active infections have been found and there were no reports of damages caused by the worm.

Removal

Siemens has released a detection and removal tool for Stuxnet. Siemens recommends contacting customer support if an infection is detected and advises installing the Microsoft patch for vulnerabilities and disallowing the use of third-party USB sticks. The worm's ability to reprogram external programmable logic controllers (PLCs) may complicate the removal procedure. Symantec's Liam O'Murchu warns that fixing Windows systems may not completely solve the infection; a thorough audit of PLCs is recommended. In addition, it has been speculated that incorrect removal of the worm could cause a significant amount of damage.

Speculations about the target and origin

Alan Bentley of security firm Lumension has said that Stuxnet is "the most refined piece of malware ever discovered ... mischief or financial reward wasn't its purpose, it was aimed right at the heart of a critical infrastructure". Symantec estimates that the group developing Stuxnet would have been well-funded, consisting of five to ten people, and would have taken six months to prepare. The Guardian, the BBC and The New York Times all reported that experts studying Stuxnet considered that the complexity of the code indicates that only a nation state would have the capabilities to produce it. Israel, perhaps through Unit 8200, has been speculated to be the country behind Stuxnet in many of the media reports and by experts such as Richard Falkenrath, former Senior Director for Policy and Plans within the Office of Homeland Security. There has also been speculation on the involvement of NATO, the United States and other Western nations. Symantec claims that the majority of infected systems were in Iran (about 60%), which has led to speculation that it may have been deliberately targeting "high-value infrastructure" in Iran including either the Bushehr Nuclear Power Plant or the Natanz nuclear facility. Ralph Langner, a German cyber-security researcher, called the malware "a one-shot weapon" and said that the intended target was probably hit, although he admitted this was speculation. There are reports that Iran's uranium enrichment facility at the Natanz facility was the target of Stuxnet and the site sustained damage because of it causing a sudden 15% reduction in its production capabilities. There was also a previous report by wikileaks disclosing a "nuclear accident" at the said site in 2009. Stuxnet's name comes from some of its decoded files. Since the whole Stuxnet code has not yet been decrypted, its intent

remains unknown. Among its peculiar capabilities is a fingerprinting technology which allows it to precisely identify the systems it infects. It appears to be looking for a particular system to destroy at a specific time and place. Once it has infected a system it performs a check every 5 seconds to determine if its parameters for launching an attack are met. The exact way through which Stuxnet destroys its target is still a mystery but it is thought that it may be programmed to cause a catastrophic physical failure by, for example, overriding turbine RPM limits, shutting down lubrication or cooling systems, or sabotaging the high-speed spinning process of centrifuge arrays at Iran's Natanz nuclear facility. Since the complex code of Stuxnet looks for a very particular type of system and controller, it has been theorized that the target is of a high importance for the attacker.

Iranian reaction

The Associated Press reported that the semi-official Iranian Students News Agency released a statement on 24 September 2010 stating that experts from the Atomic Energy Organization of Iran met in the previous week to discuss how Stuxnet could be removed from their systems. Western intelligence agencies have been attempting to sabotage the Iranian nuclear program for some time, according to analysts. The head of the Bushehr Nuclear Power Plant told Reuters that only the personal computers of staff at the plant had been infected by Stuxnet and the state-run newspaper Iran Daily quoted Reza Taghipour, Iran's telecommunications minister, as saying that it had not caused "serious damage to government systems". Director of Information Technology Council at the Iranian Ministry of Industries and Mines, Mahmud Liaii has said that: "An electronic war has been launched against Iran... This computer worm is designed to transfer data about production lines from our industrial plants to locations outside Iran." It is believed that infection had originated from Russian laptops belonging to Russian contractors at the site of Bushehr power plant and spreading from there with the aim of targeting the power plant control systems. It has also been reported that the United States, under one of its most secret programs, initiated by the Bush administration and accelerated by the Obama administration, has sought to destroy Iran's nuclear program by novel methods such as undermining Iranian computer systems. In response to the infection, Iran has assembled a team to combat it. With more than 30,000 IP addresses affected in Iran, an official has said that the infection is fast spreading in Iran and the problem has been compounded by the ability of Stuxnet to mutate. Iran has set up its own systems to clean up infections and has advised against using the Siemens SCADA antivirus since it is suspected that the antivirus is actually embedded with codes which update Stuxnet instead of eradicating it. According to Hamid Alipour, deputy head of Iran's Information Technology Company, "The attack is still ongoing and new versions of this virus are spreading." He reports that his company had begun the cleanup process at Iran's "sensitive centres and organisations." "We had anticipated that we could root out the virus within one to two months, but the virus is not stable, and since we started the cleanup process three new versions of it have been spreading," he told the Islamic Republic News Agency.

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EXPL –News

Keeping The Boom From The Room: NIST's Blast Resistance Standards

Source: http://www.medicalnewstoday.com/articles/193000.php

With summer travel season hard upon us, specialists at the National Institute of Standards and Technology (NIST) have helped create two new standards designed to increase safety as we rush from gate to gate in crowded mass transit centers. Their efforts will help to fortify against potential bomb threats in the nation's transportation centers. Whether you travel by plane, train or bus, you're bound to pass a familiar container that makes for an attractive spot to stash a bomb: a trash can. Not only does a trash receptacle present an easy place for a terrorist to hide an explosive device before making a quiet getaway, but the metal from a bin can rupture into shrapnel that flies outward in all directions, increasing the risk to passersby. While industry has been producing blast-resistant trash receptacles for years, there were no widely-accepted specifications for judging a manufacturer's particular claims of product safety. The Science and Technology Directorate of the Department of Homeland Security (DHS) and several manufacturers began working with NIST in 2007 to address the lack of standards for blast resistance among trash receptacles. The results of the DHS-funded work now have been published by the standards development organization ASTM International. The two standards will allow managers of transit centers - and other venues as well - to know exactly how a given receptacle model has been tested against blasts and precisely what a passing grade means in terms of resistance. The standards are scalable, meaning that they provide useful information on performance at any threat level. "In practice, this means a transit center manager can make a purchase with confidence in the performance of the unit, the specific threat level anticipated and cost," explains Chris White, a researcher in NIST's Building and Fire Research Laboratory. "If, for example, you know you can, at a minimum, detect the trafficking of five or more pounds of plastic explosive, you can purchase trash receptacles that will redirect the blast at up to that level of explosive force." A trash receptacle has met the standard if it is capable of directing a blast upward, rather than outward, at a given level of force. While any receptacle will fail to direct the blast upward at some level of force, these two standards will allow a buyer to determine that level with confidence. "Using these two standards, any transit agency can reference blast resistance when they do their procurement," White says. "They can go to multiple manufacturers and compare their products on an equal basis." A third standard is now in the works. It will help guide the placement of trash receptacles in building to minimize safety risks should a bomb detonate inside the containers.

Reducing The Impact Of Bomb Explosions, Hurricanes, With Expanding Blast-Proof Curtain

Source: http://www.medicalnewstoday.com/articles/192571.php

A new type of blast-proof curtain that gets thicker, not thinner, when stretched is being developed to provide better protection from the effects of bomb explosions. The Engineering and Physical Sciences Research Council (EPSRC) project is being led by the University of Exeter in collaboration with their spin-out company Auxetix Ltd and three other partners. The new curtain is designed to remain intact and capture debris such as flying glass when windows are blown in. Debris of this kind can cause severe, sometimes life-threatening injuries to people working or living in buildings within a blast zone. The curtain is primarily designed to be fixed over the inside of windows in buildings that are potential terrorist targets, such as Government and high-profile commercial properties. Potential uses could also include protecting building occupants from the effects of severe weather events such as typhoons and hurricanes. You can hear more about the research on our Pioneer Podcast page on iTunes or alternatively, watch it on our Youtube channel. Blast curtains currently in use essentially consist of thick net-curtain fabric and work in conjunction with an anti-shatter film applied to the window to prevent fragments of glass from tearing the material. The new curtain aims to

remove the need for anti-shatter films by using stronger, more resilient fibres woven into a carefully controlled textile structure. The secret lies in the yarn the curtain is made from. A stretchy fibre provides the core of the yarn and a stiffer fibre is then wound around it. When the stiffer fibre is put under strain, it straightens. This causes the stretchy fibre to bulge out sideways, effectively increasing the yarn's diameter. Scientifically speaking, the yarn is an 'auxetic' material - one that gets thicker when stretched. The research team has identified a whole range of widely available, tough fibres that can be used in the yarn. Producing the yarn and turning it into a textile are also completely conventional processes. The extent of the auxetic effect is determined by the precise angle at which the second fibre is wound around the first fibre, and also by the two fibres' relative stiffness and diameters. Altering these parameters enables the yarn's performance to be fine-tuned for specific applications (e.g. to withstand different levels of blast). The project team have focused considerable effort in this area. Another key feature of the new curtain is that, when stretched, small pores open up in it. Although too tiny for flying debris to penetrate, these pores are designed to let through some of an explosion's shock wave. This reduces the force the curtain is subjected to and so helps ensure it doesn't rip. At just 1-2mm thick, the new type of curtain can also be designed to let in a reasonable amount of natural light. It is currently being tested in situations similar to car bomb explosions. "In the 1995 Oklahoma City bombing, glass accounted for nearly two thirds of all eye and head injuries," says Professor Ken Evans, who is leading the project. "The blast curtain we're working on, which will be capable of dispersing the shock from an explosion extremely effectively, will be backed up by robust scientific understanding vital to ensuring it really can block flying debris and achieve widespread use." Testing at a Government-approved facility has already commenced. Following rigorous certification procedures, the new curtain could be on the market within three to five years. The fabric could also be used in other areas such as:

- The manufacture of smart, self healing auxetic bandages. Wounds that swell would put the bandage under tension opening up pores that are impregnated with an antibiotic which would then be released.
- Dental floss that expands when you pull it, to fill in gaps to make cleaning more effective for teeth.
- Civil engineering for the reinforcement of soils and for storm and flood mitigation.

Protecting Vehicles Against Mines and IEDs

Source: http://www.defenceiq.com

Bottom of Form

With the on-set of asymmetric warfare, mines began to be laid not to create barriers to the movement of armoured formation but to ambush and to kill individual vehicles. Mines changed also by having tilt-rod and magnetic influence fuzes in addition to contact fuzes and by being detonated by remote control, so that they would explode not only under the wheels or tracks of vehicles but also under their bellies, which made them much more dangerous. At the same time asymmetric conflicts have involved far greater use of light armoured vehicles, which are less robust and, therefore, inherently more vulnerable to mines than tanks. Moreover, as previously stated, the mine threat has increased considerably as a result of the development and employment of mines with shaped charges and explosively formed penetrators (EFPs). Despite all these developments, blast mines and buried explosive charges, which are their improvised equivalent, remain the most common threat. Surveys have been carried out in Germany and the United States of the relative number of industrially produced blast mines of different weights and they have shown that 95 percent of them weigh less than 10 kg and that about one half weigh between six and eight kg. NATO has also categorised the severity of the blast-mine threat to armoured vehicles in terms of a number of levels corresponding to the explosions of different weights of TNT under the wheels or tracks, or under the hulls of vehicles and tabulated them in its STANAG 4569 documents. The highest level is 4, which corresponds to the explosion of 10 kg of TNT. In fact mines improvised by

insurgents burying explosive charges in the ground can be considerably heavier. It has been suggested, therefore, that the upper limit to the weight of commonly used blast mines is not 10 kg but is more likely to be about 20 kg, which is roughly the maximum weight that an individual terrorist or insurgent might carry for any distance. There is, of course, no absolute limit to the weight of the buried charges and considerably more than 20 kg of explosive has been used in some cases, with devastating effect even on the most heavily armoured tanks in the world. However, the much lighter mines and buried charges that are generally used can be countered in a number of ways. The effect on the crew can be reduced considerably by lifting crew seats off the floor to which they are traditionally fixed and attaching them to the sides of the hull or, better still, to its roof. Lifting crew seats off the floor also removes the risk of them being struck by floor plates which can bow inwards under dynamic pressure, even though they may spring back afterwards. To avoid the risk of injury to their feet and legs, the crews' feet must also be kept off the floor plates by means of side-mounted foot rests or by an inner floor well-separated from the bottom plate. To some extent problems associated with the bulging of the belly plates can be eliminated or at least minimised by simply stiffening the plates. This has been done in a number of ways, the simplest being the replacement of the usual flat plates by plates bent lengthwise to form a shallow "V." The simplest way of reducing or eliminating the deformation of belly plates is to fix steel armour plates under them, as was done in several cases from the war in Vietnam onwards. If thick enough, such add-on armour can be very effective but where relatively heavy buried charges are involved it may require the additional plates to be 75 or 80 mm thick and they impose severe weight penalties, which can only be tolerated by tanks or tank-like vehicles. Relatively little can be done to existing vehicles to reduce the drag force created by the blast wind and the soil ejecta that act on them and which tend to lift and overturn them. The drag force acting on a vehicle is not only a function of the blast wind but also of its projected area and of its drag co-efficient, which can be minimised by making the vehicle "streamlined" with a "V"-shaped hull bottom and no sponsons, wheel wells and other "blast catchers." Characteristics to reduce the vulnerability of vehicles to blast mine and buried explosive charges include:

- A one-piece monocoque hull
- Minimum number of hull welds
- "V" or truncated-"V" hull bottom
- Crew located away from wheel stations
- Largest possible ground clearance
- Hullwidth within wheel track; and
- No sponsons and wheel wells

Reduction of the hull width, together with the adoption of a "V"-shaped hull bottom and the elimination of sponsons and wheel wells, can significantly reduce the drag force acting on a vehicle and hence the likelihood of it being turned over. Whatever is done to prevent it, the risk of a vehicle being turned on its side or even rolled over cannot be ruled out. It is essential therefore that the crew are secured in their seats, preferably by five-point harnesses, and wear helmets. It is also highly desirable for the seats to provide lateral head restraint. In addition to securing the crew in their seats, it is essential to secure items of equipment, which, if left loose, can become lethal when thrown about by a mine explosion. Very different design problems are posed by mines with shaped charges and those with flat-cone charges, which create EFPs, or by their improvised equivalents. Of the two, shaped-charge mines have been less common, despite being very effective in penetration of armour. For example, the shaped charge warhead of an RPG-7 grenade can penetrate about 320 mm of steel armour when detonated 0.3 m from it, but its penetration becomes negligible when the detonation distance increases to more than 1 m. Precision-made shaped charges can penetrate much more armour in relation to their size than the RPG-7, but their penetration also decreases with stand-off distance and so far their use in asymmetric conflicts has been limited. A few shaped-charge mines have been improvised from the warheads of RPG-7 grenades but the latter have been more effective as direct-fire weapons, although a partial answer to them has been found in slat

armour, which prevents the detonation of up to about 60 percent of them. Slat armour also offers the advantage of being relatively light, its area density being about 40 kg/m2. However, more complete protection against RPG-7 grenades can only be provided by hybrid explosive reactive armour, which is inevitably heavier, having an area density of 250 kg.m2. Charges with flat-cone liners can only penetrate the equal of their diameter. Their penetration, however, does not fall off for a considerable distance, which makes them very suitable for off-route mines when the distance between them and their targets can vary considerably. As a result, flat-cone charges have become popular with terrorists and insurgents as road side ambush weapons. In addition to being independent of stand-off distance, flat-cone charges are also less sensitive to the quality of their manufacture than more conventional shaped charges, which makes it easier to improvise them. The penetration of the improvised flat-cone charges is still less than that of those industrially made but, nevertheless, a charge improvised by filling a 100 mm diameter plastic pipe with explosive and closing it with a copper disc can penetrate about 50 mm of steel armour at a distance of up to 50 m. Penetration of this order implies that even small flat-cone or EFP charges can perforate the belly plates of tanks which are, typically, 15-20 mm thick unless they are augmented by additional armour, and they can easily perforate the belly armour of light armoured vehicles which, in some cases, is only 5 mm thick. They can also perforate the sides of most armoured vehicles unless they are fitted with add-on armour. Flat-cone charges do not penetrate by virtue of creating long, thin copper jets with tip velocities of up to 8,000 m/sec but by projecting copper slugs travelling at about 2,000 m/sec, which act more like solid, armour-piercing shot. They cannot, therefore, be defeated by the thin reactive-armour sandwiches that break up the long copper jets. In consequence, vehicles have to be protected against them by a different type of armour. Protection of vehicles against large EFP charges requires the use of heavier armour.

Letter bomber guilty of 11 attempted murders
Source: http://www.thestar.com/news/gta/crime/article/828768

"An aspiring actor who sent homemade bombs and poisoned water to a host of perceived enemies, including a talent agency owner and a judge, has been convicted of 11 counts of attempted murder. In his ruling Friday, Ontario Superior Court Justice Todd Ducharme rejected Adel Arnaout's claim that he sent the water bottles and explosive devices just to scare his foes and confuse police. 'He is a narcissistic, self-aggrandizing person who has blown the 'wrongs' he has suffered in his own mind completely out of proportion,' Ducharme said. [...] Crown prosecutor James Dunda told the judge that he and co-counsel Joe Hanna are going to consult superiors about applying to have Arnaout declared a dangerous offender -- which would send him to prison indefinitely. Found among his writings were such warnings as: 'We are going to strip the flesh from your bones,' and 'It is time for you to die.' In July 2004, he sent tainted water bottles disguised as 'Nestle Waters' promotional gifts to two talent agencies he felt were not advancing his career sufficiently. The water contained the deadly poison Ricin, the judge ruled Friday. Arnaout also sent the bottles to the CIBC and to Old City Hall provincial court Justice Bernard Kelly, who had given Arnaout a conditional discharge after he pleaded guilty to harassing a talent agency owner."

Army to cleanse [Commonwealth] Games of dirty explosives
Source: http://www.mid-day.com/news/2010/jul/020710-Indian-Army-Common waelth-Games-dirty-explosives.htm

"In the run up to the Commonwealth Games, Delhi is witnessing an unprecedented growth in infrastructure. Simultaneously, the security agencies have upped the ante, so much so that devices and strategies that are yet unheard of in the Indian subcontinent are being developed to ensure that India's big-ticket event remains safe from all quarters. Adding to the comprehensive security arrangements for the games, scheduled to be held in October in the national capital, the Defence Research and Development Organisation (DRDO) is going to train a special unit from the Indian Army to detect and defuse dirty bombs that may be

planted by subversive elements. [...] Soldiers from various army units would be handpicked for the special squad who will undergo training under the auspices of Institute of Nuclear Medicine and Sciences (INMAS), a DRDO organisation. [...] Soldiers from various army units would be handpicked for the special squad who will undergo training under the auspices of Institute of Nuclear Medicine and Sciences (INMAS), a DRDO organisation."

Unique THz 'Fingerprints' Will Identify Hidden Explosives From A Distance

Source: http://www.medicalnewstoday.com/articles/194390.php

A major breakthrough in remote wave sensing by a team of Rensselaer Polytechnic Institute researchers opens the way for detecting hidden explosives, chemical, biological agents and illegal drugs from a distance of 20 meters. The new, all-optical system, using terahertz (THz) wave technology, has great potential for homeland security and military uses because it can "see through" clothing and packaging materials and can identify immediately the unique THz "fingerprints" of any hidden materials. Terahertz waves occupy a large segment of the electromagnetic spectrum between the infrared and microwave bands which can provide imaging and sensing technologies not available through conventional technologies such as x-ray and microwave. "The potential of THz wave remote sensing has been recognized for years, but practical application has been blocked by the fact that ambient moisture interferes with wave transmission," says Xi-Cheng Zhang, Ph.D., director of the Center for THz Research at Rensselaer. Dr. Zhang, the J. Erik Jonsson Professor of Science at Rensselaer, is lead author of a paper to be published in the journal Nature Photonics. Titled "Broadband terahertz wave remote sensing using coherent manipulation of fluorescence from asymmetrically ionized gases," the paper describes the new system in detail. The "all optical" technique for remote THz sensing uses laser induced fluorescence, essentially focusing two laser beams together into the air to remotely create a plasma that interacts with a generated THz wave. The plasma fluorescence carries information from a target material to a detector where it is instantly compared with material spectrum in the THz "library," making possible immediate identification of a target material. "We have shown that you can focus a 800 nm laser beam and a 400 nm laser beam together into the air to remotely create a plasma interacting with the THz wave, and use the plasma fluorescence to convey the information of the THz wave back to the local detector," explains Dr. Zhang. Repeated terrorist threats and the thwarted Christmas Eve bombing attempt aboard a Northwest airline heightened interest in developing THz remote sensing capabilities, especially from Homeland Security and the Defense Department, which have funded much of the Rensselaer research. Because THz radiation transmits through almost anything that is not metal or liquid, the waves can "see" through most materials that might be used to conceal explosives or other dangerous materials, such as packaging, corrugated cardboard, clothing, shoes, backpacks and book bags. Unlike x-rays, THz radiation poses little or no health threat. However, the technique cannot detect materials that might be concealed in body cavities. "Our technology would not work for owners of an African diamond mine who are interested in the system to stop workers from smuggling out diamonds by swallowing them," Dr. Zhang says. Though most of the research has been conducted in a laboratory setting, the technology is portable and eventually could be used to check out backpacks or luggage abandoned in an airport for explosives, other dangerous materials or for illegal drugs. On battlefields, it could detect where explosives are hidden. The fact that each substance has its own unique THz "fingerprint" will show exactly what compound or compounds are being hidden, a capability that is expected to have multiple important and unexpected uses. In the event of a chemical spill, for instance, remote sensing could identify the composition of the toxic mix. Since sensing is remote, no individuals will be needlessly endangered. "I think I can predict that, within a few years, the THz science and technology will become more available and ready for industrial and defense-related use," predicts Dr. Zhang.

Remote Chemical Detection

Source: http://www.rdmag.com/Awards/RD-100-Awards/2007/09/RD100-Awards-Remote-Chemical-Detection/

2007 R&D 100 Winner

With increased concerns about national security has come the realization that acts of nuclear or chemical terrorism could endanger large numbers of people in a short span of time, as could industrial accidents in densely populated areas. Consequently, detection of chemicals in air, especially remotely, is of paramount importance to national security, counter terrorism efforts, leak detection, and environmental protection. To that end, Nachappa Gopalsami, Sasan Bakhtiari, Apostolos Raptis, and Thomas Elmer at Argonne National Laboratory, Ill., created the Passive Millimeter-Wave Spectrometer for Remote Chemical Detection, a passive spectrometer in the millimeter-wave region of the electromagnetic spectrum that is relatively immune to atmospheric interference and can detect chemical signatures from several kilometers away. Its primary function is to covertly or overtly monitor the chemical signatures of effluents emitted from suspect processing facilities with regard to nuclear proliferation detection. The uniqueness of the spectrometer results from the design of its hardware, which allows passive measurement of spectral lines from absorption/emission by polar molecules and the application of a millimeter-wave radiometric technique for terrestrial remote sensing of chemical plumes. This technology represents a significant new frontier in science, and the offshoots of this technology are expected to have many future industrial, scientific, and medical applications.

Collection

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Terror –News

Are injuries from terror and war similar? A comparison study of civilians and soldiers.

National Center for Trauma and Emergency Medicine Research, Gertner Institute for Epidemiology and Health Policy Research, Tel Hashomer, Israel. Ann Surg. 2010 Aug;252(2):363-9.

Abstract

OBJECTIVE: To compare injuries and hospital utilization and outcomes from terror and war for civilians and soldiers.

SUMMARY BACKGROUND DATA: Injuries from terror and war are not necessarily comparable, especially among civilians and soldiers. For example, civilians have less direct exposure to conflict and are unprepared for injury, whereas soldiers are psychologically and physically prepared for combat on battlefields that are often far from trauma centers. Evidence-based studies distinguishing and characterizing differences in injuries according to conflict type and population group are lacking.

METHODS: A retrospective study was performed using hospitalization data from the Israel National Trauma Registry (10/2000-12/2006).

RESULTS: Terror and war accounted for trauma hospitalizations among 1784 civilians and 802 soldiers. Most civilians (93%) were injured in terror and transferred to trauma centers by land, whereas soldiers were transferred by land and air. Critical injuries and injuries to multiple body regions were more likely in terror than war. Soldiers tended to present with less severe injuries from war than from terror. Rates of first admission to orthopedic surgery were greater for all casualties with the exception of civilians injured in terror who were equally likely to be admitted to the intensive care unit. In-hospital mortality was higher among terror (7%) than war (2%) casualties, and particularly among civilians.

CONCLUSIONS: This study provides evidence that substantial differences exist in injury characteristics and hospital resources required to treat civilians and soldiers injured in terror and war. Hospital preparedness and management

Are lithium-ion batteries the next threat to airline safety?

Source: http://www.usatoday.com/money/industries/travel/2010-08-16-airlinebatteries16_CV_N.htm

Worried about a possible terrorist strike, American Airlines flight attendants confiscated 58 cellphones, lithium-ion batteries and charging devices from a passenger on a June 23 New York flight to Buenos Aires. In April, Tokyo police and fire officials rushed to a baggage area at Narita airport after a curling iron powered by a lithium-ion battery caused a passenger's checked bag to burst into flames as it was being shuttled from an American Airlines jet to a connecting flight. Lithium-ion batteries — the rechargeable energy source for cellphones, laptop computers and an increasing number of other portable electronic devices — are becoming a growing concern for airlines in passenger cabins and cargo holds. Non-rechargeable lithium metal batteries like those in cameras and flashlights are a concern, too. When a lithium battery short-circuits or overheats, it can catch fire or explode. The fire it causes may not be as easy to extinguish as a normal combustion fire. FAA data show that from March 20, 1991, through Aug. 3, 2010, batteries and battery-powered devices were involved in 113 incidents with "smoke, fire, extreme heat or explosion" on passenger and cargo planes. The data are for lithium and non-lithium batteries and are not a complete list of such incidents, the agency says. In January, the Transportation Department proposed stricter rules for companies that ship lithium batteries in cargo holds. "The frequency of incidents, combined with the difficulty in extinguishing lithium-battery fires, warrants taking strong action," Rep. Jerry Costello, D-Ill., chairman of the House aviation subcommittee, said of the Transportation Department's proposal. Lithium-battery experts, security analysts and flight attendants wonder, though, if stricter rules are also needed in airline passenger cabins to prevent fires or worse: a possible attempt by a terrorist to bring down a plane by rigging a large number of batteries together to start a fire. Right now, there's no limit to how many small lithium-ion batteries a passenger can carry aboard a flight. Transportation Security Administration spokeswoman Kristin Lee says the agency has studied the matter. She says the TSA, which oversees air security, determined that lithium-ion batteries for cellphones, laptops and cameras "cannot be used as an explosive and are not a security threat in personal carry-on quantities." But some scientists who have studied the batteries raise doubts about the safety of the ones passengers carry on board flights in their electronic devices, even those as small as those used to power cellphones. Jian Xie, a mechanical engineering professor at Indiana University-Purdue University-Indianapolis, says portable electronic devices are "pretty safe" for consumers. But, he says, they could be rigged together for a bomb. That's what worried the attendants aboard the American Airlines flight to Buenos Aires in June. The passenger, who spent more than 30 minutes in a lavatory and acted suspiciously earlier in the flight, began removing batteries from cellphones and had many batteries, cellphones and charging devices on a tray table. Flight attendants reported his actions to the captain and were told to confiscate the devices. Xie, who is doing lithium-ion battery research for the military, says it's "scary" that a passenger with 50 or so electronic devices, including numerous lithium-ion batteries for cellphones and laptops, boarded an aircraft. "I would be very uncomfortable on that flight," he says. Amy Prieto, a Colorado State University chemistry professor who also is a lithium-battery expert, says several batteries could start fires that would be difficult to put out. But, she says, even 50 batteries rigged together "wouldn't be like a bomb that would take down a plane." Dan Abraham, a materials

scientist at the Argonne National Laboratory in Illinois, says even a single cellphone battery could start a fire. "A smart terrorist can start fires with these things," he says. "Any energy-storage device packs a lot of energy in a small space and can be used for good or evil."

Special precautions?

Former FAA security director Billie Vincent says TSA screeners need to use common sense and call a supervisor when they see a passenger with many batteries and electronic devices. "Why is someone carrying so many batteries?" Vincent says. "If there's a need for special packaging for batteries in the cargo hold, why are there not special precautions in the passenger cabin?" Dinkar Mokadam of the Association of Flight Attendants, which represents more than 50,000 flight attendants at 22 airlines, says a rule should be established to limit the number of devices a passenger carries on board. Such regulations aren't implemented "unless something catastrophic occurs," he says. Despite the June incident, American Airlines hasn't taken a public position on the quantity of batteries passengers can bring on board, says spokesman Tim Smith. However, Smith says, the crew on the Buenos Aires flight "did exactly as they are trained to do." They observed suspicious behavior and acted on it by confiscating the passenger's phones and batteries, he says. The devices were turned over to "Argentinean authorities," who determined the passenger wasn't a security concern but intended to sell them in Argentina. Carrying lithium-ion batteries on an aircraft is "mostly" a hazardous materials issue for the Federal Aviation Administration, says Adam Comis, press secretary for the House Committee on Homeland Security. The FAA, which regulates flight safety, classifies lithium batteries as hazardous materials because they "present chemical and electrical hazards" and are a fire risk. There have been several recalls of lithium-ion batteries used in laptops and other consumer products "that could spontaneously overheat and cause a fire," FAA spokeswoman Sasha Johnson says. But the FAA and its parent agency, the Transportation Department, do not limit the number of lithium-ion batteries for laptops, cellphones and some other portable electronic devices that passengers carry aboard. There is a limit for other lithium batteries with higher lithium content. Since April 1999 — when a shipment of lithium batteries caught fire after being taken out of a passenger plane's cargo hold at Los Angeles airport — the FAA has received reports of 40 fires involving lithium batteries and devices powered by them, Johnson says.

The reports include:

•On Sept. 9, 2009, a battery owned by American Airlines for use by passengers dropped during a flight and caught fire.

•On Aug. 8, 2008, a passenger on an American flight from Washington to Dallas noticed his laptop was smoking. The passenger removed the battery pack and gave it to a flight attendant. The flight attendant placed the battery in a coffee pot in the aft gallery and poured water and Sprite on it.

•On March 4, 2008, a passenger's video display device for viewing entertainment systems emitted a "10-inch plume of sparks and debris" on a United Airlines flight from Chicago to Tokyo. The captain doused the device with water. A small area of the carpet in the passenger cabin was damaged.

No spare batteries

FAA concerns about the fire risks of lithium-ion and lithium-metal batteries are so great that passengers aren't allowed to put spare ones in checked bags. They can, however, put them in checked bags if they are attached to an electronic device. The Transportation Department in January proposed that shipments by manufacturers and distributors of batteries for laptops, cellphones and many other portable devices be included in stringent hazardous materials rules for cargo holds. Battery manufacturers must retain results of design and safety tests, and their batteries must be more safely packaged and more safely stored on aircraft, the rule says.

In passenger planes, they would have to be stored in more fire-resistant cargo compartments with fire-extinguishing systems. In FedEx and other cargo planes, they'd have to be stored in areas accessible to pilots in the event of a fire. A shipment of lithium-ion batteries caught fire

as it was being loaded onto a FedEx jet at the company's Memphis hub in August 2004. The National Transportation Safety Board, which investigates air accidents, said the probable cause was unapproved packaging used by the shipper, AC Propulsion. The packaging "was inadequate" to protect the lithium, the NTSB said. Lithium-ion batteries were inside cargo containers when a cargo hold fire destroyed a UPS jet at Philadelphia airport in February 2006. The NTSB said it couldn't determine what started the fire, but the fire most likely began in one of three cargo containers that contained lithium-ion batteries, laptop computers and other electronic devices. The trade association for lithium-ion battery manufacturers says that it's very concerned about safety, and that the batteries "present minuscule fire initiation risk." Battery and electrical equipment makers oppose the proposed Transportation Department rules. They say the rules are costly and more onerous than those of the International Civil Aviation Organization, which sets standards for 190 countries' aviation authorities. A restriction on storage of batteries in cargo planes may result in greater quantities being shipped on passenger planes, says George Kerchner, executive director of The Portable Rechargeable Battery Association. The Airline Pilots Association, which represents nearly 53,000 pilots at U.S. and Canadian airlines, says the proposed rules will make flying safer for passengers and flight crews. The union would "like to see the fastest implementation of the new rule," says Mark Rogers, the union's dangerous goods expert.

Arson: The Overlooked Threat to Homeland Security

Source: http://www.emergencymgmt.com/safety/Arson-Homeland-Security.html

As the nation focuses on dramatic, novel or "niche" threats of chemical, biological, radiological, nuclear and explosive weapons of mass destruction, a big threat to homeland security occurs more than 80 times a day in our own neighborhoods: arson. From 1999 to 2008, domestic arson accounted for more than 3,410 deaths, more than $7 billion in direct property loss and approximately 436,000 structure fire incidents, according to the National Fire Protection Association. This puts a strain on local, state and federal law enforcement, fire and court resources. Arson in motor vehicles, wildland and other "nonstructural" properties also add to the impact on public and private sectors.

Arson's Place in Homeland Security

The White House National Security Strategy 2010 emphasizes threats that are of significant consequence, but occur less frequently: "The gravest danger to the American people and global security continues to come from weapons of mass destruction, particularly nuclear weapons. The space and cyber-space capabilities that power our daily lives and military operations are vulnerable to disruption and attack." While these threats may be real, the probability of success is suspect. According to the 2003 RAND report Putting WMD Terrorism into Perspective, the "technical capacity of groups to produce or acquire and effectively deliver unconventional weapons varies considerably" and "requires a considerable scale of operations." To be successful, an arsonist needs only a match and a combustible target. Structural fires account for a large percentage of America's property losses, but intentionally set transportation, chemical plant or wildland fires as terrorist acts can't be ruled out. A recent Congressional Research Service report states, "Pyro-terrorism is just one example of many alternative hypotheses that homeland security risk managers may wish to consider in order to avoid what was famously described in the 9/11 Commission Report as 'a failure of imagination.'"

Detection and Prevention Strategies

Arson detection and prosecution remain a state and local responsibility, except where a federal statute has been violated. There isn't a national mandate for reporting arson, so the

scope of the problem remains unclear. Many jurisdictions that rely only on fire services for suppression don't have the technical expertise or training to perform thorough fire investigations to detect arson. Often, follow-up investigation is the sole purview of an insurance company that underwrote the risk and has no obligation to report the outcome. The decentralized and predominantly local nature of investigation, reporting and prosecution is a lost opportunity for an organized national effort. The inability or reluctance of agencies and individuals to share case information, identified trends or successful solutions exacerbates the problem. Prosecutors often are unwilling to tackle arson cases that are built predominantly on circumstantial evidence. Arson is not "on the radar screen" of nationally elected officials or policymakers because other than for highly publicized events, fires generally are seen as a local problem needing local solutions. An advantage to the local approach is that investigators obtain intimate knowledge of their communities and can build close-knit organizational teams to combat the problem. State and local investigators rely on professionally derived relationships to share information on motives, techniques and individuals. However, those who use fire as a tool or weapon aren't constrained by jurisdictional boundaries, and networks of leaderless cells or "lone wolves" provide a challenge to detect, apprehend and prosecute. The federal Bureau of Alcohol, Tobacco, Firearms and Explosives is building a new Web-based intelligence-sharing database, which is still in its infancy and the bureau will require local organizations to populate it.

Recommended Strategies

Several strategic options exist to address arson including the following:

Add "arson" or "fire" to the national vernacular. While politicians and policymakers continue to use the acronym CBRNE (chemical, biological, radiological, nuclear and explosives) for terror-related hazards, references to arson or fire aren't included. CBRNEA (CBRNE arson) or CBRNEF (CBRNE fire) may complicate the acronym, but would help bring these threats to the forefront of national discussion.

Create a national arson awareness and prevention strategy. For years fire departments and service organizations have advocated generic "fire prevention" strategies and techniques, but other than in juvenile fire-setting circumstances, rarely confronted the problem on the head or arson's root cause. Many campaigns of sound bites (Rat on a Rat) and post-incident rewards address arson after the event, but few employ a preventive approach. Some of this may be attributed to a lack of resources, but it is likelier a dilemma of not having the socio-psychological research on hand to address the complexities of arson. The arson awareness and prevention strategy should include simple, standardized self-assessment tools for risk management so property owners and law enforcement officers can evaluate their risks against known or anticipated threats.

Recruit non-traditional partners in the arson awareness and prevention strategy. Although arson often is seen as a public safety issue, there are many organizations that can be employed in the fight at all government levels. This may include law enforcement, fire services, social service organizations, faith-based organizations and other nongovernmental organizations, the last three of which may see potential fire setters in noncontroversial and nonconfrontational settings. This approach comports with the UK's effort at community prevention programs.

Provide incentives for better data reporting and analysis. National fire incident data collection is a voluntary effort; the data is often unreliable for various reasons, including data entry errors, poor or nonexistent fire cause determinations, or simply that the local fire services elect not to report their incidents. Although the federal government can't mandate fire incident data reporting, it can encourage better reporting through grants, awards, incentives and other inducements.

Provide prompt data filtering, analysis and feedback. Currently national fire incident data

collection is vetted by state organizations before it is submitted to the U.S. Fire Administration (USFA) Fire Data Center where it's collated and analyzed to identify trends. This can take up to two years following an event. Congress has mandated that the USFA develop a more real-time data collection method that should be operational within the next two years. Important to its success, however, will be the quality and quantity of data that's submitted.

The homeland security fusion centers that exist in nearly all states could provide a role in collecting and interpreting fire and arson data in a timely fashion. If fire incident data were scanned at these fusion centers, trained and qualified intelligence personnel could extrapolate emerging trends that need to be addressed, as well as find linkages among methods, motives or perpetrators. This strategy aligns with the Homeland Security Advisory Council's recommendation for a national intelligence estimate of pending threats.

Develop a national training standard for fire investigators and law enforcement. Several organizations have created their own national "certification" programs for fire investigation personnel, but there isn't a national standard that describes the skills needed to successfully investigate and prosecute criminal fires.

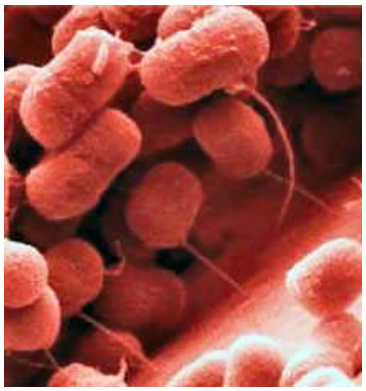
Enhance fire protection and anti-arson strategies in building codes to enhance resiliency. Fire-resistant construction and automatic sprinklers improve a building for life safety and property protection. Though unable to prevent all fires, this construction method mitigates the impacts of those that occur, including arson. Building codes also provide generous design latitude and don't require that all structures meet these rules.

Homeland security strategies should encompass an all-hazards approach. The current national discussion on CBRNE threats focuses on high-risk/low-frequency events, but doesn't address man-made threats that occur daily and aren't always on the front pages of the national news media. Total fire deaths from the last decade and property loss due to arson exceeds that of all domestic terrorist attacks combined and must be addressed as part of a national security strategy.

Robert A. Neale is deputy superintendent for the U.S. National Fire Academy in Emmitsburg, Md., and with its state partners trains more than 120,000 first responders each year. The fire academy is part of the FEMA component of the U.S. Department of Homeland Security.

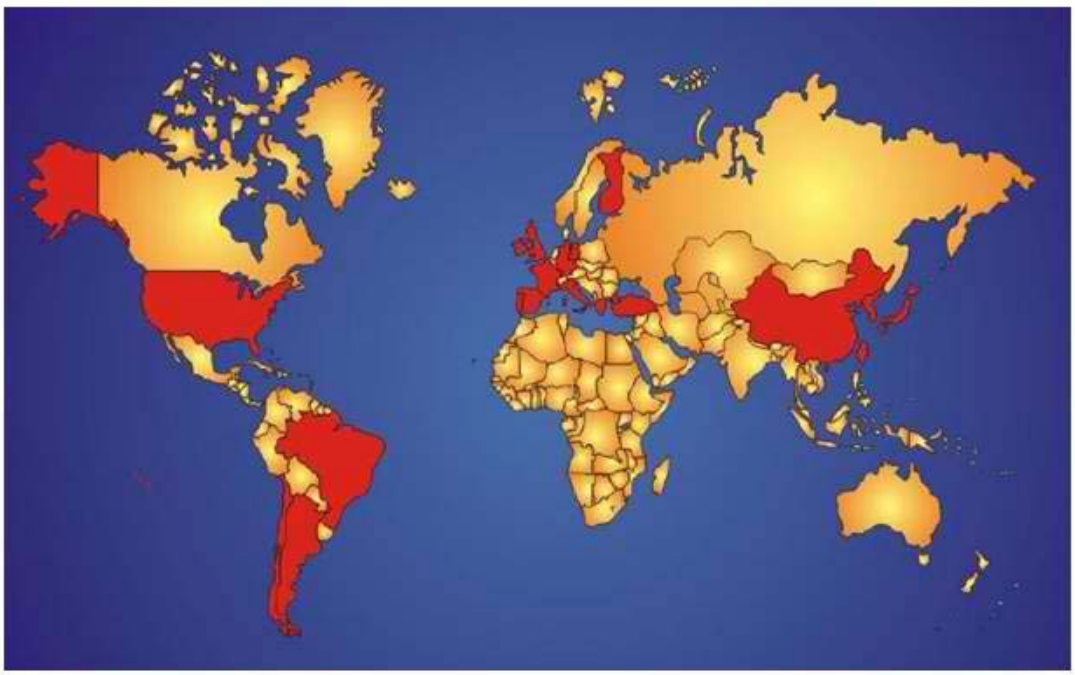
Brand New Drug Might Help Fight Soldiers' Wound Infections

Source: http://www.medscape.com/viewarticle/727889
J Antimicrob Chemother. Posted online September 1, 2010.



An antibiotic that gets its microbe-fighting power from insect proteins was effective at attacking a common infection that afflicts blast victims in war zones, U.S. researchers said. The antimicrobial peptide - a fragment of a larger protein found in certain insects - helped speed wound healing and clear infections in mice infected with Acinetobacter baumannii, the most common systemic infection in soldiers who have burns or blast wounds. "This is a bacteria to which resistance develops very, very fast. When soldiers get injuries like blast injuries or burns, they are taken to military hospitals. These bugs (the bacteria) are all over these hospitals," said Dr. Laszlo Otvos of Temple University in Philadelphia, whose findings were published online today in the Journal of Antimicrobial Chemotherapy. "It is so bad that about 40 percent of gowns worn by healthcare workers (in military hospitals) are

infected," Dr. Otvos said in a telephone interview. "About 30 to 40 percent of soldiers admitted to these hospitals who have blast or burn infections do get infected," Dr. Otvos said, adding that it also infects civilian hospitals. Current antibiotics, such as imipenem, a drug in



the powerful carbapenem class used for hard-to-treat infections, or the older antibiotic colistin rapidly lose efficacy due to high rates of antimicrobial resistance. And colistin is highly toxic. Dr. Otvos and colleagues set out to find something better. They developed a group of peptide drugs inspired by proteins in insects used to fight certain microbes. "We optimized these. We put together all the best properties. I also made a few changes so the peptide would not decompose in the body," Dr. Otvos said. The result is a compound called A3-APO. They tested this in mice with burn wounds infected with A. baumannii bacteria taken from a Canadian soldier who had returned from Afghanistan. When given as a shot, the therapy worked better at clearing bacterial counts in the blood and the injury site than colistin or imipenem. The peptide also protected open wounds from bacteria in the environment. "We have a more effective compound than anything else and a less toxic one," Dr. Otvos said. The drug also appears to have some effect on multi-drug resistant strains of Escherichia coli. Dr. Otvos has formed a small biotech company called Pepthera LLC based in Pennsylvania to develop the drug and has been in discussions with the U.S. Defense Department about testing the compound in people.

Could You Treat 270 Patients in Two and a Half Hours?

http://www.medscape.com/viewarticle/725821?src=mp&spon=45&uac=82598DG

On March 11, 2004, 10 terrorist explosions occurred almost simultaneously on commuter trains in Madrid, killing 177 people instantly and injuring more than 2000 (Figure 1). That day, 966 patients were taken to 15 public community hospitals. More than 270 patients arrived at just one hospital in 2 and a half hours.

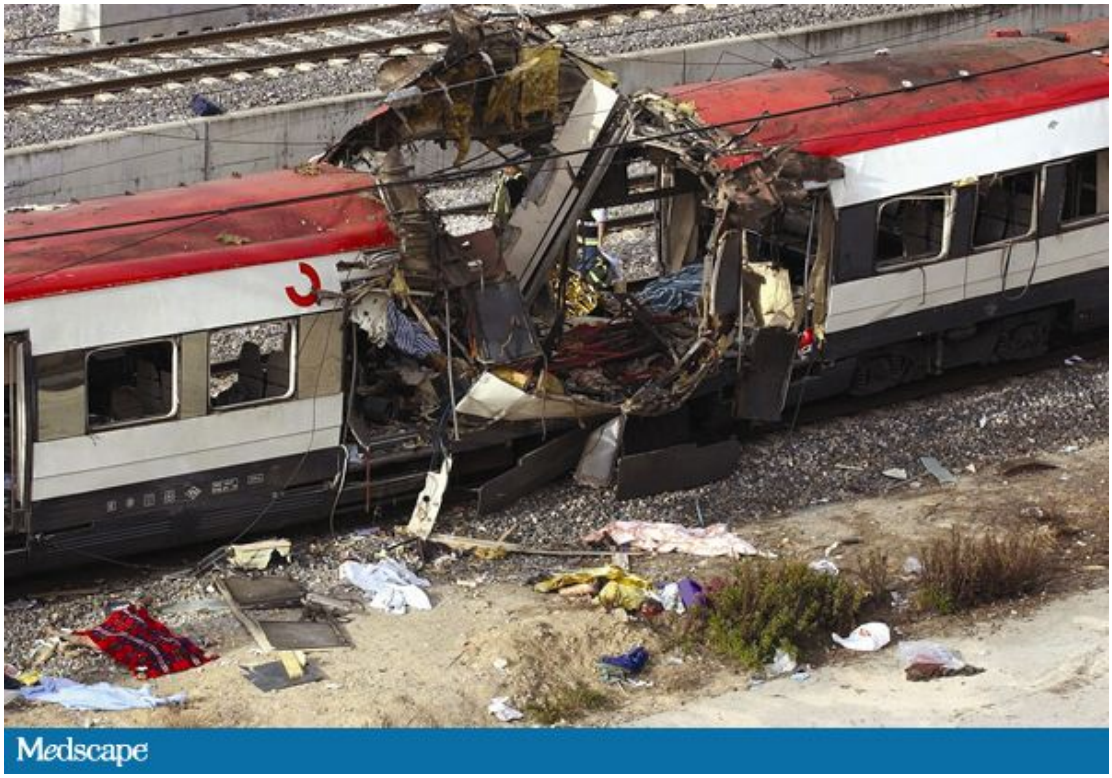


Figure 1. Terrorist bombing of train in Madrid.

Hello. My name is Dr. Richard Hunt. I'm the director of Centers for Disease Control and Prevention (CDC) Injury Center's Division of Injury Response. I am a board-certified emergency department physician with over 20 years of experience, and before joining CDC I directed a large emergency department in New York. So I am here to speak to you as a fellow clinician about what you need to know about blast injuries. So you may be thinking... something like this won't happen at my hospital, in my department, on my shift. Unfortunately, the fact is, you must be ready to confront an event like the Madrid bombings. Current trends in global terrorism demand that we, as acute care clinicians, be prepared for treating injuries caused by explosions no matter our location or the size of our hospital. As seen in Madrid and elsewhere, multiple simultaneous attacks, some of which target hospitals treating blast victims, should be anticipated. The initial surge of noncritical patients should be expected at the closest available hospital within minutes of the event, with the more severely injured arriving after this initial surge. We know from previous events that terrorist bombings do create predictable challenges to the healthcare system. Learning from these experiences, we know that:

- Triage and life-saving procedures should never be delayed because the victim might be contaminated with radiation; the risk of exposure to caregivers is small.

- Primary blast injury to the lungs may require complex ventilation, fluid management, and supportive care. A "butterfly" pattern in a chest x-ray is indicative of this injury (Figure 2). Suspect this injury in anyone with dyspnea, cough, hemoptysis, or chest pain following the blast. Signs of blast lung usually present at the time of initial evaluation, but may be delayed up to 48 hours.

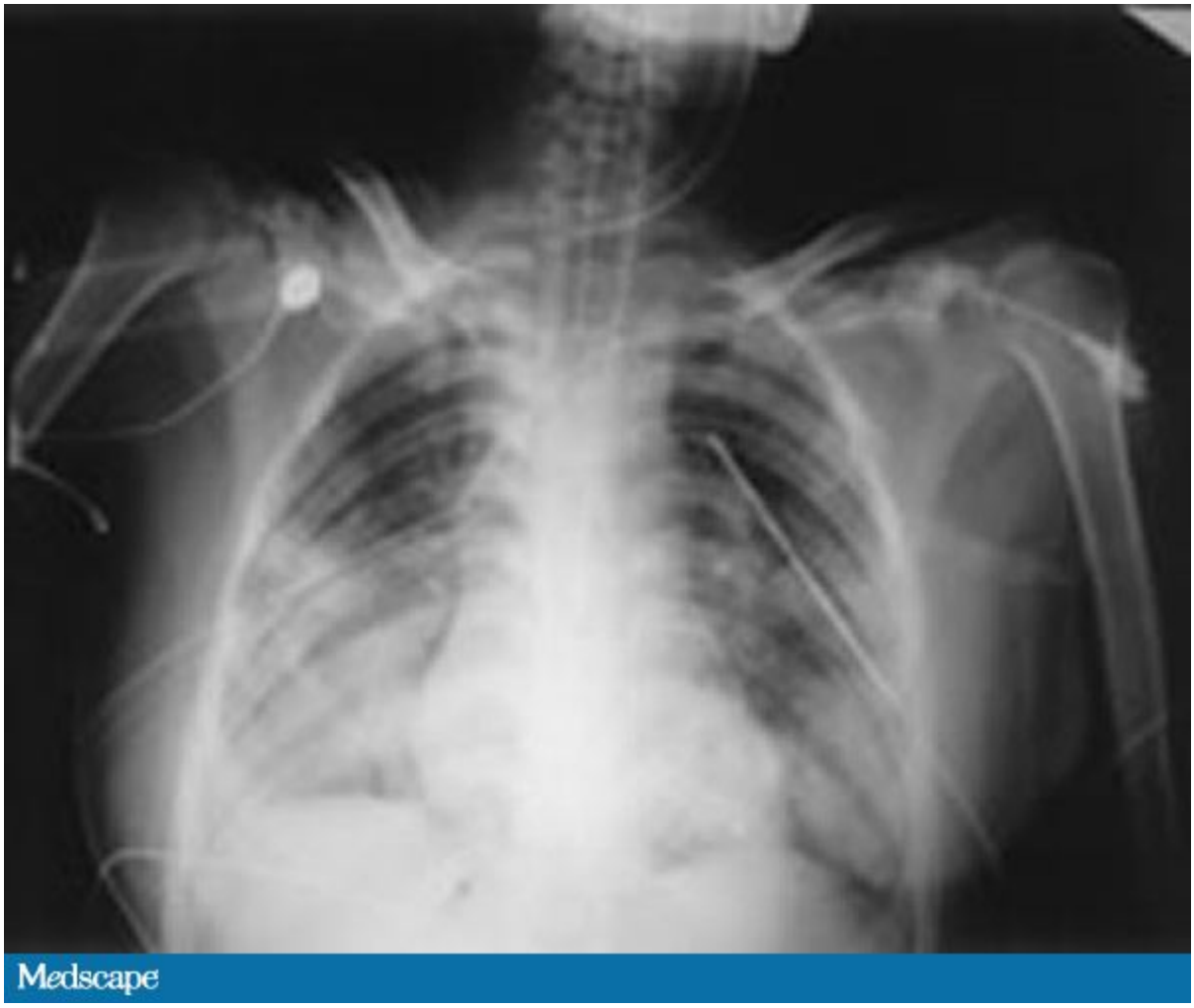


Figure 2. "Butterfly" pattern on chest x-ray, indicative of blast lung injury.

- Gas-filled structures, such as the colon, are most vulnerable to abdominal blast injuries. Suspect this injury in anyone with abdominal pain, nausea, vomiting, hematemesis, rectal pain, tenesmus, testicular pain, or unexplained hypovolemia.

- Wounds are typically grossly contaminated. Aggressive wound management and delayed primary closure should be considered and tetanus status should be assessed.

- Traumatic amputation of any limb is a marker for multisystem injuries. However, many injuries caused by blunt or penetrating trauma from flying debris or shrapnel may not be life-threatening.

- Communication with bombing victims may be difficult because of tinnitus and sudden temporary or permanent deafness. The signs of blast ear injury are usually evident on presentation and include hearing loss, tinnitus, otalgia, vertigo, bleeding from external canal, or otorrhea.

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'Fused' people eager to die and kill for their group

Source: www.physorg.com/news200831377.html

People with extremely strong ties to their countries or groups are not only willing, but eager, to sacrifice themselves to save their compatriots, according to new psychology research from The University of Texas at Austin. In a study to appear in Psychological Science, Bill Swann, professor of psychology, and a team of researchers found the majority of "fused" people, those who view themselves as completely immersed in a group (be it ethnic, national or other), are willing to commit extreme acts for the good of their compatriots. "Fused group members believe that through suicide, their lives will achieve tremendous significance," Swann said. "Their strong sense of moral agency drives them to see not only that justice is done, but to also take an active role in its implementation." The psychology researchers who co-authored the study included Sonia Hart of The University of Texas at Austin, Angel Gomez of Universidad Nacional de Educacion a Distancia in Spain, John F. Dovidio of Yale University and Jolanda Jetten of the University of Queensland. In the study, the researchers recruited 506 college students at the Universidad Nacional de Educacion a Distancia in Spain. Based on the students' answers in online questionnaires, the researchers identified 38 percent of the participants as "fused" as compared to "non-fused," with Spain. They then measured their self-sacrificial behaviours. To test the subjects' willingness to die for their group, the researchers based their Web surveys on different variations of the "Trolley Problem." Coined by British philosopher Judith Jarvis Thomas in 1967, the "Trolley Problem" presents a hypothetical moral dilemma in which a person must choose whether to kill one person to save five strangers from a fatal trolley collision either by pushing a man in front of the tracks or simply flipping a switch that would automatically kill an innocent bystander. To put a new spin on the moral dilemma, the researchers added self-sacrifice as a means of saving a member of their group from a runaway trolley. The study revealed that an overwhelming majority of fused respondents are willing to take extreme, bold steps to save the lives of their group members. According to the findings:

- 75 percent are willing to jump to their deaths to save the lives of five group members, compared to 25 percent of participants who were not fused with their country.

- 88 percent said they would die to save five members of an extended in-group (Europe), but not members of an out-group (America). The researchers used Europe as an example of an extended in-group (outsiders with close cultural or moral affiliations) because of its common social, political and economic ties to Spain. They used America as an example of an out-group because it is far removed from Spain.

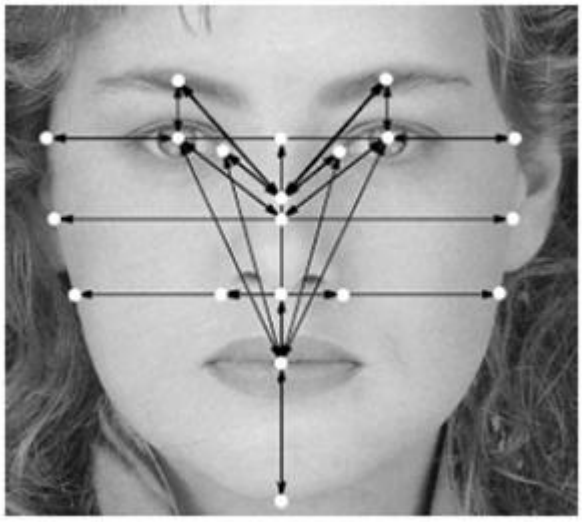
When given the option to push aside a fellow group member who is about to sacrifice himself to kill some escaped terrorists, 63 percent said they would push the group member aside so they, themselves, could leap to their deaths to divert a train that would then kill the terrorists. Swann said the study may offer new insights into the mindsets of groups with extremist ideology. "In an era in which the act of sacrificing one's own life for the group has had world-altering consequences, it is critical to learn more about the psychological underpinnings of such activity," Swann said.

Identifying Terrorists With The Help Of Facial Recognition Technology

Source: http://www.medicalnewstoday.com/articles/201545.php

Rapid improvements in facial-recognition software mean airport security workers might one day know with near certainty whether they're looking at a stressed-out tourist or staring a terrorist in the eye. A research team led by Dr. Alice O'Toole, a professor in The University of Texas at Dallas' School of Behavioral and Brain Sciences, is evaluating how well these

rapidly evolving recognition programs work. The researchers are comparing the rates of success for the software to the rates for non-technological, but presumably "expert" human evaluation. "The government is interested in spotting people who might pose a danger," O'Toole said. "But they also don't want to have too many false alarms and detain people who are not real risks." The studies in the Face Perception and Research Laboratories are funded by the U.S. Department of Defense. The agency is seeking the most accurate and cost-effective way to recognize individuals who might pose a security risk to the nation. Algorithms - formulae that allow computers to "recognize" faces - vary greatly among the various software developers, and most have not faced real-world challenges. So O'Toole and her team are carefully examining where the algorithms succeed and where they come up short. They're using point-by-point comparisons to examine similarities in millions of faces captured within a database, and then comparing results to algorithm determinations. In the studies, humans and algorithms decided whether pairs of face images, taken under different illumination conditions, were pictures of the same person or different people. The UT Dallas researchers have worked with algorithms that match up still photos and are now moving into comparisons involving more challenging images, such as faces caught on video or photographs taken under poor lighting conditions. "Many of the images that security people have to work with are not high-quality," O'Toole said. "They may be taken off closed-circuit television or other low-resolution equipment." The study is likely to continue through several more phases, as more and better software programs are presented for review. So far, the results of man vs. machine have been a bit surprising, O'Toole said. "In fact, the very best algorithms performed better than humans at identifying faces," she said. "Because most security applications rely primarily on human comparisons up until now, the results are encouraging about the prospect of using face recognition software in important environments." The real success comes when the software is combined with human evaluation techniques, O'Toole said. By using the software to spot potential high-risk individuals and then combining the software with the judgment of a person, nearly 100 percent of matching faces were identified, O'Toole said. The researchers also are interested in the role race plays in humans' ability to spot similar facial features. O'Toole said many studies indicate individuals almost always recognize similarities among members of their own race with more accuracy. But there is little research evaluating how technological tools differ in recognizing faces of varying races. In a paper to be published soon in ACM Transactions on Applied Perception, O'Toole reports that the "other race effect" occurs for algorithms tested in a recent international competition for state-of-the-art face recognition algorithms. The study involved a Western algorithm made by fusing eight algorithms from Western countries and an East Asian algorithm made by fusing five algorithms from East Asian countries. At the low false-accept rates required for most security applications, the Western algorithm recognized Caucasian faces more accurately than East Asian faces, and the East Asian algorithm recognized East Asian faces more accurately than Caucasian faces. Next, using a test that spanned all false-alarm rates, O'Toole's team compared the algorithms with humans of Caucasian and East Asian descent matching face identity in an identical stimulus set. In this case, both algorithms performed better on the Caucasian faces, the "majority" race in the database. The Caucasian face advantage was far larger for the Western algorithm than for the East Asian algorithm. Humans showed the standard other-race effect for these faces, but showed more stable performance than the algorithms over changes in the race of the test faces. These findings indicate that state-of-the-

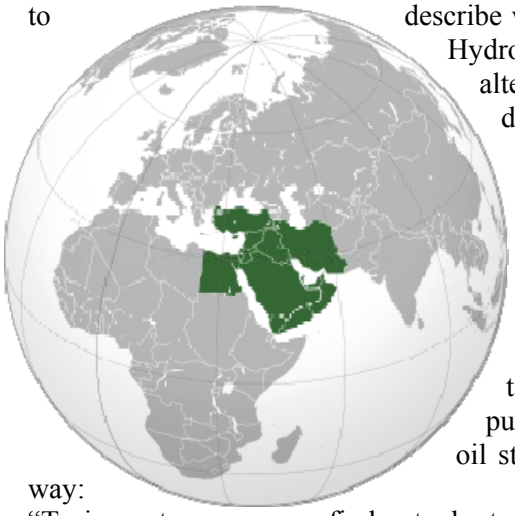


art face-recognition algorithms, like humans, struggle with "other-race face" recognition, O'Toole said. The companies that develop the most reliable facial recognition software are likely to reap big profits down the line. Although governments may be their most obvious clients, there is also a great deal of interest from other major industries. "Casinos have been some of the first users of face recognition software," O'Toole said. "They obviously want to be able to spot people who are counting cards and trying to cheat the casino

Is Hydrocarbon Man the Next Terrorist Target?

Source: http://www.globalintelligencereport.com/articles/Is-Hydrocarbon-Man-the-Next-Terrorist-Target

Daniel Yergin, in the prologue to his award winning book, uses the language of anthropology to describe what the human species became in the past century: Hydrocarbon Man. While the search continues for alternative fuels and millions are spent on research and development, modern man will continue for some time to come to be dependent on Persian Gulf oil: the strategic prize. This essay focuses on the terrorist threat to oil pipelines in the region. The question is, given the strategic importance of Middle East oil to the West and its economic and technological dependence on oil: Why have pipelines in that part of the globe not been primary targets of international terrorism to date? It is puzzling why terrorists have not chosen Middle East oil structures as targets. One terrorist expert puts it this way:



"Trying to find out why terrorists do what they do is a bit like trying to solve a good fictional murder in that one is dealing with the elements of motive, method, and opportunity. However, the plot is reversed. With the classic murder one starts with a victim, and has to determine the motive, methods, and opportunity involved in order to discover the perpetrator. With target selection on the other hand, the motives are known, the means can usually be estimated, and the opportunities are fairly plentiful. What one has to determine is who or what is likely to be the victim." Like a good, fictional murder mystery, the task of explaining silence, why something does not happen, gives a double twist to a plot and makes solving a mystery much more complicated. Sherlock Holmes, the master detective, solved a classic murder in The Hound of the Baskervilles when he learned that the dog was silent when it should have been barking. But, it is unlikely that in the process of answering the basic question, we will find a single clue to unwrap the mystery surrounding the silence of oil terrorism in the Middle East. For unlike in Holmes' time, it is not hounds but jackals that have captured our attention in the 21st Century drama, the non-state actors who for most members of the world-audience will always remain a mystery: terrorists. In looking for clues, our investigation will sift the evidence found in open sources and evaluate the Middle East silence by methods, scientific and otherwise. Although the focus is on the security of Middle East oil pipelines, globalization and the throughput character of the oil industry require brief consideration of threats to the oil infrastructure of the entire industrialized world, from Australia to the United States and from China to Turkey. In this respect, the vulnerability of oil pipelines in the United States is discussed with one eye on critics who see real danger in pointing out soft targets to terrorists' cells with the technical means to terrorize multinational oil companies and the US public. Nevertheless, Maynard Stephens over 20 years ago did not hesitate to diagnose the Achilles heel of Hydrocarbon Man in the United States: "Established petroleum and natural gas operations, their pipeline interties, and associated tankage and storage are the most attractive targets of dissidents. But there is no part of the industry that is immune to being seriously damaged by someone who has a little knowledge of it or makes an effort to learn its frailties. It is no wonder that security personnel and management become almost 'paranoid' at the thought of having attention drawn in publications to the vulnerability

of the industry. . . But how does one know what dangers and threats to guard against?" As will be shown, the dangers and threats to oil pipelines are real. The author makes no apology for calling the attention of US policy and police officials to the threat that continues to exist from individuals wanting to hamstring the United States by interdiction of oil flows with which the economy runs and the military rolls.

The Silence

While Stephens had to deal with the silence of domestic inaction, our attention turns to the silence of terrorism. For analyzing patterns of global terrorism, specifically against oil pipelines, we turn to reports on terrorism by the US Department of State. The total number of terrorist attacks between the years 1981 and 2000 declined from 429 in 1981 to 423 at the end of the millennium and a high of 666 attacks in 1987. The Middle East region saw a decline in such incidents from 45 in 1995 and 1996 to 16 in the year 2000 with a total of 199 for the period. Only North America had fewer attacks than the Middle East. During the same five-year period, business facilities were attacked on 1,842 occasions; diplomats, 200; governments, 97; military, 48 and other facilities, 571. Thus, terrorists attacked worldwide businesses twice as frequently as all other targets combined, 916. Turning another page in the Department of State report, we discover in the year 2000, that of the total attacks (557), oil facilities were singled out only 10 times, and, of this number, none were in the Middle East! We therefore conclude, that of the 384 business facilities struck in 2000, none were leveled against oil facilities in the Middle East. Going back further in time, we discover that terrorists infrequently attacked pipelines. From 1968 to 1979 there were 63 transnational terrorist incidents among nine Middle Eastern states: Bahrain (2), Iran (43), Iraq (4), Kuwait (10), Oman (0), Qatar (0), Saudi Arabia (3), UAE (1), and Yemen (0). These oil-producing countries are located atop huge oil reserves and astride a tangle of oil pipelines and oil shipping lanes. Of the total number of incidents five were related to the oil business and of these only two incidents involved oil pipelines or facilities. In January 1972 facilities of the Kuwait Oil Company, partially owned by US firms, were damaged twice. The second incident occurred on May 11, 1997, when saboteurs set fire to the Aramco-operated Abqaiq production center, causing $100,000 damage to a network of pipelines. Led by Illich Ramirez Sanchez (aka "Carlos, the Jackal"), a significant terrorist attack occurred on the Organization of Oil Exporting Countries (OPEC) headquarters in Vienna Austria on December 21-23, 1975. The terrorist group — The Arab Revolution — seized 70 hostages, including 11 oil ministers, and barricaded themselves in OPEC offices. Extortion was thought to be the purpose of the raid. Saudi Arabian and Iranian governments paid perhaps as much as US$50-million to the terrorists who took themselves and 42 hostages back to Algeria. Huge sums of money were transferred to a bank in Aden. Although this attack was not against oil pipelines, the incident serves to remind us that terrorists of two and three decades ago viewed the oil industry as a profitable target, and that the jackals of today are ready, willing and able to deal in a new brand of eco-terrorism.

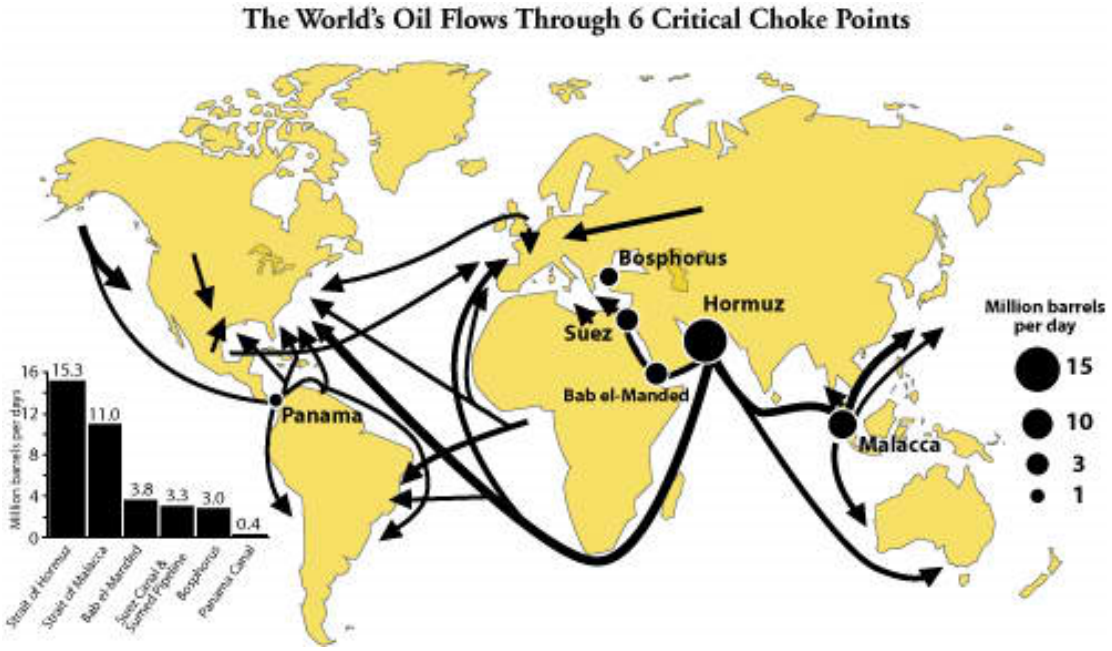
Definitions

Generally speaking, the petroleum industry is segmented into geological exploration and drilling, construction and operation of production facilities, crude oil transportation and gathering, crude oil refining and storage, product transportation, and retail distribution. Our interest is in the pipelines located in the first three segments and specifically those in the Middle East. Both oil and gas pipelines are found in these segments and both are implied in the single use of the word "pipelines" unless otherwise noted. This word therefore is more or less synonymous with the front-end infrastructure of the petroleum industry. As will become clear below, the term "Middle East" refers to the oil producing states surrounding the Persian Gulf and the Caspian Sea. Many observers, writers and commentators have noted that no one definition of ""terrorism" has gained universal acceptance. This paper will attempt to consistently use the US Department of State definition of terrorism in use since 1983 for statistical and analytical purposes:

- "The term 'terrorism' means premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents, usually intended to influence an audience.
- The term 'international terrorist' means terrorism involving citizens or the territory of more than one country.
- The term 'terrorist group' means any group practicing, or that has significant subgroups that practice, international terrorism."
- Transnational terrorism has the same meaning as international terrorism and is further defined as nonmilitary threats that cross borders and threaten either the political, social or economic integrity of a nation or the health of its inhabitants. As discussed below, inclusion of economic prosperity, dependent as it is on the flow of oil from the Middle East, in the defense policy of the United States means that significant acts of transnational terrorism will attract US forces.

Global Oil Targets

Transnational jackals do not lack oil target prey. The abundance is seen in the importance of oil in the world economy and is driven home by eye-opening statistics and spectacular claims. The terrorism from the sky of September 11, 2001, impacted the minds of all who heard and saw the events. Since then people see the possibilities for terror everywhere. Technology is now the enemy rather than the comforter it appeared to be. Squeezed along the paths of energy systems, we are unable to escape the final destinations of flight paths, fluid tunnels, and electrical circuits. The homeland of the self seems unable to locate the off switch just

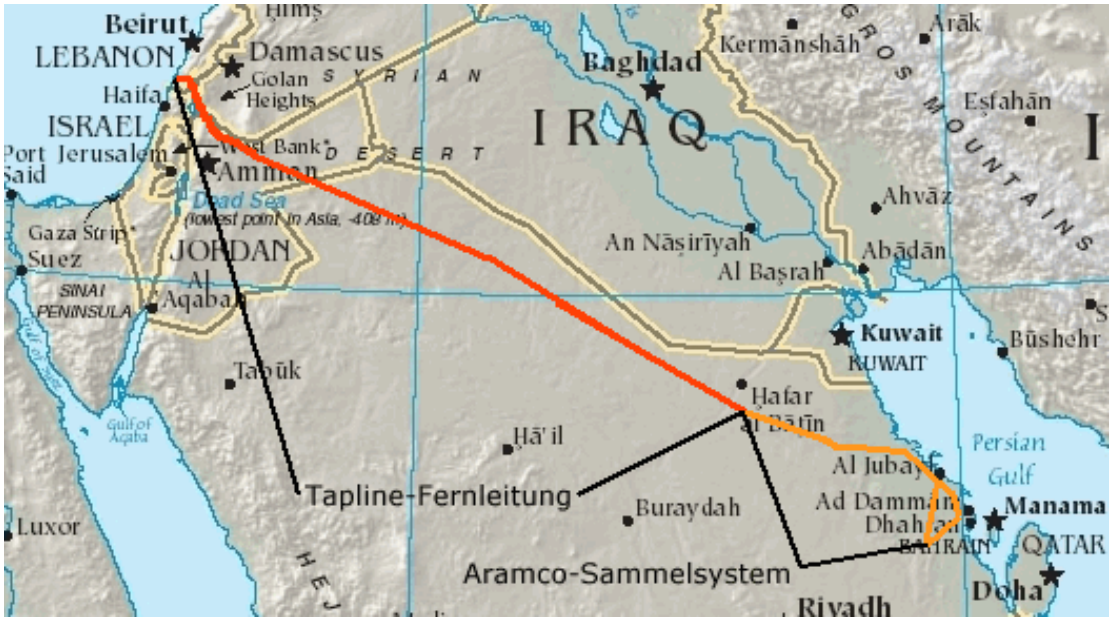


beyond its reach. The "new victims" fix their minds on vulnerability to the world's energy systems and find themselves more curious about sources of power and light. Because the most recent and violent terrorism comes from Middle East countries, the energy coming from these countries in the form of "crude", the precious black ooze is again of special interest as it has been periodically in each of the past three decades. World energy consumption remained stable during the latest years reported, 1996, 1997, and 1998. The US ranks either first or second in the production of world energies: crude oil, (2); natural gas plant liquids, (1); dry natural gas, (2); coal, (2); hydroelectric power, (2); and nuclear electric power, (1). Petroleum once constituted almost 50 percent of the world's energy; it now accounts for less than 40 percent. The difference is made up of mostly natural gas and nuclear power. Production of petroleum (crude oil and its by-products) reached an all time high of 75 million barrels per day (MMBD) in 1998. Three states accounted for 31 percent of the oil production—US,

Russia, and Saudi Arabia—or 20 MMBD. One observer of the Middle East stated, "Oil is not the only source of energy, but it has been and will remain the single most important fuel. It constituted 47 percent of world energy use in 1970 and 39 percent in 1997. And it is projected to provide 38 percent in 2020." Another writer noted, "At the end of 1997, the market capitalization of each of the top 10 companies in the world exceeded the gross national product of over 150 of the 185 members of the United Nations." Oil provides 79 percent of the total revenue for Venezuela, 84 percent for Saudi Arabia and 95 percent for Nigeria. Seventeen of the Fortune 40 companies of the world are in the petroleum business and the annual revenue of each company exceeds the Gross Domestic Product of half the nations of the globe. Oil accounts for 5 percent of all the commodities traded in the world, and it far outranks the commodity in second place. By any measure oil is vital to the world economy and critical to the prosperities of many nations.

The Moving Target

The processing and flow of oil from wellhead to the ultimate consumer is complicated and continuous, but points along the way may be simplified and discussed without comprising the analysis of their vulnerability to terrorist attack. Critical oil facilities in the Middle East may be summarized under four headings: crude oil pipelines, loading terminals, tankers and waterways. Pipelines: The Middle East has three basic pipelines: the Iraqi, the Saudi Arabian and the Caspian. The Iraqi system is the "most extensive, complex and exposed to uncertainties". Decades of conflict disrupted the area and finally closed the line that ran from near Kirkuk and divided into two 12-inch pipelines running to Haifa, Israel and Tripoli, Lebanon. A new 590-mile, 40-inch pipeline went into operation in 1977, which linked the Iraqi fields with the terminal in Dortyol, Turkey on the Mediterranean Sea. A second parallel Turkish line was constructed in 1987. Due to sanctions following the Gulf War, the Turkish lines were also closed. As a safety measure Iraq constructed in 1977 a 42-inch "strategic pipeline" that linked Kirkuk to the Persian Gulf terminal at Fao. This "strategic line" was constructed with a reversible flow allowing oil to be directed northward to Haditha. Construction of another strategic line of 42-48 inches in diameter was started but not completed before the Gulf War. Looking for a safer alternative, larger throughput, and increased production, Iraq constructed in 1985 and 1990 two pipelines around Kuwait to Saudi Arabia. The Saudis shut down both lines when Iraq attacked Kuwait in August 1990. Four types if pipelines traverse Saudi Arabia: crude oil (6,400 km), natural gas (2,200 km), gas liquids (1,600 km), and petroleum products (150 km). Its oil fields are located in the Eastern Province close to the coast of the Persian Gulf. Abquiq is the major processing center for crude oil in the southern area about 40 miles south west of Dhahran. The northern area is



headquartered in Ras Tanura, forty miles north of Dhahran. Most of the crude oil and refined products from the Ras Tanura refinery is delivered to tankers at Ras Tanura or Ju'aymah also on the coast. Offshore fields are at Safaniya and Zuluf. Located in Saudi Arabia is Ghawar, the largest oil field in the world. In the early 1950s a 30-31-inch line of about 750 miles, the Trans-Arabian Pipeline (Tapline), was constructed along the border with Iraq, through Jordan, Syria and ending on the Lebanese coast south of Beirut, in Zahrani, next to Sidon. Following the Lebanese civil war, the Tapline was mothballed. Because of the dangers of shipping oil by tankers through the Persian Gulf, Saudi Arabia constructed the 48-inch "Petroline" from Abqaiq in the Eastern Province with Yanbu on the Red Sea, a distance of 747 miles. This pipeline is known as the Iraqi-Saudi Pipeline. It and a second parallel were closed indefinitely following the August 1990 Iraqi invasion of Kuwait. Parallel to the Petroline is the Abqaiq-Yanbu natural gas liquids pipeline that serves the petrochemical plants at Yanbu. Saudi Arabia has sought alternative export routes because of conflicts and its pipelines lack adequate security. Altogether, Saudi Arabia has about 77 oil and gas fields, 1,430 wells, and seven refineries. Its 2001 budget called for drilling 246 more wells (208 onshore and 38 offshore) at a cost of US$1-billion. Another 292 wells are planned for 2002. The Saudis were expected to earn in 2001 about US$62.6-billion in crude oil export revenues, double their 1998 revenues. Pipelines of the Caspian Sea Basin typify the complexity of pipeline construction and the difficulties of protecting them, or from the terrorist's perspective, how easy it might be to interrupt the flow of black gold, eg: the Caspian Pipeline of 460-miles that will connect western Kazakhstan to the Russian Black Sea Port of Novorossiysk. This

pipeline will allow maximum development of the Tengiz field with potential reserves of six - to nine- billion barrels of recoverable oil. Planned production peaks at 700,000 BD in 2010. After construction and testing, the pipeline must be maintained and protected. Security of the pipeline, as noted below, will come from governmental and non-governmental sources. Construction of the global oil and gas infrastructure will continue at a healthy and sustained rate through 2003 and beyond. One survey indicates 60,000 miles of oil and gas pipelines are in various stages of construction or planned for construction. Planned pipelines and those under construction in the Middle East total 8,092 miles. Several are more than 1,500 miles in length. What armed forces will be called upon to protect these new initiatives? Loading Terminals: Throughout the continuous process of petroleum production and transport, oil enters storage tanks at various stages along the way, near wells, at refineries, and near seashores. Oil is moved from shore to oil loading terminals located either on shore at fixed

docks reachable by oil tankers or at offshore terminals, circular moorings for one or more ships. Construction of underwater pipelines is a costly and difficult job. The pipes are made of steel and laid from special barges only in good weather. The underwater pipes are from 20 to 36 inches in diameter and made up into 39- foot lengths. It may cost more than US$1.5-million to lay a mile of underwater pipe. Oil is moved through these underwater lines by pump stations resting on floating platforms to the terminal and into large oil cargo tankers. Most oil loading terminals in the Persian Gulf are offshore in deep water where the terminals can handle supertankers. Fixed deep-water ports are located at Kharg (Iran); Khor-al-Kafka and Khor-al-Amaya (Iraq); and Mina-al-Ahmadi (Kuwait). The only terminals able to accommodate super tankers of 400,000 to 500,000 deadweight tons (DWT) are those of Iran, Kuwait, Saudi Arabia, and Oman. Controlling depths in the Mediterranean Sea are too shallow for berthing and maneuvering supertankers. Tankers: Oil tankers range in size from 30,000 DWT to 500,000 DWT and their oil capacities from 200 MMBD to 3,700 MMBD. Oil tankers of all sizes carry about 60% of the world's oil out of the Persian Gulf. Tankers at oil terminals or in the Persian Gulf and the Red Sea are vulnerable to attacks from shore batteries, small arms fire, surface-to-sea missiles, air attacks, and sea mines. To obtain an idea of possible consequences and the disruption of the flow from a multiple terrorist attack on oil tankers, no worse case scenario is better than that of the Iran-Iraqi War. Iran attacked 173 ships and Iraq did the same to 283 vessels, however oil supplies during this so-called "Tanker War" from 1980-87 were only marginally affected. In fact, tankers large and small have not been to date favorite targets of maritime terrorism. Attacks are very difficult to execute and terrorists are at high risk. Payoffs are low; the killing of crews and large oil spills are not as spectacular as other land targets. An analysis of hijackings on high seas reveals no regular pattern and no geographical cluster. The primary danger comes to ships when they are in port where they accessible to terrorist bombing or mining. The bombing in Yemen of the USS Cole in 2000 is a recent reminder. Waterways: Crude oil is threatened as it moves from its source in a Middle Eastern country to its ultimate destination: the consumer. Terrorists may attack pipelines on land or sea lines of communication (SLOCs). Tankers carrying crude from the Middle East are especially vulnerable at oil transit choke points around the world: Strait of Hormuz, Strait of Malacca, Bab el Mandeb, Suez Canal and Sumed Pipeline, Bosporus/Turkish Straits, and the Panama Canal. It is not only the United States and Europe, which are dependent on the oil sailing through these choke points but also countries like the Peoples Republic of China and Japan. The US Department of Energy estimates that the Middle East countries exported an average of 17.7-MMBD in 1995.This amount was 47% of the world total of 37.7-MMBD. Projections are that by 2020 these exports will reach 40-MMBD and be 60% of the world's total.

Target Selection

When will terrorist cells attack Middle East pipelines? Attacks will begin when the petroleum infrastructure satisfies target criteria. The process of target selection is complicated and constantly undergoing change. Target selection in an armed conflict between states is a science and an art, and it is equally true for terrorist groups who select their targets on the basis of many factors. While it is relatively easy to imagine and theorize about factors that enter into target selection, the dynamics among and between non-state actors and selection factors is complicated, fast moving, and stealthy like terrorists themselves. Contrary to popular opinion, terrorists are not free to do anything they want. Every potential target is not available to every terrorist cell, and these cells face a number of constraints. Pipelines themselves are complicated systems. Terrorists may simply lack resources to attack pipelines, although given the technical sophistication of today's transnational terrorists, the resource criterion does not appear to be much of an impediment to action. Furthermore, protection of pipelines has high priority among oil-producing and oil-consuming countries, and damage is quickly repaired. Also, other targets, such as civilians, may be of more interest to terrorists than are pipelines. Media impact is frequently crucial in the thinking of terrorists. Destruction of remote pipelines may not make the evening news on CNN for any number of reasons. Terrorists with the objective of making a statement to the world would probably not want to

risk not having their activities reported, especially in countries where state control of media exists. Other constraints with examples are international opinion (UN, OPEC), security environment (Saudi Arabia National Guard-SANG, NATO), protective measures (electronic, number of control valves), current situation (FBI teams, diplomacy of sponsoring state), and leadership (planning and organization). Oil pipelines in the Middle East may not be targets for terrorists because they are selected out during the target selection process.

Global Target Incidents

Of the five categories of transnational threats — transnational crime, transnational terrorism, international migration flows, disease and international pandemics, and global environmental degradation and climate change — the focus here is on terrorism. It is not as though terrorists avoided pipelines elsewhere around the world. In the year 2000, Latin America alone experienced 193 attacks, up from 121 the previous year. There were 10 oil related, significant, terrorist incidents: Colombia, four; Indonesia, one; and Nigeria, five. The four pipeline incidents were all in Colombia. What lies behind the four "incidents" in Colombia is the fact that Colombia's second-largest crude oil pipeline, the Cano-Limon Covenas, was attacked 152 times. This record number of attacks was blamed on the National Liberation Army, one of two large guerilla groups. As a result, Occidental Petroleum halted exports through most of August and September. Terrorists in these oil-related attacks attempted to obtain funds through extortion and ransom. All acts of violence have an element of terrorism. For this reason, the terrorist label attached to acts of violence may cloud our understanding of transnational terrorism. Aggressive acts in wartime are often termed terrorism. For example, Iraq is said to be guilty of ecological terrorism in Kuwait, when in 1991 it deliberately torched or sabotaged more than 500 Kuwaiti oil wells, storage tanks, and refineries. It dumped an estimated six-million barrels of oil into the Persian Gulf, the largest oil spill ever. The oil fires were the worst ever: three- to six-million barrels of oil daily went up in smoke and flames during peak times. After visiting the area, the head of the US Environmental Protection Agency said, "If hell had a national park, it would be those burning oil fires." Whether caused by a government leader or a terrorist, pipeline destruction is the same no matter what terminology is used to describe the perpetrator.

Pipeline Security

One or a combination of agents protects oil pipelines: (1) the oil-producing state, (2) a foreign state, (3) a multinational oil corporation, (4) a non-state armed actor, and (5) a private contractor. Non-state actors include religious movements, revolutionary insurgents, warlords, guerrilla groups, drug cartels, international criminal organizations, and mercenary forces. Military Forces. Armed forces and public safety officials of oil producing states are the first line of defense against terrorism, but many of the Middle East countries do not have the forces to effectively protect their pipelines from terrorists or aggressor states. In such situations, the United States or another strong nation-state is relied upon to protect the economic assets of weaker oil-producing states. Protection of oil production in the Middle East is clearly within national and global security interests of the US. The emerging tendency, if not established trend, is for nation-states to turn to military forces to deal with security threats that are transnational and not state-centered. Previously, nations in modern times deployed armed forces directly against one another, and states were expected to handle their own internal problems, such as terrorism. The recent trend will likely continue in the coming decades and is expected, if terrorist should attack oil targets in the Persian Gulf states, eg: in Kuwait or Qatar. The US military exercise, Operation CENTRAZBAT 97, sent a message to all states in the Caspian Sea region that the US is prepared to assist the oil states of

Kazakhstan, Kyrgyzstan and Uzbekistan against invasion or terrorism. Middle East states are reluctant to have the US involved directly in their internal security affairs. One exception is US assistance to the Saudi Arabia National Guard. For some time the US has been advising and training the Guard in infantry tactics and the use of up-to-date NATO equipment. The original objective of US help was to develop Guard forces capable of handling urban disorders, border problems with Yemen, and oil field security. The Guard's effectiveness in its oil field security mission is enhanced with airborne assets and C3I links. US policy and practice leave little doubt that United States does and will continue to assist friendly Middle East states in fighting oil pipeline terrorism. An analysis of the threat parameters for operations other than war identified five categories of threat forces: government forces, insurgent or factional forces, terrorists, criminal organization and armed populace. What is striking about the correlation of threats with mission activities is that a large number of activities across all threat categories are or could be identified as terrorist activities and could cause massive destruction to oil pipelines. One study of energy security risks concluded that the oil logistical system in the Middle East is "indefensible by conventional military means and that the United States and its allies must find another strategy for lowering the risks of politically inspired attacks on key oil operations." Private Security. There are forces other than national armies to protect pipelines. Public or governmental security in the world is becoming increasingly privatized in part because of globalization and the inability of weak states to provide state security structures that protect citizens and properties. A new security paradigm is said to be emerging. These private security groups are categorized as mercenaries, private military companies, and private security companies. In many instances these categories tend to be mixed. Users of private security groups are non-state actors, governments in conflict regions and supplier countries, multilateral peacekeeping organization, humanitarian agencies, and corporations in extractive industries, for example, oil and gas. Oil corporations hire private contractors to secure their pipelines. Financial Incentives. The financing of terror is widespread in the Middle East. In so doing, oil producing Arab states receive various degrees of protection from attacks on oil infrastructures. All terrorists must acquire income, buy arms, and achieve international recognition. They must find safe havens where they may escape and store arms and cash. "The countries of the Middle East have contributed most of the cash and arms that are given to the different terrorist groups and have ensured their growth." Oil wealth finds its way to terrorists through a variety of practices: governmental corruption, contract offsets, bribes, blackmail, direct payments, indirect purchases, and any number of other ways. Terrorists realize oil monies are sponsoring many of their activities. The reason nation-states sponsor terrorism is not solely for protecting pipelines: "Terrorism-sponsoring states have interests ranging from ideological and theological aspirations to pragmatic and practical strategic and economic goals. They commit to terrorism sponsorship to further these interests. States use terrorism in order to attain objectives they cannot and/or would not attain through regular and conventional instruments of international relations, from negotiations to economic disputes to waging major wars. And as the potential costs and price of war grows, so does the penchant to use terrorists in war-by-proxies in order to solve national problems and/or realize national aspirations through the use of force but without much of the risk entailed." Private oil companies are accused of yielding to demands for oil dollars to fund terrorists' activities; therefore, retaliation is thought to be less likely against these companies that also have the further incentive of keeping governments from interfering with daily operations. The extent of

this practice is unknown but is suspected in the Middle East because of the private/governmental ownership of companies supplying oil. Although strenuously denied in public, industry-related bribery by Western oil giants in major energy deals appears to be frequent. "Show me the money" is a major theme between Arab nations, big oil, and producers of terrorism. Casualty Insurance. Pipelines are secure if they may be reconstructed rapidly. The speed of reconstruction increases rapidly if funds are available to repair damage to facilities. Governmental and private insurance agencies are in the business of covering risks to the Middle East oil infrastructure and providing the dollars to pay for reconstruction. An outstanding example of a governmental agency that underwrites damage done by political violence is the Overseas Private Investment Corporation (OPIC) in the United States. The mission of OPIC is to facilitate the investment of private capital from the US to emerging markets as part of US foreign policy. It carries out this mission by selling political risk insurance and long-term financing to US businesses. It invests in projects in over 140 developing countries. OPIC claims to operate on a self-sustaining basis with no net cost to the taxpayer. Over its thirty-year history, OPIC has supported US$138-billion worth of investments. Interestingly, OPIC insurance is backed by the full faith and credit of the US Government. Oil and gas coverage is one of eight special insurance programs of the agency. Political violence coverage compensates for property and income losses caused by violence undertaken for political purposes. OPIC also can provide financing for construction, ownership and operation of oil and gas pipeline, and other large and small energy and non-energy related projects. The Caspian Office of OPIC has facilitated development of energy projects such as the Baku-Ceyhan main export oil pipeline and the Trans-Caspian gas pipeline. To date, OPIC has provided more than US$2-billion in project finance and political risk insurance support in Turkey, the Caucasus, and Central Asia. Oil companies with billions in net revenue and the assistance of OPIC, Export-Import Bank, and the US Trade and Development Agency are insulated in varying degrees from short-term and long-term destruction due to political violence. The terrorist's events of September 11, 2001, did not deter oil firms from moving ahead with new construction. One energy analyst affirmed after the attacks, "They [terrorists] could delay (the projects), but in general, there's no inclination to change their [international oil companies] investment outlook based on political changes." A spokesman for BP said it was not scaling back on a US$15-billion natural gas project in Saudi Arabia's South Ghawar region in partnership with ExxonMobil, Shell, and Phillips. The resiliency of oil companies to move forward may also be seen in the action of shareholders of Shell Pakistan who three days after the terrorist attacks of September 11 approved investment of US$3-million in the Pak Arab Pipeline Co. which plans to build a US$480-million, 817-km pipeline oil pipeline that will carry five-million tons of oil a year from northern Pakistan. The

managing director of Air Security International, a Houston-based security and intelligence firms, has confidently gone on record with the statement that radical fundamentalists who oppose oil companies being in their countries do not care what happens to these oil projects and international relationships. Repair of Pipelines. The amount and timeliness of funds to repair broken pipelines and other facilities are not the only factors to consider in estimating the time when oil will again flow. Pipelines are constructed and maintained with only little regard to their vulnerability to terrorism, and they are vulnerable at several points. An estimate of the time to repair a US pipeline system, for example, gives some indication of the time required to repair the Middle East system. "The time required to repair damage to any

pipeline varies, depending on the size of the damage, its complexity, weather conditions during repair, required safety measures, and the availability of skilled repair crews. For example, damage to a Tapline [The Alaskan Pipeline System: TAPS] pump station could take nine months to fix. Some booster pumps are constructed to each system's specifications and might require six months to a year to replace. Damage to pump stations or to the automated control facilities could result in as much as a one-third reduction in throughput." The TAPS is a four-foot pipe running 800 miles between Prudhoe Bay to Port Valdiz, Alaska. It is estimated that attacks along the pipeline would require over a year to clean up. On October 4, 2001 a single rifle bullet entered the Tapline near Livengood, Alaska. The "terrorist" was a single drunken hunter with a .338-caliber rifle. Pressure spewed 286,000 gallons of oil 75 feet into the air. The pipeline shut down for three days before workers of the Alyeska Pipeline Service Co. fixed the leak. Vulnerability to oil pipeline attack is reduced by having skilled repair and operating personnel and easily obtainable critical spare parts. Worldwide data over a 10-year period shows that oil and gas pipelines are the fourth most popular energy targets for terrorists, but that damages are only temporary. Even with more than 150 attacks on the Cano-Limon Covenas pipeline in Colombia, terrorists were unable to seriously disrupt the energy supply. However, under certain conditions, damage can be significant and long-term. Multiple attacks on the Beira-Mutare pipeline in Zimbabwe were highly significant, because it was the sole conduit for refined petroleum products to Mozambique and Zimbabwe. Consequences to peoples of the two countries were compounded because of a stressed economy. Terminals: Oil loading terminals in the Middle East, and by inference oil drilling platforms, are "sitting ducks" for an air attack. "The exposure of oil loading terminals in the Persian Gulf suggests that the most effective way to cripple oil trade from the Middle East would be aerial attack on the principal oil ports and offshore loading terminals up and down the Gulf." Terminal repairs range from upwards of one year or more. Pipelines may be repaired relatively quickly, but destruction of pumping stations could put the entire system out of action for weeks or months depending on the factors mentioned above. Loss of oil supplies may be offset because of the ease of handling oil, the ability of producers and consumer states to swap oil, and the use of alternative pipelines. Loss of gas supplies is another matter. Reconnection and restoration of gas supply after a terrorist disruption is far more complex than for oil. If the length of repair time on land is uppermost in a terrorist's mind, would he/she select pipelines, pumping stations, storage tanks, or oil terminals? Probably, none of the above, for if he/she has good, oil system intelligence he/she would more likely target key points in the electrical control systems for petroleum and water pumping stations. Such a choice and follow-through would affect most other facilities. The best way to cripple Hydrocarbon Man is to pull the plug on Kilowatt Man.

Conclusions

Where does the evidence lead that might answer why terrorists do not attack oil pipelines in the Middle East? What is to be made of the silence? What conclusions may be drawn? Conclusions are only as valid as information is available and reports of terrorist incidents are accurate. Corporations for any number of reasons are reluctant to report losses to the public. Governments may not want to report incidents, and if they do, they want to determine how incidents come across to the public. Incidents may be reported one way for domestic consumption and another for international listeners or readers. Middle East states may be much more concerned to have incidents attributed to transnational terrorists than to domestic dissidents. Middle East officials, like those of the West, know how to "wag the dog". Much of the literature assumes that all energy infrastructures are vulnerable to terrorist attack, not only oil. But "vulnerability" is an oil-slick word. Because no energy system is 100% safe from terrorist attacks, are such systems therefore vulnerable? Pipelines by their length alone make them appear vulnerable to terrorists, but pipelines under the right conditions may be the least vulnerable physical targets. What is needed is a definition of vulnerability that measures the notion at all segments and points in the system. Elements to be measured would include redundancies, alternative throughputs, interchangeable parts, numbers of repair crews, and armed protection of critical stations. Therefore, "total vulnerability" of a system is not as

important as segmented vulnerability. Saying that an entire system, at least in the case of oil, is vulnerable is probably inappropriate, except in those rare instances where alternatives are nonexistent. Statements in the record about the vulnerability of Middle East oil facilities need to be examined carefully. Another idea pervading the thinking on pipeline protection is that the system is vulnerable, if there is not a continuous throughput of the product. The argument follows along these lines: The system that directs oil flowing through pipelines from wellhead to storage field to on-load shipping terminal to tanker to off-load terminal to storage tank to refinery to truck to the consumer is vulnerable unless the flow of oil is continuous, that is without interruption of any kind. This idea is supported by the otherwise fine writing of Lisa Maechling and Yonah Alexander who remark: "While the flow of oil from fields to tankers can be slowed down, it cannot be stopped without bringing to a halt the flow of oil from the wellhead." Granted, there may be segments where pipeline pressure and continuous flow are necessary, but accidents happen, full storage tanks may not be available, and other wells may be put on line only at great expense. Continuous flow and vulnerability are often joined in order to press the need for action, be it armed intervention or financial assistance. Alarms about this type of vulnerability are more appropriate, if at all, in the long-term. There is no single answer to whether Hydrocarbon Man is the next terrorist target. Answers are a function of the point of view of the intelligence analyst, corporate or government official, terrorist leader, or other interested party. The literature reviewed, the evidence as it were, leads to the following conclusions as to what is of primary importance to the oil corporation and to the terrorist.

Corporate Protection

Oil companies must deal with multiple threats to the flow of oil. When the terrorist is the perceived threat, the primary concern is whether the flow of oil is protected from interruptions. The issues are those of safety and security to pipelines in the broadest sense of the word. Protection is the operative word in their war against terrorism, and it comes in many guises: Superpower protection of Middle East oil flow is the most obvious protection available to states surrounding the Persian Gulf and the Caspian Sea. The enormous wealth and influence of multinational oil companies allows actions to be taken that make oil pipelines less desirable targets of terrorists. Oil companies and governments are able to augment armed forces with proxies—private security armies—to protect vulnerable oil targets. Oil firms are able to reduce risks to investments from terrorism because insurance is available to fund the rapid replacement of destroyed or damaged pipelines. Complexity of the oil network makes the petroleum infrastructure more secure from terrorist attack than other sectors of the world economy. But the ultimate argument for protection against terrorist attacks on the Middle East oil structure reportedly came from a senior Western oil executive who said: "Terrorism? Who's going to blow up their own pipeline?"

Terrorist Selection

Selection is the operative word for terrorists. At this point it would be worthwhile for a group of analysts to draft a scenario by selecting oil facilities and terrorist organizations and then go through the target acquisition process to determine which facilities would filter to the bottom as prime candidates for a terrorist attack. Such an exercise is of course beyond the scope of this paper and must be left to government agencies with the resources to carry off such an undertaking. The most that can be done is to review the materials presented and make judgments based on them. Consequently, factors in the target selection process lead to the following conclusions when viewed, in so far as possible, from the terrorist perspective: The oil infrastructure of the Middle East with its various protective measures has made oil pipelines less attractive targets. As oil targets and other potential targets make their ways through the terrorist target selection process, other targets emerge with more appeal. The complexity of the oil infrastructure, while in many ways appealing as a target, removes oil pipelines from consideration. The funding of terrorists' activities by the oil-producing states effectively removes oil pipelines from initial consideration in the target selection process. Both corporations/governments and terrorists have reasons to believe, as in the past, that oil

pipelines will not experience long- or even short-term disruptions. Corporations have the protective wherewithal to support their belief; terrorists have more important targets in sight. In battle, it is a mistake to underestimate the enemy. Constraints, capabilities, and conditions are constantly in flux. There is no one answer from open sources or silent caves surrounding Middle East oil kingdoms as to whether Hydrocarbon Man is the next terrorist target or not, but if an answer is required, it would be, "unlikely in the near future". All forms of vulnerability create various degrees of stress, fright and terror in the minds of employees, shareholders, and directors of the firms involved. The venue of the oil production business is permeated with a degree of danger and terror perhaps unknown to other companies. Do company related individuals think differently about risk, exposure, and vulnerability when faced with the organized and resourced cells of state sponsored terrorism? Or, is a terrorist incident an accident with a different name, and therefore it is business as usual? It's a curious idea, this conducting the oil business as usual in a terrorist environment. It requires a look beyond the points already discussed.

A Strategic Framework

Pipelines are always vulnerable. The absence of a history of terrorism or lack of an acute terrorist threat does not make them any less vulnerable. They are always vulnerable to a terrorist attack, because terrorists have the ability to insert the element of surprise. The inability to calculate surprise results in costly overreaction by governments and corporations when taken by surprise. In the course of explaining why terrorists have given Middle East oil pipelines "the silent treatment," answers have touched upon a number of components: infrastructure, threats, vulnerabilities, protections, targeting, and analysis of risk. None of these topics by themselves explain the silence. What explanations have lacked up to this point is a broader strategic framework that would pull together and connect as many of the components as possible. Fortunately, such a framework exists in systems theory and was applied to an energy strategy study conducted in the early 1980s by the Rocky Mountain Institute for the US Department of Defense. Now available in a new 2001 edition on the Web, the study has many implications for protection of oil pipelines in the Middle East. The crude oil throughput infrastructure is designed on the principle of efficiency. Petroleum stays in the ground until needed, because, "oil appreciates faster in the ground than it does in a Swiss bank". It takes about three months for oil to get from the wellhead to the end user. Nearly two months of world oil use is in the pipeline during the three months. "The oil system is rather 'tightly coupled' without large reserves of storage to draw upon in an interruption. This money-saving (but vulnerability-increasing) practice is most striking in the case of refineries, which normally keep only a three to five day' supply on hand and thus wither rapidly if the crude supply is interrupted." It is not just refineries, but all components of the oil business are designed for efficiency: wellheads, drilling rigs, pipeline, storage tanks, tankers, offshore production platforms, plans, methods, and people. Oil components are currently designed for the kind of reliability that makes them efficient, but therefore vulnerable to terrorist attacks. The most effective strategic principle in the terrorist arsenal is surprise, and to extend the metaphor, terrorists have surprise secreted in millions of barrels per day. Surprise is the unknown risk factor. This is why oil pipelines can never be 100 percent safe, but why they should be made as resilient as possible. Thus, it is the surprise principle vs. the efficiency principle. In using surprise the terrorist in asymmetrical warfare employs economy of force by necessity. Surprise is a force multiplier due to the inherent vulnerability of efficiently designed and maintained pipelines. The resilient properties sought in response to surprise are functions of causes inside and outside the system. The Lovins identified from bio- and eco-systems the resilient properties necessary for oil and gas systems. These properties are reduced to principles and applied to the problem of designing resilient energy systems. Thus, "The more resilient, slightly less 'efficient' strategy wins an even richer prize: minimizing unexpected and disastrous consequences which can arise when the causal structure of a real system turns out to be qualitatively different than expected." To compensate for the lack of inside design resiliency, private and government owned pipelines require a greater degree of external protection than would otherwise be necessary. The greater protection comes at a high

cost, eg: in the form of foreign military forces, private armies, financial incentives, and insurance. To say that NATO, the Gulf Cooperation Council, and US provide protection to efficient oil system misses the point. Its seems reasonable that fewer armed forces would be required in the Middle East, if the oil infrastructure were designed with more resilient properties. Furthermore, one of the thirteen properties sought in resilient energy systems is that of limited demands on social stability. This property is particularly apropos to the presence of US forces in Saudi Arabia and to tensions between social classes in the country, for as one observer has noted: "It should not be necessary to deploy force to protect (an energy technology. It) … should be able to survive and recover from periods of political breakdown, civil unrest, war and acts of terrorism. The system should be unlikely to become a target of protest; should enhance, not threaten social stability."

Summary

It was George Bernard Shaw, British playwright and critic, who said: "Silence is the most perfect expression of scorn." The deafening silence surrounding oil pipelines in the Middle East expresses the scorn of transnational terrorists who are currently strapped by target selection constraints, the need for financial assistance, and the manifold protection available to big oil corporations and Arab governments. The forbearance of terrorists is due to their greater open dislike and disrespect for modern Western nations whose civilians make richer targets. The armor of Hydrocarbon Man may protect him a little while longer against the chilling terror that lies behind the crescent smiles of the new jackals.

Israel Identifies The Perfect Terrorist

http://www.strategypage.com/htmw/htterr/articles/20100726.aspx

Israel and the United States have collected a lot of information on how Islamic terrorists operate. A lot of this data will remain secret for some time, but new tidbits are made public from time to time. The latest revelation is actually confirmation of many older bits of information. That is, the suicide bombers themselves are usually persuaded, not forced, to carry out their missions. Israel, for example, has captured at least fifteen suicide bombers who did not (could not or would not) carry out their mission. These terrorists were extensively questioned, as were family and friends. The Israelis also collected similar data on dead suicide bombers, including email or tapped phone calls and other material the bomber left behind. The Israelis, like the suicide bomb organizations, came to the same conclusion; that certain personality traits make someone very willing to carry out these attacks. And the chief characteristic is usually not fanaticism, but deference to authority and public opinion. This is one reason why the Palestinian media campaign to glamorize suicide bombers is so dangerous. Over a decade of this propaganda provides a large supply of potential suicide bombers, and even assists them in contacting terrorist groups to sign up. For terrorists unable to find these impressionable volunteers (who are easy to train and control), there is another pool of recruits. These are the deranged and impulsive. This is why you will occasionally hear about dead suicide bombers who were mental patients, or widows of terrorists. The widows are told, quite accurately, that they faced a dim future and that becoming a martyr for the cause was a good move. In these cases, the cash paid (by terrorist organizations) to the families of suicide bombers helped with the recruiting. Terrorists consider suicide bombing a very effective weapon. But to make it work they need volunteers who are reliable and able to learn the techniques of getting to the target undetected, and then actually setting off the bomb. You don't hear much about it, but many (in some situations, over a third of) suicide bombers refuse to go through with it. Thus the many "handlers" that work closely with the suicide bomber, until the final moment. If a suicide bombing campaigns goes on for a while, only killing Moslem civilians, there will be a shortage of competent volunteers. All those dead Moslem civilians gives the attacks a bad reputation. That means fewer successful suicide bombing missions, and more captured (or surrendered) bombers, which results in more suicide bombing cells (and their hard to replace management and technical personnel) are

destroyed. Israeli police have long known how the terrorist groups recruit, equip and deliver bombers. This information was obtained from Palestinian publications, captured documents and interrogations of Palestinian militants. Eventually, the Israelis found several weaknesses in the suicide bomber system. The first one discovered was transportation. Most of the suicide bomber volunteers lived in the West Bank, and had to be transported to areas with a large Israeli population. As the Israelis discovered, most of the cost of each suicide bombing went to paying a driver or guide to get the suicide bomber close to a target area. Using a system of checkpoints and profiling, the Israelis began to catch most of the suicide bombers. But some still got through. So the Israelis went back to a 1990s technique that, while it worked, was widely criticized as unfair and inhumane. Namely, the family home of the suicide bomber was destroyed. The bomber usually came from a family that housed several generations in one house (which was often the family's major asset. Before resuming this practice, the family actually profited from the bombing, receiving up to $30,000 for their son (or daughter's) sacrifice. Soon after the house destruction policy went into effect, there were reports of family's forcibly restraining adult children from joining the suicide bombing effort (or reporting the kid to the Israelis, who would then arrest the bomber volunteer.) While that dried up the source of the more competent bombers, it did not eliminate all the bombings. So Israel cut the West Bank off from Israel. Thus for the last five years, there have been hardly any attacks. Because the Palestinians continue their suicide bomber recruitment program (especially on children's television shows), the Israelis don't plan on reopening their borders to the Palestinians any time soon.

Man-Portable Air Defense Systems: A Persistent and Potent Threat

Source: http://www.stratfor.com/analysis/20100129_manpads_persistent_and_potent_threat

Summary

For more than three decades, shoulder-fired surface-to-air missiles have been used to attack civilian as well as military aircraft. While counterproliferation efforts worldwide have focused attention on the threat — and managed to contain it to some extent — these "man-portable air defense systems" remain highly prized and sought-after by militant groups. This is because they provide a cheap, simple and reasonably effective way to bring down an airplane full of people. And while missile technology continues to be refined, counterproliferation efforts are being offset by arms transfers on the black and gray markets.

Analysis

On Dec. 11, 2009, authorities seized an Ilyushin-76 cargo plane in Bangkok that contained 35 tons of North Korean-produced military weapons, including North Korean variants of the Chinese HN-5 "man-portable air defense system," or MANPADS, which were being shipped to Iran. The HN-5 — a copy of the Soviet SA-7 (a first-generation MANPADS) — is less advanced than the MANPADS Iran produces on its own, which are based on later Chinese designs. So, the question was: Why would Iran be importing less advanced missiles? Or was Iran planning to provide North Korean missiles to proxy militant groups, thereby gaining plausible deniability in case the missiles were ever used or seized? Iran has reportedly supplied MANPADS from a variety of sources to Hezbollah, the Islamic Courts Union of Somalia (forerunner of al Shabaab) and the Taliban. It is possible that the North Korean MANPADS were also bound for Iranian proxies Hezbollah and Hamas or to other hostile actors as a way to retaliate against Western powers operating in the region who are opposed to Iran's nuclear program. In any case, it is clear that the shipment of MANPADS, which have been used by militants to attack civilian airliners and are high on the list of counterproliferation efforts worldwide, was not an encouraging sign for the traveling public.

Since 1973, at least 30 civilian aircraft have been brought down and approximately 920 civilians killed by MANPADS. While the number of such attempts declined in the last decade, militant groups are still trying hard to get their hands on the weapons, which are relatively cheap, easy to operate and provide a considerable amount of bang for the buck.

What They Are and How They Work

MANPADS are shoulder-fired, surface-to-air anti-aircraft missiles that come in a variety of models. They were developed after the end of World War II, when U.S. military planners realized the need for a weapon that could provide better defense against attacks by aircraft flying at high speeds low to the ground. Machine guns simply did not have the effective range, accuracy or velocity to address such threats. In 1948, the U.S. Army began researching and developing a weapon that could be more effectively used by infantrymen against aircraft, but it was not until 1967 that the first shoulder-fired anti-aircraft missile was fielded. This was the U.S.-manufactured FIM-43 Redeye tactical missile. The Soviets soon followed with their SA-7 Grail (Strela-2) missiles, introduced in 1968, which borrowed heavily from the Redeye design. In 1972, the improved U.S.-manufactured Redeye II gave rise to the FIM-92 Stinger missile, which, like the Soviet SA-7s, has been updated many times over the years. The British introduced their Blowpipe MANPAD in 1972. In the years since, many more versions of the weapon have been developed by other countries.

By definition, MANPADS are designed to be man-portable. This means that the systems usually weigh about 40 pounds and are balanced on and fired from the shooter's shoulder. The missile is generally stored in and launched from a narrow tube that averages roughly five feet in length and about three inches in diameter. The system generally includes a battery and often an ejection motor. While the guidance mechanism within the missile itself can be quite complex, MANPADS are designed to be operated in the field from the front lines, so

durability is an important part of the design. A simple targeting interface makes most MANPADS relatively easy to operate. MANPADS use a variety of guidance systems. The most common, perhaps, is infrared (IR) guidance, in which the missile seeks the hot exhaust from an aircraft's engine. Older models are relatively easy to decoy if the target is aware and equipped with flares. Newer IR models are more difficult to decoy. In the design of the original MANPADS, such as the SA-7 and the Redeye, the IR seeker had to have a relatively clear line of sight to the rear aspect of an aircraft and its exhaust, limiting the missile's engagement envelope considerably. Newer models have far more sophisticated and sensitive seekers, allowing them to be targeted and fired from a much wider area. Other guidance methods include command line-of-sight guidance, in which the operator uses a radio control to fly the missile into the target. A third type is laser-beam guidance, in which the operator guides the missile by pointing a laser at the target. The warheads themselves weigh only a few pounds. Most are armed with a proximity fuse and employ both explosives and fragmentation to puncture the soft skin of an aircraft. Generally, the later the design the more lethal the warhead.

Usefulness as a Weapon

MANPADS are also very cost-effective. They can be bought on the black market for prices as low as $5,000 (for an old SA-7). A new third-generation missile, like the Russian SA-16, can cost anywhere from $40,000 to several hundred thousand dollars. Performance varies considerably by type. The SA-7 has a kill zone with an upper limit of 4,290 feet, while some newer models can reach altitudes of over 12,000 feet. The average range of MANPADS is about three miles. As for the vulnerability of large commercial aircraft, which generally cruise at around 30,000 feet, the weapon is most effective during the takeoff and landing portions of a flight, or when aircraft are operating at lower altitudes. MANPADS are not without limitations. Some research suggests that battery life makes the weapon obsolete after about 22 years. Missiles treated roughly, stored poorly and not maintained well may not last anywhere close to that long. Nevertheless, the two SA-7s al Qaeda used to target an Israeli civilian flight over Mombasa, Kenya, in 2002 were 28 years old and fully functional (despite the fact that they did not hit their target). Since replacement batteries can be found on the black market, battery life is not necessarily a key limiting factor. Perhaps the most limiting factor has to do with the kind of aircraft being targeted. As MANPADS were developed and refined for military use, so were countermeasures for military aircraft. Due to budget constraints, however, most commercial airliners do not have these defensive military systems, which can alert a pilot that a missile has been launched so proper action can be taken, including evasive maneuvers and the deployment of IR flares to decoy the missile or lasers to blind the seeker. Industry estimates indicate that outfitting and maintaining the entire U.S. airline fleet with countermeasures that could foil missiles would cost $40 billion. One airline company that does have countermeasures on all of its aircraft is Israel's small state-owned airline El Al. Similar countermeasures were likely responsible for thwarting the previously mentioned al Qaeda attempt in 2002 to down the Israeli airliner (owned and operated by a different Israeli carrier) taking off from Mombasa. The missiles missed their target, and neither the plane nor its passengers were harmed. Because of the high cost of such defensive systems, however, the bulk of the civilian aviation fleet worldwide remains undefended and vulnerable to MANPADS.

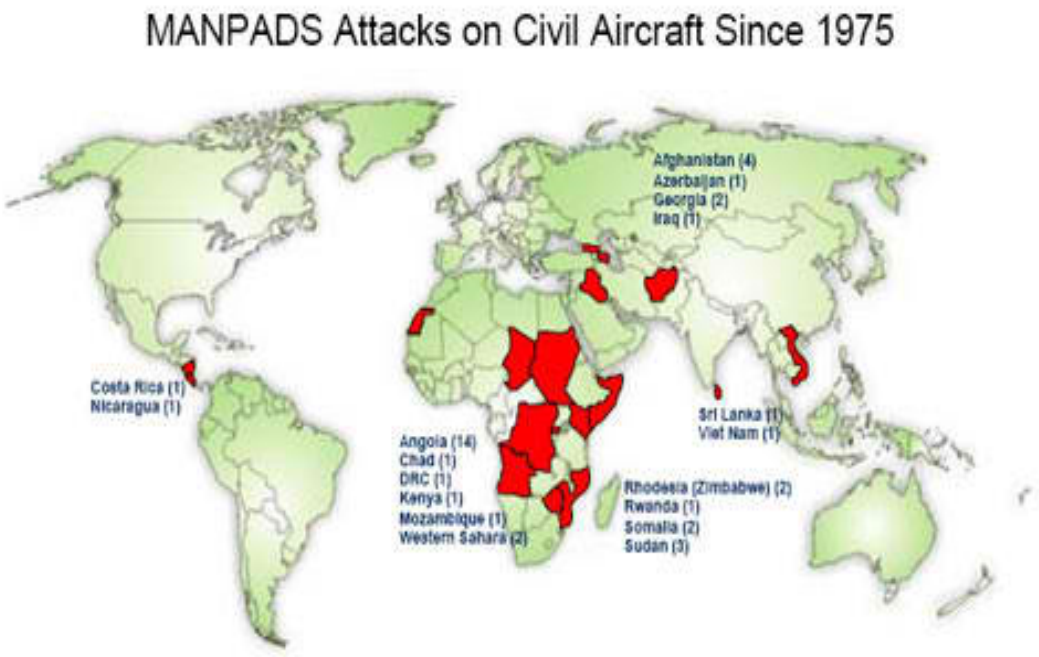
Use in War Zones

During the Cold War, the United States and the Soviet Union were very generous in providing MANPADS to their allies and proxies. The Soviets armed the North Vietnamese with SA-7s, and the United States gave about 900 Stingers to Afghan mujahideen fighters who, between 1986 and 1989, used them against the Soviets. MANPADS alone are credited with downing an estimated 269 Soviet aircraft in Afghanistan during that period. Since their introduction in the late 1960s, MANPADS have most often been used against military targets in active war zones, especially in Vietnam in the early 1970s, Afghanistan in the 1980s, Angola during its civil war from 1975 to 2002 and in the Persian Gulf War in the early 1990s.

In fact, 80 percent of U.S. aircraft lost in Operation Desert Storm were reportedly downed by MANPADS. In May 2002, al Qaeda operatives tried unsuccessfully to shoot down a U.S. fighter jet with an SA-7 as the jet took off from Prince Sultan Air Base in Saudi Arabia. More recently, coalition aircraft in Iraq have come under fire from insurgents armed with shoulder-fired missiles, including a C-130 cargo plane in 2006 that was carrying four members of the U.S. House of Representatives. Onboard countermeasures enabled the military aircraft to successfully evade what was thought to have been an SA-18 missile. The Liberation Tigers of Tamil Eelam also used shoulder-fired missiles in their war against the Sri Lankan government, and Chechen rebels have successfully employed them in the Caucasus against Russian military aircraft.

Civilian Attack History

The first known cases of attempted MANPADS attacks against civilian aircraft were in 1973 in Rome. In both January and September of that year, Black September militants attempted to strike Israeli flights, one of which was carrying then-Prime Minister Golda Meir. Both attempts were thwarted in their final minutes. In the January case involving Meir's plane, the militants were positioned around the airport with the weapons but were caught before her plane touched down. In the second attempt, police raided the militants' apartment as the militants, who had positioned themselves outside on the balcony, prepared to shoot at the plane as it taxied down the runway. Two years later, the first successful MANPADS attack against a civilian aircraft came in the form of an SA-7 missile launched by North Vietnamese forces against a Douglas C-54D Air Vietnam flight, resulting in the deaths of all 26 passengers and crew members. One of the most famous civilian MANPADS attacks was in 1994, when two SA-16s were used to shoot down a Rwandan government flight whose



(Image: Courtesy of Santo Polizzi, Transportation Security Administration)

passengers (and victims) included the presidents of Rwanda and Burundi. This event sparked the Rwandan genocide, which resulted in approximately 800,000 deaths in 100 days. (The identity of those responsible for this attack remains a matter of debate.) Over the years, MANPADS attacks have been plotted and actively attempted in at least 20 countries, resulting in more than 900 civilian fatalities.

MANPADS ATTACKS AGAINST CIVILIAN AIRCRAFT

Includes suspected and attempted attacks

DATE	AIRCRAFT OPERATOR	KILLED	ATTACKER	OUTCOME	LOCATION
1/15/73	Israeli government flight	0	Black September	Foiled in final minutes	Italy
9/5/73	El Al	0	Black September	Foiled in final minutes	Italy
3/14/75	Air Vietnam	26	North Vietnamese forces	Crashed	Vietnam
1/25/76	El Al	0	Baader Meinhof and PFLP	Foiled in final minutes	Kenya
1/29/78	French DC-4	3	National Liberation Front of Chad	Crashed	Chad
9/3/78	Air Rhodesia	48	Zimbabwe People's Revolution Army	Crashed	Zimbabwe
2/12/79	Air Rhodesia	59	Zimbabwe People's Revolution Army	Crashed	Zimbabwe
5/16/81	TAAG - Angola Airlines	4	Unknown	Crashed	Angola
11/8/83	TAAG - Angola Airlines	130	UNITA	Crashed	Angola
2/9/84	TAAG - Angola Airlines	0	UNITA	Landed	Angola
9/21/84	Ariana Afghan Airlines	0	Afghan guerrillas	Landed	Afghanistan
9/4/85	Bakhtar Afghan Airlines	52	Hizb i-Islami	Crashed	Afghanistan
8/16/86	Sudan Airways Flight	60	Sudan People's Liberation Army	Crashed	Sudan
10/5/86	Corporate Air Services	3	Sandanistas	Crashed	Nicaragua
5/5/87	Sudanese Aeronautical Services Airways (SASCO)	13	Sudan People's Liberation Army	Crashed	Sudan
6/11/87	Bakhtar Alwatana Airlines	53	Afghan guerrillas	Crashed	Afghanistan
11/9/87	Air Malawi Shorts Skyvan	10	Mozambique Army	Crashed	Mozambique
4/11/88	Bakhtar Alwatana Airlines	29	Afghan guerrillas	Crashed	Afghanistan
12/8/88	USAID flight	5	Polisario rebels	Crashed	Western Sahara
12/8/88	USAID flight	0	Polisario rebels	Landed	Western Sahara
6/28/89	Somali Airlines	30	Unknown	Crashed	Somalia
12/21/89	Doctors Without Borders	4	Sudan People's Liberation Army	Crashed	Sudan
6/12/90	Aeroflot Uzbekistan	0	Afghan guerrillas	Landed	Afghanistan
2/22/91	Antonov 26 transport flight	47	UNITA	Crashed	Angola
3/16/91	Transafrik Airlines	9	UNITA	Crashed	Angola
4/1/91	ICRC flight	0	UNITA	Landed	Angola
6/10/91	Angolan government contract cargo flight	7	UNITA	Crashed	Angola
9/17/91	ICRC flight	0	Unknown	Landed	Somalia
1/28/92	Azarbaijani government flight	47	Armenian militants	Crashed	Azerbaijan
3/27/92	Armenian Airlines	0	Unknown	Landed	Armenia
9/3/92	United Nations flight	4	Unknown	Crashed	Bosnia
4/5/93	United Nations flight	0	UNITA	Landed	Angola
4/26/93	United Nations flight	1	UNITA	Crashed	Angola
6/25/93	Aeroflot Airlines	0	Abkhazian rebels	Landed	Georgia
7/22/93	Tupelov TU-154 plane	0	Abkhazian rebels suspected	Landed	Georgia
9/20/93	Orbi Georgian Airways	0	Abkhazian rebels	Unclear	Georgia
9/21/93	Transair Georgia Airlines	27	Abkhazian rebels	Crashed	Georgia
9/22/93	Transair Georgia Airlines	108	Abkhazian rebels	Crashed	Georgia
4/6/94	Rwandan Government	12	Rwandan Patriotic Front	Crashed	Rwanda
9/29/98	Lionair flight	55	LTTE	Crashed	Sri Lanka
10/10/98	Congo Airlines	41	Tutsi rebels	Crashed	Democratic Republic of the Congo
12/26/98	United Nations flight	14	UNITA	Crashed	Angola
1/2/99	United Nations flight	8	UNITA	Crashed	Angola
6/8/01	United Nations flight	0	UNITA	Landed	Angola
6/16/01	United Nations flight	0	UNITA	Landed	Angola
6/16/01	United Nations flight	0	UNITA	Landed	Angola
11/28/02	Arkia Israeli Airlines	0	al Qaeda	Missiles missed target	Kenya
11/22/03	DHL cargo flight	0	Iraqi insurgents	Landed	Iraq
3/23/07	TransAVIAexport cargo plane	11	al Shabaab	Crashed	Somalia
8/13/07	Nordic Airways	0	Iraqi insurgents	Missile missed target	Iraq

Not a Magic Weapon

A MANPADS attack does not necessarily mean certain death for an air crew and passengers. In fact, some civilian airliners hit by MANPADS have made emergency landings without loss of human life. In November 2004, a DHL Airbus 300 on a mail delivery flight had just departed Baghdad International Airport. At about 8,000 feet in altitude, the aircraft was struck in the left wing by a shoulder-fired missile. With the aircraft badly damaged and one engine on fire, the pilot was able to maneuver the plane by engine thrust alone and land it safely. Indeed, it is important to remember that the nature of MANPADS severely limits the size of the warhead that the weapon can carry. Designed to destroy low-flying military aircraft menacing troops in the field and densely packed with small amounts of fuel and ordnance, MANPADS are not ideally suited for bringing down large civilian aircraft. Though airliners are hardly designed to absorb a missile strike, the damage a single MANPADS can inflict may not be catastrophic. Nearly 30 percent of planes struck by MANPADS have managed to make some sort of emergency or crash landing without loss of life, despite (in many cases) sustaining significant structural damage to the aircraft. Still, the threat is not insignificant. The other 70 percent of civilian planes that have been hit by MANPADS have crashed, and with

considerable loss of life. Indeed, on departure from or approach to an airport, airliners do have to traverse predictable airspace at low altitudes — well within the engagement envelope of MANPADS. These lower level phases of flight also occur over large swaths of built-up urban terrain that would be impossible to search and secure — even temporarily. And with these flight paths so well established, even casual observers generally have a sense of when and where large, low-flying aircraft can be found at any given time over their city.

MANPADS Proliferation

It is estimated that more than one million MANPADS have been produced by at least 25 countries since the weapon was introduced in the late 1960s. According to a 2004 estimate by the U.S. Government Accountability Office, 500,000 to 750,000 of these weapons are still in existence today, some 6,000 of which are believed to be in the hands of hostile non-state actors. Indeed, militants will always try to illegally acquire weapons of all kinds, and MANPADS are no different. As early as 1974, the Irish Republican Army received Russian SA-7s, said to have been smuggled in by the Libyans in diplomatic pouches. The old SA-7, believed to be the most widely proliferated and copied of the MANPADS, has shown up in Taliban caves and al Qaeda safe houses in Afghanistan. Russian international arms trafficker Viktor Bout (aka the "Merchant of Death") was arrested in March 2008 for attempting to sell 100 MANPADS to undercover agents whom he mistakenly believed were representatives of the Revolutionary Armed Forces of Colombia (FARC). He had previously supplied arms to such diverse groups as the Taliban, the Northern Alliance, Hezbollah and various militant groups in Africa. The cargo plane seized in Bangkok in December 2009 exemplifies the murky maze of the international arms trade through which MANPADS make their way from governments to militants. Reports indicate that it was a very complex arms-laundering scheme, involving dealers in five countries. The main player behind the scheme was allegedly a Kazakh arms dealer named Alexander Zykov, who claimed that the five crewmen on the cargo plane — four Kazakhs and a Belarusian — usually worked for him but were under the employ of someone else for this particular flight. The plane took off from Baku, Azerbaijan, and made stops in Al Fujairah in the United Arab Emirates (UAE) and in Bangkok before reaching Pyongyang, where it acquired its cargo of weapons on Dec. 10 before returning to Bangkok. The weapons, destined for Mehrabad Airport in Tehran, were listed on the cargo manifest as "oil industry spare parts." If the airplane had not been seized in Bangkok, it would have continued on to Sri Lanka, the UAE, Ukraine and then to Iran, where it would have off-loaded the weapons. The United Nations has banned North Korea from exporting weapons, and the United States reportedly tipped off Thai authorities about the questionable cargo on the flight. The trail of MANPADS through the gray and black arms markets is very difficult to trace. Many of these weapons are sold, traded or given away several times over, for ideological or financial reasons, often ending up in the hands of militants. In the case of the two SA-7s used in the attack over Mombasa in 2002, the launchers were produced in Russia

in 1978; the missiles themselves were made in Bulgaria in 1993 and sold to Yemen in 1994. From there, they made their way to Somalia, possibly via Eritrea, and on to Kenya where they were used unsuccessfully against the Israeli airliner. The SA-18 missile used to down a Belarusian cargo plane over Somalia in 2007 was manufactured in Russia in 1995. It was one of a batch of SA-18s sent from Russia to Eritrea, some of which were "turned over" to al Shabaab militants in Somalia. Al Shabaab then used the SA-18 against the cargo plane as it departed Mogadishu, killing 11 people. At least nine currently active non-state militant groups, based on credible media reports, are believed to possess MANPADS. There are more than a dozen other groups, such as FARC, that have been working hard to obtain them and probably have, though there is no evidence that they now have them in their arsenals. It is difficult to know if a group really possesses MANPADS unless they use them and the remnants are recovered and linked to the group. Also, given the nature of the black and gray arms market and the roughness with which the weapons are often handled and stored by non-state actors, the functionality of the missiles reportedly in a group's possession is impossible to assess. The following militant groups are reported to possess MANPADS:

- Al Qaeda
- Al Shabaab
- Chechen rebels
- Hezbollah
- Iraqi insurgents
- The Irish Republican Army (IRA)
- Kurdistan Workers' Party (PKK)
- The Taliban
- The United Wa State Army in Myanmar

Many militant groups have used MANPADS against civilian aircraft since the first attempt in 1973. Some of these groups, such as the National Union for the Total Independence of Angola (UNITA) and Baader Meinhof, are no longer active while other groups, such as al Qaeda and al Shabaab, currently pose a threat. Al Qaeda's unsuccessful use of MANPADS in 2002 against the Israeli airliner over Mombasa was a failure likely caused by countermeasures on the targeted aircraft rather than shooter error or technical malfunction. The most recent MANPADS attack that resulted in loss of life was the strike by al Shabaab over Somalia in 2007 against the Belarusian cargo plane.

Counterproliferation Efforts

The threat from MANPADS has not been ignored. In December 2000, 33 countries (the number currently stands at 40) signed the Wassenaar Arrangement, a non-binding agreement to sell or transfer MANPADS only to other governments (who may not necessarily be a party to the agreement) and only after determining that the buying country would use the weapons only for legitimate military purposes. The United States has made a concerted effort to secure, buy back or destroy MANPADS that lie in loosely guarded arsenals of various countries. In Afghanistan, after the Soviet-mujahideen conflict, the United States deceptively shipped replacement batteries to the mujahideen that were, in fact, designed not only to not work but also to short out the weapons' electronics system and render them ineffective. In Afghanistan in the 1990s and later in Iraq, the United States bought MANPADS from anyone who would turn them in. The U.S. institutions most actively involved in MANPADS counterproliferation efforts are the State Department's Office of Weapons Removal and Abatement and Office of Conventional Arms Threat Reduction, along with the various offices at the Defense Department that administer the Golden Sentry program. This program monitors international sales of MANPADS to ensure that they do not fall into the hands of non-state actors. Multilateral counterproliferation efforts also have been undertaken, including an agreement by G-8 members at the Evian Summit in 2003 to ban all transfers of MANPADS to non-governmental entities and to assist other countries as needed in the securing or destroying of their MANPADS arsenals. Other international organizations that have taken multilateral steps to counter the MANPADS threat are the Organization of American States, Asia-Pacific

Economic Cooperation and Organization for Security and Cooperation in Europe. Since 2001, with assistance from other countries, the United States has destroyed 30,000 MANPADS in more than 25 countries that have asked for assistance in counterproliferation efforts. These countries include Afghanistan, Cambodia, Chad, Cyprus, Liberia, Nicaragua, Sudan, Ukraine and various countries in the Balkans where there was thought to be an excess number of weapons that were poorly controlled or in danger of being sent elsewhere. For fiscal year 2009, the United States appropriated $47 million for use in destroying "at-risk" weapons (those that are in excess, are not adequately guarded or are obsolete), including MANPADS. The 2010 budget proposal called for nearly twice that amount. Of course, not all of the remaining 6,000 loose MANPADS are likely to be functional, which depends on when they were made and how well they have been stored and maintained. However, MANPADS are designed to be used and stored in rough conditions, so many of the loose weapons probably do still work. Moreover, even as some of the older MANPADS become dysfunctional, various MANPADS-producing countries are still distributing them to hostile actors through illegal transfers and the gray market (MANPADS-producing countries noticeably absent from the Wassenaar Arrangement are China, Egypt, Iran, North Korea, Pakistan, Singapore and Vietnam).

The Current Threat

From 2000 through 2009, attempts to use MANPADS against civilian airliners were down about 66 percent compared to the previous decade. Despite the decline in the number of attacks, however, the proliferation of MANPADS among non-state actors remains a problem, as shown by the following incidents:

- May 2009: Four men in New York were arrested for plotting to shoot down a U.S. military cargo plane with a fake Stinger they had acquired from undercover agents.
- June 2009: The U.S. Department of Homeland Security canceled Delta's inaugural flight from Atlanta to Nairobi over concerns of a MANPADS attack.
- July 2009: It was revealed that a FARC commander was negotiating with Venezuelan contacts to obtain Russian SA-24s that Caracas had recently acquired from Moscow.
- August 2009: A Syrian arms trafficker was extradited to the United States for selling SA-7s to undercover agents posing as FARC representatives. The missiles were being housed in a Hezbollah warehouse in Mexico.
- September 2009: During national elections in Germany, German airports were on heightened alert after intelligence information raised concerns of an al Qaeda-linked MANPADS attack against civilian aircraft.
- October 2009: An unconfirmed press report indicated that Hezbollah was in possession of Iranian-produced MANPADS (though, as noted previously, Hezbollah has had MANPADS in its arsenal for some time).
- November 2009: A U.S. indictment charged several people with conspiring to send Stingers from Philadelphia to Syria and Hezbollah.
- December 2009: Another unconfirmed press report stated that Hezbollah was buying MANPADS from Albania.
- January 2010: A Spanish judge revealed that the Basque separatist militant group ETA had unsuccessfully tried to shoot down the Spanish prime minister's plane with a shoulder-fired missile in 2001.

Nevertheless, it is important to remember that MANPADS in the hands of a militant group do not necessarily mean the weapons will be used against civilian airliners. FARC, for example, which reportedly possesses MANPADS, does occasionally shoot down government anti-drug airplanes flying low over the jungle canopy. But FARC, like certain other militant groups, has no vested interest in shooting down a civilian airliner and dealing with the international fallout, especially as it works to strengthen its international ties. FARC has the capability but not the intent. Other groups like al Qaeda, which has used MANPADS before, have the capability and the intent, if not often the opportunity. Since 9/11, al Qaeda prime has been relegated to the tribal areas along the Afghan-Pakistani border, far removed from the lower-

altitude approach and departure paths that put Western airliners within MANPADS range. Although al Qaeda's last known MANPADS attack against a civilian aircraft was unsuccessful (over Mombasa in 2002), a MANPADS in the hands of a lone-wolf jihadist or a grass-roots al Qaeda franchise group such as al Qaeda in the Arabian Peninsula remains a significant concern. The 50 attempts and successful attacks that have occurred since 1973

testify to this ongoing threat. Thus, while the international community has made strides in its counterproliferation efforts, civilian aircraft will remain vulnerable to MANPADS as long as some nations continue to export the weapons to hostile actors and as long as the weapons can be obtained from arms traffickers or on the gray and black markets. And although certain defensive measures are being taken by the airlines, nearly all civilian carriers have not sufficiently equipped their airplanes to effectively evade anti-aircraft missiles. It is important

to keep in mind that, once successful, terrorist tactics are usually refined and employed again. Although the first successful MANPADS strike against an airliner was conducted by units of

the uniformed North Vietnamese Army and not a non-state actor, the lessons from that strike and the many that have followed are not lost on militants, who are nothing if not adaptive. The MANPADS threat may have lessened over the last 10 years, but it will undoubtedly continue into the foreseeable future.

Muslim bus drivers refuse to let guide dogs on board

Source: http://www.dailymail.co.uk/news/article-1295749/Muslim-bus-drivers-refuse-let-guide-dogs-board.html#ixzz0uCYlvapa

Blind passengers are being ordered off buses or refused taxi rides because Muslim drivers or passengers object to their 'unclean' guide dogs. One pensioner, a cancer sufferer, told how had twice been confronted by drivers and asked to get off the bus because of his guide dog, and had also faced hostility at a hospital and in a supermarket over the animal.The problem to carry guide dogs on religious grounds has become so widespread that the matter was raised in the House of Lords last week, prompting transport minister Norman Baker to warn that a religious objection was not a reason to eject a passenger with a well-behaved guide dog. 'Stunned': George Herridge, 73, was twice asked by bus drivers to leave their vehicles because of his guide dog, a black Labrador. While drivers can use their discretion to refuse to carry non-disabled passengers with dogs, they are compelled to accept guide dogs under disability discrimination law. Yesterday both the Guide Dogs for the Blind Association and the National Federation of the Blind confirmed the problem was common, and, according to the latter organisation was 'getting worse'. The tension stems from a strand of Islamic teaching which warns against contact with dogs because the animal's saliva was considered to be impure, the Muslim Council of Britain said. It urged Muslims to show tolerance and common sense over the issue. 'We need to be flexible on this,' a spokesman said. 'Muslim drivers should have no hesitation in allowing guide dogs into their bus or car. 'If a dog does lick you, it's not the end of the world. Just go home and wash yourself.' George Herridge, 73, a retired hospital maintenance manager, told the Daily Mail he was 'stunned' to be twice asked by bus drivers to leave their vehicles because of his guide dog Andy, a black Labrador. Mr Herridge, who lives with wife Janet, 69, in Tilehurst, Reading, said that on the first occasion two years ago, he got off at the request of a Muslim driver because some Muslim children on board were 'screaming' because of the dog. He found himself in a similar scenario in May last year, when a Muslim woman and her children became 'hysterical'. Mr Herridge this time refused the driver's request to alight. He complained to the bus company which launched an investigation. It later informed him the matter had been dealt with 'internally'. Jill Allen-King, spokesman for the NFB, said she had been repeatedly left on the kerb by Muslim taxi drivers who refused to take her dog. One cab driver told her he would have to 'go home now and wash myself' when she tried to enter his car with her dog. Mr Baker yesterday warned bus and cab companies that, while there were within their rights to ask a passenger to leave if the dog was causing a nuisance, it was 'much more questionable to be asked to remove a dog for religious reasons'. He added: 'One person's freedom is someone else's restriction.' In 2006, Muslim minicab driver Abdul Rasheed

Majekodumni was fined £200 and ordered to pay £1,200 costs by magistrates in Marylebone, central London, after being prosecuted for failing to comply with the Disability Discrimination Act when he refused to take a blind passenger because her guide dog was 'unclean'.

Muslim Europe: the demographic time bomb transforming our continent

Source: http://www.telegraph.co.uk/news/worldnews/europe/5994047/Muslim-Europe-the-demographic-time-bomb-transforming-our-continent.htm

Britain and the rest of the European Union are ignoring a demographic time bomb: a recent rush into the EU by migrants, including millions of Muslims, will change the continent beyond recognition over the next two decades, and almost no policy-makers are talking about it. The numbers are startling. Only 3.2 per cent of Spain's population was foreign-born in 1998. In 2007 it was 13.4 per cent. Europe's Muslim population has more than doubled in the past 30 years and will have doubled again by 2015. In Brussels, the top seven baby boys' names recently were Mohamed, Adam, Rayan, Ayoub, Mehdi, Amine and Hamza. Europe's low white birth rate, coupled with faster multiplying migrants, will change fundamentally what we take to mean by European culture and society. The altered population mix has far-reaching implications for education, housing, welfare, labour, the arts and everything in between. It could have a critical impact on foreign policy: a study was submitted to the US Air Force on how America's relationship with Europe might evolve. Yet EU officials admit that these issues are not receiving the attention they deserve. Jerome Vignon, the director for employment and social affairs at the European Commission, said that the focus of those running the EU had been on asylum seekers and the control of migration rather than the integration of those already in the bloc. "It has certainly been underestimated - there is a general rhetoric that social integration of migrants should be given as much importance as monitoring the inflow of migrants." But, he said, the rhetoric had rarely led to policy. The countries of the EU have long histories of welcoming migrants, but in recent years two significant trends have emerged. Migrants have come increasingly from outside developed economies, and they have come in accelerating numbers. The growing Muslim population is of particular interest. This is not because Muslims are the only immigrants coming into the EU in large numbers; there are plenty of entrants from all points of the compass. But Muslims represent a particular set of issues beyond the fact that atrocities have been committed in the West in the name of Islam. America's Pew Forum on Religion & Public Life, part of the non-partisan Pew Research Center, said in a report: "These [EU] countries possess deep historical, cultural, religious and linguistic traditions. Injecting hundreds of thousands, and in some cases millions, of people who look, speak and act differently into these settings often makes for a difficult social fit." How dramatic are the population changes? Everyone is aware that certain neighbourhoods of certain cities in Europe are becoming more Muslim, and that the change is gathering pace. But raw details are hard to come by as the data is sensitive: many countries in the EU do not collect population statistics by religion. EU numbers on general immigration tell a story on their own. In the latter years of the 20th century, the 27 countries of the EU attracted half a million more people a year than left. "Since 2002, however," the latest EU report says, "net migration into the EU has roughly tripled to between 1.6 million and two million people per year." The increased pace has made a nonsense of previous forecasts. In

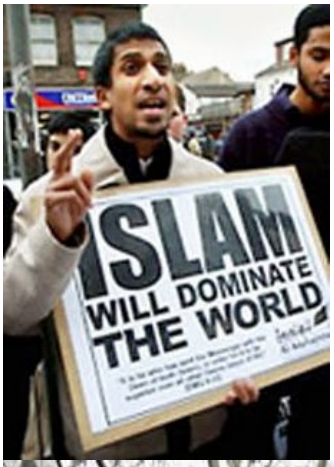
2004 the EU thought its population would decline by 16 million by 2050. Now it thinks it will increase by 10 million by 2060. Britain is expected to become the most populous EU country by 2060, with 77 million inhabitants. Right now it has 20 million fewer people than Germany. Italy's population was expected to fall precipitously; now it is predicted to stay flat. The study for the US Air Force by Leon Perkowski in 2006 found that there were at least 15 million Muslims in the EU, and possibly as many as 23 million. They are not uniformly distributed, of course. According to the US's Migration Policy Institute, residents of Muslim faith will account for more than 20 per cent of the EU population by 2050 but already do so in a number of cities. Whites will be in a minority in Birmingham by 2026, says Christopher Caldwell, an American journalist, and even sooner in Leicester. Another forecast holds that Muslims could outnumber non-Muslims in France and perhaps in all of western Europe by mid-century. Austria was 90 per cent Catholic in the 20th century but Islam could be the majority religion among Austrians aged under 15 by 2050, says Mr Caldwell. Projected growth rates are a disputed area. Birth rates can be difficult to predict and migrant numbers can ebb and flow. But Karoly Lorant, a Hungarian economist who wrote a paper for the European Parliament, calculates that Muslims already make up 25 per cent of the population in Marseilles and Rotterdam, 20 per cent in Malmo, 15 per cent in Brussels and Birmingham and 10 per cent in London, Paris and Copenhagen. Recent polls have tended to show that the feared radicalisation of Europe's Muslims has not occurred. That gives hope that the newcomers will integrate successfully. Nonetheless, second and third generations of Muslims show signs of being harder to integrate than their parents. Policy Exchange, a British study group, found that more than 70 per cent of Muslims over 55 felt that they had as much in common with non-Muslims as Muslims. But this fell to 62 per cent of 16-24 year-olds. The population changes are stirring unease on the ground. Europeans often tell pollsters that they have had enough immigration, but politicians largely avoid debate. France banned the wearing of the hijab veil in schools and stopped the wearing of large crosses and the yarmulke too, so making it harder to argue that the law was aimed solely at Muslims. Britain has strengthened its laws on religious hatred. But these are generally isolated pieces of legislation. Into the void has stepped a resurgent group of extreme-Right political parties, among them the British National Party, which gained two seats at recent elections to the European Parliament. Geert Wilders, the Dutch politician who speaks against Islam and was banned this year from entering Britain, has led opinion polls in Holland. The Pew Forum identified the mainstream silence in 2005: "The fact that [extreme parties] have risen to prominence at all speaks poorly about the state and quality of the immigration debate. [Scholars] have argued that European elites have yet to fully grapple with the broader issues of race and identity surrounding Muslims and other groups for fear of being seen as politically incorrect." The starting point should be greater discussion of integration. Does it matter at all? Yes, claims Mr Vignon at the European Commission. Without it, polarisation and ghettoes can result. "It's bad because it creates antagonism. It antagonises poor people against other poor people: people with low educational attainment feel threatened," he says. The EU says employment rates for non-EU nationals are lower than for nationals, which holds back economic advancement and integration. One important reason for this is a lack of language skills. The Migration Policy Institute says that, in 2007, 28 per cent of children born in England and Wales had at least one foreign-born parent. That rose to 54 per cent in London. Overall in 2008, 14.4 per cent of children in primary schools had a language other than English as their

first language. Muslims, who are a hugely diverse group, have so far shown little inclination to organise politically on lines of race or religion. But that does not mean their voices are being ignored. Germany started to reform its voting laws 10 years ago, granting certain franchise rights to the large Turkish population. It would be odd if that did not alter the country's stance on Turkey's application to join the EU. Mr Perkowski's study says: "Faced with rapidly growing, disenfranchised and increasingly politically empowered Muslim populations within the borders of some of its oldest and strongest allies, the US could be faced with ever stronger challenges to its Middle East foreign policies." Demography will force politicians to confront these issues sooner rather than later. Recently, some have started to nudge the debate along. Angel Gurría, the OECD secretary-general, said in June: "Migration is not a tap that can be turned on and off at will. We need fair and effective migration and integration policies; policies that work and adjust to both good economic times and bad ones."

Muslims are immigrating into England in large numbers and have taken over whole communities. But apparently these immigrants aren't intersted in assimilating into British culture--it looks like their interest is in annihilating.

The following are pictures of Muslims marching through the streets of London, England during a 2006 "Religion of Peace Demonstration."


FREEDOM
GO TO
HELL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Syria bans the burka.

Source: http://www.dailymail.co.uk/news/article-1295665/Banning-burkas-UK-British-says-Green.html#ixzz0uCcRoCAf

Syria has banned the face-covering Islamic veil from the country's universities. The Education Ministry's ban comes as similar moves in Europe - and calls for one in England - spark cries of discrimination against Muslims. An official told local media: 'Our students are our children and we will not abandon them to extreme ideas and practices.' Syria is not a Muslim country. An official at the ministry says the ban affects public and private universities and aims to protect Syria's secular identity. Sunday's ban does not affect the headscarf, which many Syrian women wear. But the burka - the most concealing of the Islamic veils, in which women are forced to peer out at the world from behind a mesh mask - and the niqab, a veil that covers the head and mouth but leaves the eyes exposed - have both been banned. The niqab and the burka are not widespread in Syria, although they have become more common recently. The secular, authoritarian government has recently tried to curry favour by rallying to the cry of moderate Islam at home. But it remains wary of Islamic fundamentalism, which is a threat to its power - especially in education. Last month, hundreds of primary school teachers who wear the niqab were moved to administrative jobs, local media reported.

WHAT THE MINISTER SAID

ADAM BOULTON: There seems to be a bit of a dispute in the government at the moment about this issue of whether or not the wearing of veils and burkas should be banned or not, a lot of public opinion would like to see that ban, seeing it as somehow un-British. Where do you stand on that?

CAROLINE SPELMAN: I take a strong view on this actually. I don't, living in this country as a woman want to be told what I can and can't wear. That is something which both myself and Sayeeda Warsi [minister without portfolio] have argued very strongly that one of the things we pride ourselves on in this country is being free and being free to choose what you wear is a part of that so actually banning the burka is absolutely contrary I think to what this country is all about.

BOULTON: You don't see burkas as being repressive of women? You don't see a lot of men wearing them do you?

SPELMAN: Indeed you don't but I think it is quite interesting, I've been out to Afghanistan and I think I understand much better as a result of actually visiting why a lot of Muslim women want to wear the burka. It is part of their culture, it is part of understanding that they choose to go out in the burka and I think those that live in this country, if they choose to wear a burka, should be free to do so.

BOULTON: You really feel that? You don't think it is a manifestation of a culture which puts women in second place?

SPELMAN: . . . For them the burka confers dignity, it's their choice, they choose to go out dressed in a burka . . . We are a free country, we attach importance to people being free and for a woman it is empowering to be able to choose each morning when you wake up what you wear.

Caroline Spelman *Adam Boulton*

The move came as the pressure was turned up in Britain and across Europe for as similar ban. A British Cabinet Minister today delivered a staunch defence of a woman's right to wear a burka. Environment Secretary Caroline Spelman said women were 'empowered' by the freedom to wear the face coverings. Her comments came after her colleague, Immigration

Minister Damian Green, resisted demands from within the Tory party to ban the burka, which critics claim is a symbol of the oppression of women. Mr Green said a ban would be 'rather un-British' and run contrary to the conventions of a 'tolerant and mutually respectful society'. This is despite a YouGov survey which found that 67 per cent of voters wanted the wearing of full-face veils to be outlawed.

Opposition grows in Europe

Spain is to debate banning the burka this week. The ruling Socialist party has indicated it will support the the opposition popular party, which says the garments are degrading to women. The lower houses of parliament in France and Belgium have approved a ban on face-covering veils, but their upper chambers have to ratify the law. The Netherlands may yet decide on a ban, while Switzerland has outlawed minarets, from where Muslim are called to prayer. Syria has banned the burka and the niqab in its universities. France's lower house of parliament has overwhelmingly approved a ban on wearing burka-style Islamic veils, and Spain and Belgium have similar votes in the pipeline. Tory MPs who back a ban include Philip Hollobone, who has tabled a private member's Bill that would make it illegal for anyone to cover his or her face in public. Mr Hollobone, the MP for Kettering, said that he would refuse to hold any constituency meetings with women wearing burkas. He said: 'This is Britain. We are not a Muslim country. Covering your face in public is strange, and to many people both intimidating and offensive.' But Mrs Spelman yesterday made the counter-argument that wearing a burka is important for women's rights. Normally, the burka is defended on the grounds of religious freedom, but the minister made what appeared to be a feminist argument for the face-covering. She said: 'I don't, living in this country as a woman, want to be told what I can and can't wear. I've been out to Afghanistan and I think I understand much better as a result of actually visiting why a lot of Muslim women want to wear the burka. 'It is part of their culture, it is part of understanding that they choose to go out in the burka and I think those that live in this country, if they choose to wear a burka, should be free to do so. 'We are a free country, we attach importance to people being free and for a woman it is empowering to be able to choose each morning when you wake up what you wear.' French parliamentarians voted last week to outlaw full-face veils, including burkas, in public. Mr Green said he did not think that the French vote for a ban would have an impact on immigration into Britain, as Muslim women move here instead. He said: 'I stand personally on the feeling that telling people what they can and can't wear, if they're just walking down the street, is a rather un-British thing to do. We're a tolerant and mutually respectful society. 'There are times, clearly, when you've got to be able to identify yourself, and people have got to be able to see your face, but I think it's very unlikely and it would be undesirable for the British Parliament to try and pass a law dictating what people wore. 'I think very few women in France actually wear the burka. They [the French parliament] are doing it for demonstration effects. 'The French political culture is very different. They are an aggressively secular state. They can ban the burka, they ban crucifixes in schools and things like that. 'We have schools run explicitly by religions. I think there's absolutely no read-across to immigration policy-from what the French are doing about the burka.' The new head of the Muslim Council of Britain, Farooq Murad, said that Britain was the most welcoming country in Europe for Muslims. He pointed to the spread of mosques and sharia, or Islamic law, as positive signs of the greater freedom Muslims are given in this country. Catherine Heseltine from the Muslim Public Affairs Committee said MPs should not waste their time discussing a ban. She said: 'Britain is a free country. We value our freedoms and we don't want MPs or the government telling British citizens what they can or can't wear. 'How does it hurt anybody else if a woman chooses to wear a small piece of cloth across her face? 'Quite frankly, MPs, there's a £160billion debt; shouldn't they be busier worrying about what they're going to do about that, than a small piece of cloth that a few women choose to wear?' Under the French ban, which is expected to be approved by the country's Senate in September, a woman wearing the burka can be stopped on the street by police and ordered to a police station, where she will be compelled to remove the veil. The woman faces a possible fine. Muslim men who are deemed to have 'forced' their wives or daughters to wear the burka will also be

fined. President Nicolas Sarkozy has said that the burka 'is not welcome' in his country. He claims that it is 'oppressive' to women and reduces them to 'servitude'. He said: 'The burka is not a sign of religion, it is a sign of subservience.'

Reading Terrorists Minds About Imminent Attack

Source: http://www.northwestern.edu/newscenter/stories/2010/07/brainwaves.html

Imagine technology that allows you to get inside the mind of a terrorist to know how, when and where the next attack will occur. That's not nearly as far-fetched as it seems, according to a new Northwestern University study. Say, for purposes of illustration, that the chatter about an imminent terrorist attack is mounting, and specifics about the plan emerge, about weapons that will be used, the date of such a dreaded event and its location. If the new test used by the Northwestern researchers had been used in such a real-world situation with the same type of outcome that occurred in the lab, the study suggests, culpability extracted from the chatter could be confirmed. In other words, if the test conducted in the Northwestern lab ultimately is employed for such real-world scenarios, the research suggests, law enforcement officials ultimately may be able to confirm details about an attack - date, location, weapon -- that emerges from terrorist chatter. In the Northwestern study, when researchers knew in advance specifics of the planned attacks by the make-believe "terrorists," they were able to correlate P300 brain waves to guilty knowledge with 100 percent accuracy in the lab, said J. Peter Rosenfeld, professor of psychology in Northwestern's Weinberg College of Arts and Sciences. For the first time, the Northwestern researchers used the P300 testing in a mock terrorism scenario in which the subjects are planning, rather than perpetrating, a crime. The P300 brain waves were measured by electrodes attached to the scalp of the make-believe "persons of interest" in the lab. The most intriguing part of the study in terms of real-word implications, Rosenfeld said, is that even when the researchers had no advance details about mock terrorism plans, the technology was still accurate in identifying critical concealed information. "Without any prior knowledge of the planned crime in our mock terrorism scenarios, we were able to identify 10 out of 12 terrorists and, among them, 20 out of 30 crime- related details," Rosenfeld said. "The test was 83 percent accurate in predicting concealed knowledge, suggesting that our complex protocol could identify future terrorist activity." Rosenfeld is a leading scholar in the study of P300 testing to reveal concealed information. Basically, electrodes are attached to the scalp to record P300 brain activity -- or brief electrical patterns in the cortex -- that occur, according to the research, when meaningful information is presented to a person with "guilty knowledge." Research on the P300 testing emerged in the 1980s as a handful of scientists looked for an alternative to polygraph tests for lie detection. Since it was invented in the 1920s, polygraphy has been under fire, especially by academics, with critics insisting that such testing measures emotion rather than knowledge. Rosenfeld and Northwestern graduate student John B. Meixner are co-investigators of the study, outlined in a paper titled "A Mock Terrorism Application of the P300-based Concealed Information Test," published recently in the journal Psychophysiology. Study participants (29 Northwestern students) planned a mock attack based on information they were given about bombs and other deadly weapons. They then had to write a letter detailing the rationale of their plan to encode the information in memory.

Then, with electrodes attached to their scalps, they looked at a computer display monitor that presented names of stimuli. The names of Boston, Houston, New York, Chicago and Phoenix, for example, were shuffled and presented at random. The city that study participants chose for the major terrorist attack evoked the largest P300 brainwave responses. The test includes four classes of stimuli known as targets, non-targets, probes and irrelevants. Targets are sights, sounds or other stimuli the person being questioned already knows or is taught to recognize before the test. Probes are stimuli only a guilty suspect would be likely to know. And irrelevants are stimuli unlikely to be recognized. "Since 9/11 preventing terrorism is a priority," Rosenfeld said. "Sometimes you catch suspicious people entering a building. You suspect that they're terrorists, and you have some leads from the chatter. You've heard they're going to attack one city or another in one fashion or another on one date or another. Our hope is that our new complex protocol - different from the first P300 technology developed in the 1980s - will one day confirm such chatter in the real world." In the laboratory setting, study participants only had about 30 minutes to learn about the attack and to detail their plans. Thus, Rosenfeld said, encoding of guilty knowledge was relatively shallow. It is assumed that real terrorists rehearse details central to a planned attack repeatedly, leading to deeper encoding of related memories, he said. "We suspect if our test was employed in the real world the deeper encoding of planned crime-related knowledge could further boost detection of terrorist intentions."

Researching Acoustics For Identifying Land Mines, Roadside Bombs, Suicide Bombers

Source: http://www.medicalnewstoday.com/articles/202564.php

Imagine a tool that uses sound waves to help identify land mines, roadside bombs or suicide bombers. North Carolina State University has received a grant from the U.S. Office of Naval Research to turn that idea into a reality. "The idea is to develop a tool that will identify things that are unusual," says Dr. Michael Steer, Lampe Distinguished Professor of Electrical and Computer Engineering at NC State and primary investigator of the research effort. "As a result of this work, we hope that one day our soldiers will have pocket-sized devices that can warn them of nearby roadside bombs and suicide bombers. If you're a Star Trek fan, we're trying to build a real world tricorder." NC State is the lead institution in a multi-university collaborative effort that has been awarded $4.3 million over the next three years under a multidisciplinary university research initiative grant from the Office of Naval Research. The grant may be extended for an additional two years and $2.8 million. Other institutions that are part of the research effort are Purdue, Georgia Tech and the Colorado School of Mines. NC State researchers will receive approximately $1.9 million over the first three years of the grant. "We hope to advance our fundamental understanding of how sound interacts with air, soil and solid objects - understanding that can be applied to many different areas," Steer says. Specifically, Steer explains that the researchers hope to develop the means to use acoustics to identify objects in the environment and make them vibrate or emit energy so that they can be detected using other tools. For example, Steer says, "we think we'll be able to use sound waves to make land mines vibrate so they can be detected by radar. That would have significant humanitarian applications." Other NC State researchers involved with the project

include Dr. Mohammed Zikry, professor of mechanical and aerospace engineering, and Dr. Hamid Krim, professor of electrical and computer engineering. NC State's Department of Electrical and Computer Engineering and Department of Mechanical and Aerospace Engineering are part of the university's College of Engineering.

New Luggage Inspection Methods Identify Liquid Explosives

Source: http://www.medicalnewstoday.com/articles/202240.php

Liquid explosives are easy to produce. As a result, terrorists can use the chemicals for attacks - on aircraft, for instance. In the future, new detection systems at airport security checkpoints will help track down these dangerous substances. Researchers are currently testing equipment in their special laboratories. To most air travelers, it is an annoying fact of life: the prohibition of liquids in carry-on luggage. Under aviation security regulations introduced in Europe in November 2006, passengers who wish to take liquids such as creams, toothpaste or sunscreen on board must do so in containers no larger than 100 ml (roughly 3.4 fluid oz.). The EU provisions came in response to attempted attacks by terrorist suspects using liquid explosives on trans-Atlantic flights in August 2006. Now, travelers have a reason to hope to see the prohibition lifted. On November 19, 2009, the EU Regulatory Committee of the Member States passed a proposal to this effect issued by the EU Commission. Under the terms of the proposal, the prohibition of liquids will be lifted in two phases. First, beginning April 20 9, 2011, passengers in transit will be permitted to take liquids along with them. Under the second phase, beginning April 20 9, 2013, the limit on quantities of liquids will be lifted altogether. The EU Commission intends to introduce legislation to this effect this August. In the future, security checkpoints will feature equipment that can reliably distinguish between liquid explosives and harmless substances such as cola, perfume or shampoo. This is also the intention of the European Civil Aviation Conference (ECAC), which lays down standardized detection procedures and inspection routines for liquid explosives. The explosives tests are being carried out by the Fraunhofer Institute for Chemical Technology ICT in Pfinztal. The German Federal Ministry of the Interior has officially designated the institute as a German Testing Center. The researchers there are working in cooperation with the German Federal Police. »In our safety laboratory, we can carry out the experiments under all of the safety conditions we would find in the field,« remarks Dr. Dirk Röseling, a researcher at ICT. "Either on their own or at the invitation of ECAC, the manufacturers bring their detection equipment to our lab, where they show us how to operate it and then leave. Then we begin with testing." But how do these experiments work? In their partially remote-controlled experimental facilities, first researchers at the safety laboratories manufacture explosives according to specifications provided by the ECAC. Security services provide the organization with lists of substances to use in manufacturing explosives. Then, the detection equipment must automatically identify the liquid explosive - as well as any harmless substances - as such. For instance, the equipment must not identify shampoo as an explosive and set off a false alarm. Depending on the scenario involved, individualized testing methods and systems are required: If open containers need to be inspected, for example, then the sensors detect the vapors given off. If luggage screeners need to scan unopened bottles in a tub, on the other hand, then x-ray equipment is used. The experts forward the findings of their tests either directly to the manufacturers of the equipment, or to the German Federal Police, which in turn passes the results along to the ECAC. The ECAC, in turn, notifies the companies of whether or not their equipment is suitable for certification. "In the past, luggage

screening has only identified metals and solid explosives. The screening equipment of the future will also identify liquid explosives. Initial tests at the Frankfurt Airport have already successfully been completed," Röseling summarizes. The researcher and his team will present details of the test scenarios and methods at the Future Security conference in Berlin, September 7 to 9, 2010.

Remember Aum Sirynkio?

Source: http://the-end-time.blogspot.com/2010/08/for-there-will-come-false-christs.html; http://en.wikipedia.org/wiki/Vissarion

Sergey Anatolyevitch Torop (Russian: Сергей Анатольевич Тороп), (born January 14, 1961) known by his followers as Vissarion (Виссарион), is a Russian mystic. He founded and heads a religious movement known as the Church of the Last Testament with its head church in the Siberian Taiga in the Minusinsk Depression east of Abakan, in the southern Siberia Kuraginsk district of Krasnoyarsk territory. He has around 4,000 followers (called Vissarionites) in around thirty villages in the immediate vicinity of his base at Sun City, while having approximately 10,000 followers around the world. Vissarion claims to be a

reincarnation of Jesus. He teaches reincarnation, veganism, and the impending end of the world, or at least of civilization as we know it. In May 1990, aged 29, Vissarion claims to have experienced a mystical revelation. He first spoke publicly in Minusinsk on 18 August 1991. He founded the "Church of the Last Testament" (Церковь Последнего Завета Tserokvy Poslednego Zaveta), also known as "Community of Unified Faith". He was born in Krasnodar; after service in the Red Army, he settled in Minusinsk. He worked as a traffic policeman before losing his job in 1989. In 1991 he was "reborn" as Vissarion, the returned Jesus Christ. In his system this does not make him God, but instead the word of God. His religion combines elements of the Russian Orthodox Church with Buddhism, apocalypticism, collectivism, and ecological values. His followers observe strict regulations, are vegans, and

are allowed no vices such as smoking or drinking alcohol. Money is banned. The aim of the group is to unite all religions on Earth.Tiberkul, the settlement in the Taiga, was established in 1994 on a territory of 2.5 square kilometres, and today counts some five thousand inhabitants, largely living autochthonous and on ecological principles. It is centered around the villages of Petropavlovka and Cheremshanka, at ca. 53°53′N 93°45′E / 53.883°N 93.75°E / 53.883; 93.75. The settlement has a three-tiered structure: the Town itself (Abode of Dawn), the Heavenly Abode, and the Temple Peak. Vissarion's sect is estimated to have some ten thousand adherents, with claims of up to 50,000 adherents in eighty-three communities spread over 150 square kilometers. Since 1992, biographer Vadim Redkin has published an annual volume detailing Vissarion's activities. Vissarion has attracted a number of followers from Germany's esoteric subculture, and seven volumes of Vadim's account have been translated into German. In March 2010, UK TV channel, Channel 4 showed an hour long documentary about Vissarion and his followers.

Terrorists probing, planning for new aviation attacks

Source: http://www.9news.com/news/article.aspx?storyid=142042&catid=339

Despite billions of dollars spent on securing our nation's airports since the Sept. 11, 2001 terrorist attacks, experts say terrorists are still testing and targeting aviation security because an attack could kill a lot of people, undermine public confidence and cause significant economic damage. "It remains an incredibly high target for terrorists," Erroll Southers, President Obama's first choice to head the Transportation Security Administration, said. Southers had to withdraw his name from consideration due to political reasons. "It's still vulnerable... and it would be a decisive economic blow to our country." Aviation security experts spoke at homeland security and counterterrorism forum Tuesday at the Aspen Institute which was attended by lawmakers, industry insiders, journalists and the public. Since 1960, there have been more than 90 active attacks by terrorists on airport structures, according to the experts. "What you're seeing here is experimentation on their part to see what they can get through screening. They've been more successful every year getting on planes and that troubles me," Southers said. The experts agreed that aviation security is only as good as its weakest link because once a passenger gets behind security barriers, they can access nearly any airport in the world. Because of that, the experts said that the greatest threat is overseas. Some international airports do not maintain the same security standards as the TSA. Technology is improving by the day here at home to keep passengers safe, according to Southers. The TSA is in the process of installing 1,000 body scanners at more than 50 airports nationwide. Denver International Airport already has several in use. While passengers today can volunteer to go through the body imaging devices, next year they will

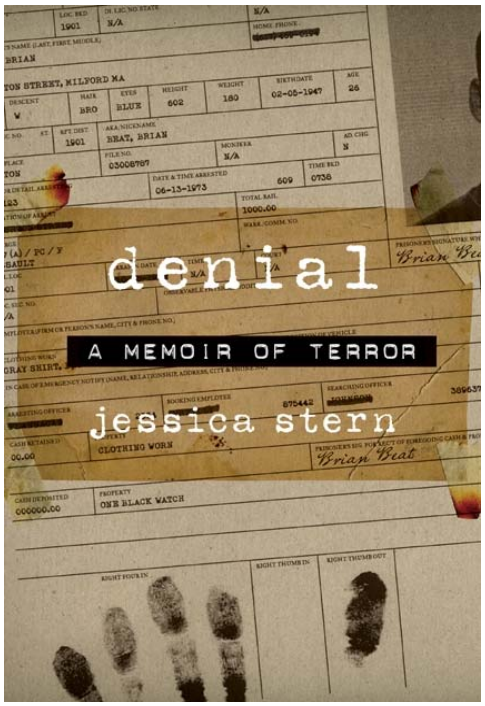
be part of primary screening. New generations of the scanner are expected out soon. "These are quantum leaps forward in terms of imaging technology and they do a terrific job. Five years ago, we would have thought this was the Holy Grail. But the key is that we have a much better system today," James May, CEO of Air Transport Association of America, Inc, said. On Aug. 1, all cargo and freight placed in the bellies of planes must be screened for explosives, according to a law passed by Congress three years ago. Narrow body aircraft are already complying with the law 100 percent and wide-body planes will meet the goal by August, according to May. He says it will take longer for international carries to comply with the rule. The experts think behaviour detection officers with the TSA should also be used more aggressively in parking lots, baggage areas, check-in lanes and other airport locations, despite recent government studies that show the program does not work. Behaviour detection officers look for people acting suspiciously or nervously. Those physical cues require the passenger to undergo further screening. While BDOs cannot claim to have stopped any terrorists, they have identified a number of criminals, drug traffickers and a number of people using fraudulent identifications, according to Christopher Bidwell, vice president of security for the Airport Council International. Other experts agree that the behaviour program, still in its infancy, needs to be given more time to work. "We do have to do a better job of finding the bomber instead of the bomb," Souther said.

Private Trauma Gives Jessica Stern Insights on Terrorism

Investigative Reporter Deborah Sherman is reporting from the counterterrorism forum in Aspen.

Source: http://books.theproductjudge.com/2010/06/30/private-trauma-gives-jessica-stern-insights-on-terrorism/

When she began investigating terrorism, by studying chemical weapons at the Massachusetts Institute of Technology in the mid-'80s, her interest was thought to be "more than a little weird," she recalled recently. "I think they thought I was nuts." And at the time she thought the subject was just something she had fallen into. "But I now see that there's a pattern," she said, sitting in the white farmhouse, not far from the Harvard campus, where she lives with her third husband, Chester G. Atkins, a former Massachusetts congressman, and her 8-year-old son. "I've really been studying perpetrators and violence all my life." How she came to this realization is the subject of her new book, "Denial: A Memoir of Terror," which Ecco published last week. The book recounts how, in 1973, when Ms. Stern was 15, she and her younger sister were raped at gunpoint in their home in Concord, Mass. The police disbelieved the girls' account and bungled the investigation; their father, in Europe at the time, didn't think it necessary to cut his trip short and return. The whole community, she writes, seemed to be in denial. The experience created in Ms. Stern a kind of emotional numbness — a calmness, even a fearlessness, that has proved oddly useful in her current work. "I am fascinated by the secret motivations of violent men," she writes in "Denial," "and I'm good at ferreting them out." She found that terrorists would talk openly to her, she said, because she could "go into a state where I almost tried to become that person, and where I felt that if I allowed myself even the tiniest judgmental thought, they could probably sense it." Though she has sometimes been in dangerous situations, she added, she rarely feels afraid. "I would go into this calm — almost as if I could feel a chemical change in my body," she said. "That's probably an aftermath of trauma, but I don't want to



medicalize it too much. I also felt intense curiosity." Benjamin Wittes, a senior fellow at the Brookings Institution who has been a friend of Ms. Stern's since the late '90s, said he was astonished to learn what had happened to her. "If you met some completely dysfunctional person who you could see was wearing the scars of such an experience, then you might not be surprised," he explained. "But that's not Jessie." Not the least of her contributions, he went on to say, was that she was one of the very first terrorism scholars to realize that the way to discover what terrorists were thinking was to go and talk to them. "She was asking the right questions of the right people," he added, "and if some of that comes from her own experience of being terrorized, then the lessons were very fruitful." "This is an example," he said, "of a very strong person taking something terrible and carving something valuable out of it." But a possible downside of not feeling too much is that you also experience less joy, and even become disconnected from your own life. It was recognizing these symptoms in herself, Ms. Stern said, that made her decide, in 2006, when the police reopened her rape case, to revisit the whole experience. She began to come to terms with what was a traumatic family history even before the rape: her mother died when she was 3; her father, a German émigré who had been persecuted by the Nazis, remarried but six years later divorced his second wife, leaving his daughters with her for almost two years while he lived on his own. And with the help of an investigator, Ms. Stern even tracked down the story of her rapist, who served 18 years in prison and then hanged himself. He turns out to have been responsible for at least 44 rapes or attempted rapes between 1971 and 1973, all with a trademark methodology that the police somehow failed to pick up on. Among other things, he found most of his prey at girls' boarding schools or at Radcliffe College, and many of his attacks involved two or more young women. (Earlier this month one of his victims, Amy Vorenberg, published an op-ed piece in The Boston Globe complaining that the police and the Harvard authorities were neither sufficiently organized nor vigilant in their response.) Ms. Stern interviewed friends or relatives of the rapist and uncovered a long and depressing history of parental abandonment (he was adopted, though he didn't know it for years, and a woman he thought was his aunt was really his mother); confused sexual identity; drug use (he even dropped acid once with Timothy Leary); and possible childhood molestation (his parish church harbored a series of predatory priests). He had probably been traumatized himself, and then in the classic fashion went on to traumatize others. At times, Ms. Stern said, she was tempted to stop her research, and she wrote the book in fits and starts. "I'd work very intensively and then I'd start to feel like I was losing feeling," she said. "Thank goodness I had a kid to take care of, because it meant I couldn't afford to go crazy. I don't mean throwing pots around. I mean just losing feeling. It's not deliberate and it's actually very annoying. It feels awful — it feels like being in a fog." Writing the book, she added, taught her a lot about the effects of post-traumatic stress syndrome, of which she now considers herself a victim, and also helped refine her thinking about terrorism. Her researches have taught her that there is no common denominator in determining why people become terrorists, but she has identified a checklist of risk factors. These include alienation, coming from a society with a youthful population bulge or a high male-to-female ratio and, for the people who wind up being used as cannon fodder by the terrorists, poverty. To the list she would now add sexual humiliation, and in January she published an article in Foreign Affairs in which she pointed out that sexual abuse of boys in the Islamic religious schools known as madrasas is not uncommon, and neither is the rape of boys in Afghanistan, especially on Thursday, known as "man-loving day," because Friday prayers are thought to absolve a sinner of all his guilt. "I've known about this for years," Ms. Stern said, "but until I wrote this book, I didn't make the connection. I'm not sure how you study it, but I do think it's there. Humiliation is definitely a risk factor, and this may be a particular kind of it." She paused and added: "But why humiliation in some places and some people but not others? Harvard is a humiliation factory, and yet we don't produce a lot of terrorists."

TERRORISM MONITOR
In-depth Analysis of al-Qaeda and the War on Terror

Can al-Qaeda Use Islam to Justify Jihad in the United States? A Debate in Progress

Source: http://www.jamestown.org

Having committed itself to the battle against the "far enemy," al-Qaeda's leadership issued in March its most explicit call yet to Muslims living in the United States to independently plan and execute terrorist attacks on American soil. In a video entitled "A Call to Arms," al-Qaeda spokesman Adam Yahyeh Gadahn claimed such attacks are a religious obligation on all able-bodied Muslims living in the "Zionist-Crusader countries, and the United States in particular" (As-Sahab Media Productions, March 7). Adam Yahyeh Gadahn (real name Adam Pearlman) is a U.S. national who is thought by U.S. government and media sources to be an important personality in al-Qaeda's propaganda operations. He is believed to be in hiding somewhere in Afghanistan or Pakistan. Gadahn seized upon the example of Major Nidal Malik Hassan, the Muslim U.S. Army officer who last November shot dead 13 fellow service personnel at Fort Hood, Texas, as a "role model" to be emulated by Muslims in the United States: "Nidal Malik Hassan is a pioneer – a trailblazer and role model who has opened the door…and showed the way forward for every Muslim who finds himself amongst the unbelievers and yearns to discharge his duty to Allah and play a part in the defense of Islam and Muslims." However, ignoring the practical operational challenges facing those with a potential interest in emulating Nidal Hassan, the theological basis for such attacks remains contentious even among Salafi-Jihadist supporters and is thus an issue worthy of greater appreciation by counterterrorism officials. In light of the 9/11 attacks and several subsequent foiled terrorist conspiracies in the United States, it may seem surprising that such debates have not already been concluded within militant Islamist circles. However, these continued doctrinal fissures offer an opportunity for authorities if they can be harnessed as part of strategic communication initiatives contributing to a wider strategy of domestic terrorism risk mitigation.

Gadahn's Sales-Pitch

Speaking in English, Gadahn reminded Muslims in the United States that it was their individual obligation to wage jihad against the United States and that lack of connections to jihadist groups should not deter them from action. He reminded his viewers; "Jihad is not the personal property, nor the exclusive responsibility of any single group, organization or individual. Instead it is the personal duty of every able-bodied Muslim on the face of the earth." He encouraged Muslims to use whatever means were at their immediate disposal to carry out terrorist attacks synchronous with al-Qaeda's aims and objectives, stressing that prior instruction at foreign training camps was not necessary. He reminded viewers that individuals such as Major Hassan carried out their attacks with the weapons they had at hand and the knowledge and expertise they developed through self-study. He also praised Mir Imal

Khasi, who shot dead two CIA employees and wounded three others in Virginia in 1993, and Mohammed Bouyeri, who murdered controversial Dutch filmmaker Theo van Gogh in a knife and gun attack in 2004, as further examples of individuals who had recognized their duty as Muslims and independently decided to take direct action in accordance with these obligations. Perhaps in an attempt to reduce the perceived threshold for an operational "success" and overcome a would-be jihadist's fear that their limited, lone-wolf actions might have little strategic consequence, Gadahn said; "We must keep in mind that even apparently unsuccessful attacks on western mass transport systems can bring many cities to a halt, cost the enemy billions and send his companies into bankruptcy." Gadahn also states: "He [Nidal Hassan] has reminded us of how much pride and joy a single act of resistance and courage can instill in the hearts of Muslims everywhere. That's why I am calling on every honest and repentant Muslim in the countries of the Zionist-Crusader alliance and the United States in particular to prepare to play his duty and role in responding to and repelling the aggression against the enemies of Islam. Unsheathe your sharpened sword and rush to take your place among the defiant champions of Islam."

Loyalty and Disavowal

While Gadahn does not address in detail the theological imperative for domestic "individualized jihad," he certainly alludes to some of the important doctrinal concepts involved, concepts discussed more fully elsewhere by his al-Qaeda associates and Salafi-Jihadist supporters. At the heart of the Salafi-Jihadi movement's doctrinal justification for such attacks, and indeed much of the violence it advocates in the name of defending Islam and Muslims, is their interpretation of the concept of Tawhid, or the oneness of Allah. At the outset, it should be emphasized that Tawhid is a core element of Islam as a monotheistic religion and one intrinsically accepted by virtually all Muslims. It does not explicitly advocate or encourage violence. However, it is the manner in which Tawhid is not just believed but practiced which is where Muslims of various sects disagree, and it is here that Salafi-Jihadists believe that violence is often obligatory in order to defend Tawhid's supremacy. For many Salafi Muslims it is impossible to be a true Muslim unless one's belief in Tawhid is turned into action. However, adherents of more militant interpretations of Salafism contend that the concept requires them to oppose both by word and deed (with violence if necessary) any attempts by Muslims or non-Muslims to establish "partners with God" or systems of governance other than that decreed in the Shari'a. This means that followers of the Salafi-Jihadi manhaj (methodology) are fundamentally opposed to any and all non-Muslim political and legal systems including liberal democracy. However, to more fully understand the doctrinal basis for Nidal Hassan's actions, appreciation of a further important Islamic concept is necessary. One of the concepts which gives life to Tawhid in a Muslim's everyday affairs is "Loyalty and Disavowal" (al-wala w'al-bara - loyalty [towards the believers] and disavowal [of the disbelievers]). This is given particular emphasis in Salafism and a unique interpretation by Salafi-Jihadists. Loyalty and Disavowal teaches a Muslim to show obedience to Allah's word and disobedience to, and separation from, anything that deviates from it or challenges it. In Major Nidal Hassan's case, this is likely to have included the U.S. military hierarchy of which he was a part as well as the many non-Muslim service personnel with whom he would have worked. The Loyalty and Disavowal concept is emphasized indirectly by Gadahn in his video when he says, "This is why I believe that defiant Brother Nidal is the ideal role-model for every repentant Muslim in the armies of the unbelievers and apostate regimes who, like him, has come to the correct conclusion that true Islam isn't in a name or a set of rituals but in fact is in total submission and obedience to Allah and total disobedience to and disassociation from the unbelievers [author's emphasis]." The importance of Loyalty and Disavowal in guiding Nidal Hassan's actions was also alluded to in statements and discourse by supporters of the Salafi-Jihadi movement in the West. One noteworthy statement to emerge from this constituency was issued on November 24, 2009 by members of the Salafi-Jihadi web forum Ansar al-Mujahideen (www.ansar1.info). In addition to praising Major Nidal Hassan's attack, the statement argues that the Quran makes it clear that Muslims should disassociate themselves from "unbelievers" and that in most cases they should leave

the United States if they are unable to fully and freely practice their religion. They emphasize that this must include being able to fulfill an obligation to Loyalty and Disavowal. Yemeni-American Salafi-Jihadi ideologue Anwar al-Awlaki said in an interview with Salafi-Jihadi media organization al-Malahim that one of the reasons he left the United States was that the post-9/11 security environment had made it more difficult for Muslims scholars there to preach practices such as Loyalty and Disavowal (Islamicawkening.com, May 23). Essentially, Salafi-Jihadists argue that Nidal Malik Hassan's attack was not only a declaration of his devotion to Tawhid but also a practical demonstration of Loyalty and Disavowal, in that he decided to abandon allegiance to all others except Allah, fulfilling in the process what Gadahn and others maintain was his obligation to wage jihad at home as long as his co-religionists were under attack abroad.

A Covenant of Security?

An issue not explored by Gadahn in his video, but which is relevant to the permissibility of domestic jihad in the United States, is the applicability of the Islamic "Covenant of Security" (aqd aman). Many Salafi-Jihadists argue that acts of domestic terrorism by U.S. Muslims are permissible because U.S. policy toward Muslims at home and abroad negates the mutual non-aggression enshrined within that Covenant. However it is here that evidence of some theological disagreement exists. In this context, the non-aggression pact enshrined in a Covenant of Security relates to the agreement between Muslims living in non-Muslim countries and the governments of those countries. There are rules concerning a Muslim's behavior under a Covenant of Security but Islamist scholars differ on the specific details, in particular the conditions under which a Covenant should be considered void. It is most commonly agreed that a Covenant of Security between Muslims living in the West and their non-Muslim hosts applies when:

• A Muslim identifies himself as such in his host country.
• The Muslim maintains Western forms of identification.
• The Muslim receives government benefits.
• A Muslim has entered the country officially, for example on a work or study visa.

In return, the Muslim is forbidden to fight his host or take his host's money or goods as booty. However, some Salafi-Jihadi scholars contend that the Covenant is voided when one or more of the following occurs:

• A Muslim in that country is prevented from freely and fully practicing his religion, including the practice of Loyalty and Disavowal.
• A Muslim in that country is subject to harassment, imprisonment, torture, degrading treatment, or unfair levels of intrusive surveillance.
• The Muslim Ummah is threatened by the foreign policies of that country.

The Ansar al-Mujahideen statement specifically mentions this: "No covenant exists between Muslims in the United States and the U.S. government and army. If there was initially some covenant, that covenant is now void due to the various crimes the United States has committed to break it, from engaging in war with the Muslims, imprisoning Muslims and by the rape and abuse of Muslim men and women, to name but a few." While many Salafi-Jihadist supporters in the United States and other countries such as the UK would doubtlessly agree that any such Covenant of Security had been voided years ago, there remain significant opposing voices. One point of contention is that, in the view of some scholars, even if an attack is permissible it can only be carried out by an expeditionary group of mujahideen from abroad arriving in the country for such a purpose. In doing so, they would have to act in a clandestine manner which does not require them to adhere to any Covenant – in other words those Muslims already resident in the country are not permitted to participate directly. Some highly respected Salafi-Jihadist scholars such as the UK-based Syrian Shaykh Abu Basir al-Tartusi have issued important judgments stating this point. Some radical scholars disagree

with al-Tartusi's position, arguing that under present conditions where Muslims are under attack worldwide and when Muslims living in the West are now subject to perceived persecution, it is now obligatory for all Muslims to fight regardless of where they are. Shaykh Omar Bakri Muhammad, former spiritual leader of the UK-based group al-Muhajiroun (The Émigrés) said in early 2005 that new anti-terrorism legislation which he claimed was designed to restrict Muslims' right to freedom of expression was among the reasons why the Covenant of Security between the UK and the Muslims living there should be considered void (See Times Online, July 24, 2005; Asia Times, June 12, 2008). However, this widely-held opinion within Salafi-Jihadist circles regarding obligatory jihad is contradicted by scholars such as al-Tartusi. In his book On the Covenant of Security in Islam, al-Tartusi lists extensive proofs from the Quran and Hadith to underscore what in this context is a critical ruling – namely that it is possible for Muslims to live under a Covenant of Security in a non-Muslim country even if the government of that country is engaged in transgressions against other Muslims abroad.

Significance for Counterterrorism

While the depth of such doctrinal disagreements may appear slight in some cases, they nevertheless represent a potential wedge issue that might be exploited by strategic messaging to cast doubt on the religious permissibility of the types of attacks al-Qaeda is now directly encouraging. For groups motivated primarily by a radical religious imperative, doctrinal legitimacy of a proposed action is critical. Gadahn spends a notable amount of time attempting to persuade viewers to shun the opinions of U.S. Muslim scholars who argue that jihad in present circumstances is illegitimate. He warns; "No fatwa in this world can possibly justify breaking the clear and unambiguous and agreed upon laws of the Shari'a like the law forbidding the killing of Muslims or the law ordering loyalty to the believers and disloyalty to the unbelievers." Both Gadahn and Western Salafi-Jihadist supporters appear to acknowledge in their statements that Muslims considering waging a domestic jihad are likely to encounter resistance from their co-religionists and rulings against such actions by Muslim scholars. They claim that carrying out such attacks is a religious obligation that no amount of fatwas (Islamic legal rulings) can overturn – perhaps a tacit acknowledgement that competing religious rulings still have enormous potential to damage al-Qaeda's theological justification for such attacks and frustrate their attempts to galvanize considerable numbers of U.S. Muslims to raise arms against their government.

Jack Barclay is an independent consultant on the use of strategic communication to counter violent extremism. He is based in the United Kingdom, where he holds a Fellowship in Strategic Communication at the UK Defence Academy.

Researchers Propose New Disaster Model

Source: http://www.hstoday.us/content/view/13828/128/

Researchers in China have developed a new environmental catastrophe risk assessment model, which has implications for predicting risk for both natural and man-made environmental disasters in the United States. Current natural disaster prediction and warnings systems, such as the Doppler radar for hurricanes and the Richter scale for earthquakes, predict the area of impact and or the intensity of a natural disaster, but the new risk assessment model could go a step further by allowing officials to accurately predict impact of such disasters. According to the study Assessment of Catastrophic Risk Using Bayesian Network Constructed from Domain Knowledge and Spatial Data by Dr. Lianfa Li and colleagues, the new model combines both domain knowledge and previous data to construct a robust network, thereby allowing it to more accurately assess the risk posed by disasters than current models. Unlike most traditional risk assessment models, this model is based on the Bayesian network (BN), a graphical model that shows dependencies among all variables, shows the probability of relationships among variables, and allows the user to combine background knowledge with available data, while accounting for missing data. Though BN

models are currently used in other domains, including economics and public health, there are few instances of the model being used to assess catastrophic risk in natural disasters, according to the authors. The researchers say BN "is able to represent uncertainty interdependences between factors that describe many real-world domains, such as public emergency catastrophic events," and "results suggest that BN is a good alternative for risk assessment and as a decision tool in the management of catastrophic risk." In assessing catastrophic risk, the model divides risk into three categories: inducing factors (those that cause the disaster, such as heavy rains inducing flood); environmental factors (those physical or artificial factors that lessen or worsen the impact of disaster, such as the levees during Hurricane Katrina); and vulnerability factors (those that determine the likelihood that a system or individual will be able to adapt to the harm of a disaster). Vulnerability, perhaps the most varying and difficult of the factors to assess, could range from the structure of a building to the demographics and socioeconomic status of an individual, including income, age, and knowledge. In the case of Hurricane Katrina, the failure to evacuate the poor black population of New Orleans, for example, stemmed from a lack of knowledge and resources, the study suggested. Such a failure is an example of how vulnerability factors play a role in catastrophe assessment risk. "Our methodology is based on a general modelling framework and the techniques used are applicable for other natural disasters. Thus, our methodology can be easily extended to other natural disasters if relevant domain knowledge is incorporated in this framework and relevant data are available," the report read. The new model could prove especially helpful in the area of emergency preparedness for hurricanes, earthquakes, and other natural disasters, which occur on a yearly basis in areas within the United States, the authors suggest. In the study, the researchers compared different versions of their BN model to nine other non-BN models in assessing the risk associated with the flooding of the Heihe River, in northwest China, from 2006 to 2008. For the comparison, they used four scalar measures: the probability of detecting "high loss," the probability of false alarms, precision, and area. They found that the BN models were all closer at assessing the true risk--with the latest BN model, BMA, generally achieving the greatest accuracy.

Marsh Report: Terrorism Risk Management Costs Decline as Federal Reinsurance Backstop Continues to Stabilize Terrorism Insurance Market

Source: http://ca.news.finance.yahoo.com

Despite a changing and uncertain marketplace, U.S. terrorism insurance take-up rates continued to climb in 2009 as companies of all sizes and across all industries continued to purchase terrorism coverage, according to a report released today by Marsh, the global insurance broker and risk advisor. Sixty-one percent of firms surveyed by Marsh purchased property terrorism insurance in 2009, an increase from 57 percent in 2008 and representing a steady climb from 27 percent in 2003, according to The Marsh Report: Terrorism Risk Insurance 2010. Median premium rates declined from $37 per million of total insured value (TIV) in 2008 to $25 per million in 2009 according to the report, which indicated several differences by industry, region, and company size:

- Utility, real estate, health care, transportation, financial institutions, and media companies purchased property terrorism insurance at the highest rates of the 15 industry segments reviewed, with take-up rates in each sector exceeding 70 percent.
- Construction, hospitality, utility, and real estate companies experienced the highest median premium rates, exceeding $50 per million of TIV.
- Take-up rates rose most significantly in the Northeast, increased slightly in the South and the West, and remained flat in the Midwest.
- As a percentage of total property premiums, financial institutions (24 percent) and transportation companies (17 percent) paid the largest share; hospitality firms saw the greatest decrease in this area (from 13 percent to 4 percent).

- Smaller companies—with TIV below $100 million—spent 22 percent of total property premiums on terrorism coverage in 2009. By contrast, relative spending was significantly lower for companies between $100 million and $500 million in TIV (5 percent), $500 million to $1 billion (7 percent), and $1 billion or more (11 percent).

"Terrorism risk remains a critical concern for global companies," said Ben Tucker, a senior vice president in Marsh's Property Practice and a lead author of the report. "Recent attempted attacks in New York's Times Square and on a Detroit-bound flight on Christmas day 2009 remind companies of the importance of securing adequate financial protection against the possible catastrophic impact of terrorist events." Capacity in the standalone terrorism insurance market, which has served as an important alternative or supplement to coverage made available through the Terrorism Risk Insurance Act (TRIA), has grown considerably in recent years, to a theoretical maximum of $3.76 billion. Primary purchasers in 2009 included hospitality companies, large real estate firms, and financial institutions.

Exposure to Terrorism Risk Persists

Commercial insurers continue to avoid accumulating high-profile urban exposures due to the residual risk for terror events retained by insurers below the triggers and retention levels set by TRIA, coupled with the relatively high cost of reinsurance in key exposure zones. In 2009, the percentage of business that purchased general liability coverage through TRIA appears to have dipped to just above 50 percent. Rates, charged as a percentage of premium for overall coverage, held steady at about 1 percent. Several U.S.-based multinational companies have reexamined the adequacy of their property and terrorism insurance in countries with uncertain political environments; political violence coverage for such events as war and civil war in developing countries is of key concern. Using a U.S.-domiciled captive to access TRIA coverage to insure an organization's exposures against acts of terrorism can be a viable, cost-efficient insurance alternative to traditional property programs. TRIA was originally enacted in December 2002 as a response to the attacks of September 11, 2001; the program has been extended twice and is now set to expire December 31, 2014. According to Marsh, should the federal backstop lapse, a market dislocation could occur due to the obligatory nature of terrorism coverage for certain lines, such as workers' compensation. "Terrorism remains a real and present risk, notably in major metropolitan areas," said Mr. Tucker. "There is a real potential for an economic downturn should terrorism insurance not be readily available. The insurance industry should fully explore all possible options to maintain a viable market, regardless of the level of federal participation beyond 2014."

A copy of The Marsh Report: Terrorism Risk Insurance 2010, is available at: www.themarshreport.com/terrorism2010

'First Lady of Al Qaeda' Arrested by Saudi Authorities

Source: http://abcnews.go.com/print?id=11063531

Heila al-Qusayyer is being called the "First Lady of Al Qaeda." The middle class Saudi mother, now in police custody, allegedly ran a cell of 60 militants, and recruited young women to its ranks. She also raised money as the main fundraiser for Al Qaeda in the Arabian Peninsula she used Islamic charities as a front to take donations of cash and jewelry that then went to funding jihad, or holy war. Saudi Arabia's Interior Minister called the case an alarm bell, a sign that authorites need to rethink counterterrorism strategy and monitor a whole new profile of jihadis: the middle-

aged mother. Analysts say it represents a significant change for Al Qaeda in Saudi Arabia. "Females have not been real Al Qaeda operatives&in early training manuals it says what the role of women should really be and that was more functioning as nurses or supporter roles," said Theodore Karasik of the Institute for Near East and Gulf Military Analysts, a Dubai-based think tank. "Women were on the sidelines, unless their husband had become a martyr and then they wanted to martyr themselves too in a suicide operation." And what does the rise of jihadi women say about Al Qaeda? "They're adapting. They're nimble, they're quick, and sometimes they're quite sloppy." Saudi Arabia has caught and cracked down on scores of violent extremists. That's pushed others over the border into Yemen, and forced Al Qaeda to shift its methods. In a culture where the sexes are strictly separated, and women are at the command of their husbands, Al Qaeda's new strategy has moved women up the jihadi ranks. Gender roles are molded around the mission Al Qusayyer used divorce and remarriage to get close to the men in Al Qaeda she wanted to emulate. One of those men is Saeed Al-Shehri, a former Guantanamo detainee who is now deputy leader of Al Qaeda in the Arabian Peninsula. According to Saudi Arabia's Okaz newspaper, Al-Qusayyer helped his wife, Wafa' Al-Shehri, enter Yemeni territory and recruit "young girls" wives and sisters of jihadis who would join them in serving Al Qaeda in Yemen. The sources said that Al-Qusayyer had managed to collect donations over the last two years for the organization in Yemen by obtaining jewelry as well as money, purportedly to build mosques and orphanages in Yemen. Dr. Mustafa Alani, an expert in terrorism and security studies at the Gulf Research Center, says the shift toward putting women in operations roles happened earlier in other Al Qaeda branches. It has been most pronounced in Iraq, where Alani estimates 10-15 percent of suicide bombings have been carried out by women. "Sajida al-Rishawi was one of the first women suicide bombers, though she failed in [2005 hotel attacks] in Jordan. Now the Iraqi experience has started to lead and encourage other branches," said Alani. "Al Qaeda has had problems recruiting more men, and women seem more willing to participate." Jihadi women have admittedly been a blind spot for Saudi authorities, who haven't been watching for women like Al Qusayyer until now. Given the gender dynamics of Saudi Arabia, Alani says, woman are less often stopped or inspected in security checks. Yet he doesn't expect Saudi officials will have a hard time closing in on suspected women jihadis. "It's different than men, who are recruited in the mosque or the workplace. The circle is still very small these women are recruited by their own families. So it's easier to control."

Sandia Labs reports first monolithic terahertz solid-state transceiver

Source:http://www.redorbit.com/news/technology/1886724/sandia_labs_reports_first_monolithic_terahertz_solidstate_transceiver/

"Sandia National Laboratories researchers have taken the first steps toward reducing the size and enhancing the functionality of devices in the terahertz (THz) frequency spectrum. By combining a detector and laser on the same chip to make a compact receiver, the researchers rendered unnecessary the precision alignment of optical components formerly needed to couple the laser to the detector. The new solid-state system puts to use the so-called 'neglected middle child' frequency range between the microwave and infrared parts of the electromagnetic spectrum. Terahertz radiation is of interest because some frequencies can be used to 'see through' certain materials. Potentially they could be used in dental or skin cancer imaging to distinguish different tissue types. They also permit improved nondestructive testing of materials during production monitoring. Other frequencies could be used to penetrate clothing, and possibly identify chemical or biological weapons and narcotics. Since the demonstration of semiconductor THz quantum cascade lasers (QCLs) in 2002, it has been apparent that these devices could offer unprecedented advantages in technologies used for security, communications, radar, chemical spectroscopy, radioastronomy and medical diagnostics."

Through the Lenses of Hollywood: depictions of Terrorism in American Movies

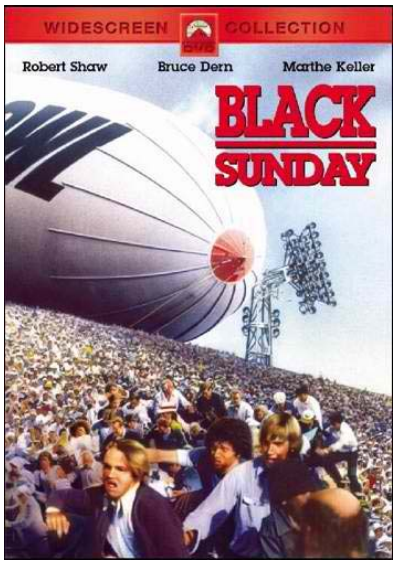
by Thomas Riegler

Abstract
This article argues that Hollywood cinema has shaped, and sometimes distorted, the perception of terrorism since the late 1960s. It does so by discussing emblematic movies in a comparative way. The main thesis is that Hollywood never seriously tried to offer an accurate assessment of terrorism. Instead, it offered a mediated version that transcends reality and is firmly rooted in a pop culture framework. Nonetheless, since movies are, according to cinema theorist Siegfried Kracauer, a "mirror of the prevailing society", they too reveal something about the historical evolution of terrorism and modifications in its understanding. Another issue briefly addressed is the question whether "real" terrorists tend to re-enact or copy (cinema)"reel" violence – given the fact that terrorists too are subject to the influence of cinematic images and metaphors.

Introduction

Italian novelist Umberto Eco once claimed that 70 percent of our knowledge derives from watching Hollywood movies. Could this also be true for our perception of terrorism? It can be argued that for a large part of its audience, American cinema, besides television (the substantial role of TV is not explored in this article), is one of the primary sources of information. The perception of what terrorism means, how it can be understood, is shaped by cinematic images. This is also of importance on a political front as mass cultural representations of terrorism tend to be often stereotypical and ideologically biased. Cinema generally affirms the political and cultural status quo from which it originates: movies reproduce, charge, and disseminate interpretations, ideologies, and world views in contemporary society by constructing and filling an imaginary space, where the hegemonic constants of the public discourse come to life. Terrorism, often described as the "scourge of our times", is one of them and a reoccurring theme of American movies since the 1970s.

The 1970s: hijackers and "lone wolfs"



When reviewing Hollywood's output on terrorism, it is obvious that it correlates with the waves and historical development of political violence: previously sporadic encounters with terrorism in Hollywood cinema, like Alfred Hitchcock's Saboteur (1942), became more frequent in the 1970s, at a time when international terrorism and especially hijackings of jetliners orchestrated by Palestinian groups made headlines and featured in newsreels. Thus, the Arab gunman, who threatens innocent passengers and strikes at Western installations, became a typical Hollywood villain: John Frankenheimer's Black Sunday (1976) depicted seductive terrorist Dahila Iyad (Marthe Keller) of German-Palestinian background enlisting an alienated Vietnam veteran Michael Lander (Bruce Dern). Together they plan an attack on the Super Bowl finale in Miami: a Goodyear blimp loaded with scrap metal is launched as a cluster bomb attack aimed to kill thousands of sport fans, including President Jimmy Carter. During the 1970s major acts of

terrorism had not yet struck the US homeland. Therefore the entertainment industry mainly looked abroad for inspiration and major foreign events were dramatised for the silver screen: William A. Graham staged the Munich hostage massacre of 1972 four years later in 21 hours at Munich. Only five months after the real event Marvin J. Chomsky re-enacted the spectacular Entebbe rescue mission in the studio, featuring a big star cast, including Burt Lancaster as defence minister Shimon Peres, Anthony Hopkins as Yitzhak Rabin, and Liz Taylor as a relative of a hostage (Victory at Entebbe, 1976). The story was also adapted for TV in Raid on Entebbe (1977), starring Charles Bronson. The formula for these movies is basically the same: high-ranking politicians in crisis centres make daring decisions, while elite commandos' first train meticulously for their mission and then free the hostages in a climactic shoot-out sequence. It is a triumphant celebration of the commando's capacity to dare and win – a myth to which Israel contributed by commissioning its own cinematic version of the events in Operation Thunderball (1979).

Home-grown terrorism is almost exclusively the work of lunatics and psychotic types with little political background: in Airport (1970) a self-made bomb explodes on board of a Boeing 707 bound for Rome. Responsibility rests with demolition expert D. O. Guerrero (Van Heflin), a desperate man with a long history of mental illness who wants his wife to benefit from a life insurance he just purchased. The damage caused by the mid-air explosion in the hull of the plane results in Guerrero being sucked out of the jetliner, which the pilots manage to landed safely. In Skyjacked (1972) it is the suicidal Vietnam veteran Jerome K. Weber (James Brolin), who takes command of a domestic flight and directs it via Anchorage to Moscow, where the plane is surrounded by aggressive Soviet troops. The would-be defector is finally challenged by the heroic Captain Henry O'Hara (Charlton Heston) and shot by the soldiers. The Taking of Pelham 1-2-3 (1974) is one of the first examples outlining a scenario of urban terrorism that is financially motivated: a gang led by a British mercenary kidnaps a New York subway train in order to extort a one million dollar ransom. This storyline of a threatened public is repeated in the thrillers Two Minute Warning (1976) and Rollercoaster (1977), where anonymous blackmailers target popular American institutions – a football stadium and an amusement park, respectively – in horrific schemes with a potential for mass casualties. Political motives, no matter how twisted, appear to be reserved for traumatized war veterans only: in Twilight's Last Gleaming (1977) an Air Force General, who was court-martialled for his anti-war stance, takes control over a Titan rocket silo and threatens to start World War III unless the US government releases all the real facts about the background of the Vietnam War. This demand is met by declassifying a top secret memo, which defines the war in South East-Asia as a means to enhance American credibility vis-a-vis the Soviet Union's. Since the US experienced sporadic acts of domestic terrorism by left-wing radicals from the Weather Underground or the Symbionese Liberation Army during the 1970s, the urban guerrilla is featured as a potential danger lurking at home. As a consequence, Clint Eastwood's vigilante cop Dirty Harry has to eliminate a fictitious "People Revolutionary Strike Force" (The Enforcer, 1976).The kidnapping of big money heiress Patty Hearst in 1975 – the most visible act of 70s left-wing terrorism – was adopted for the screen in all kind of

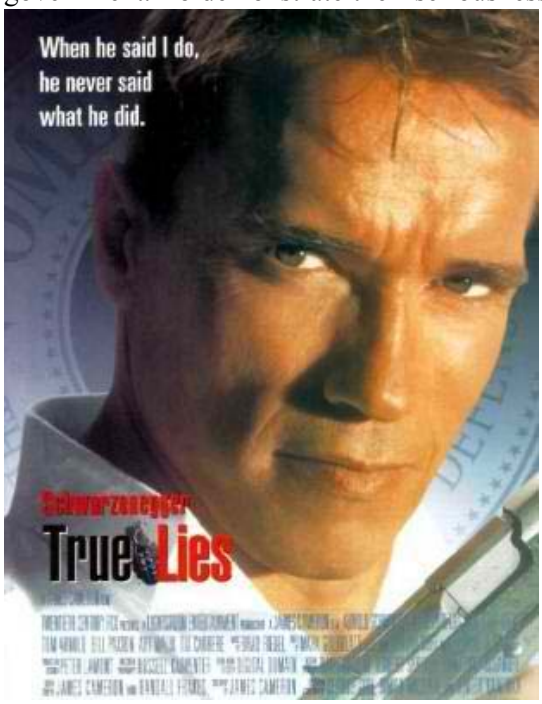
ways: ranging from the infamous exploitation pieces Patty (1976) and Tanya: Sex Queen of the SLA (1976) - where "SLA" stood for "Sexual Liberation Army" - to a classic true crime"" story made for TV (The Ordeal of Patty Hearst, 1979). In 1988 Paul Schrader revisited the case in Patty Hearst (1988); however his presentation of the events (terrorist victim apparently becomes perpetrator) in a deliberately detached style received only limited release.

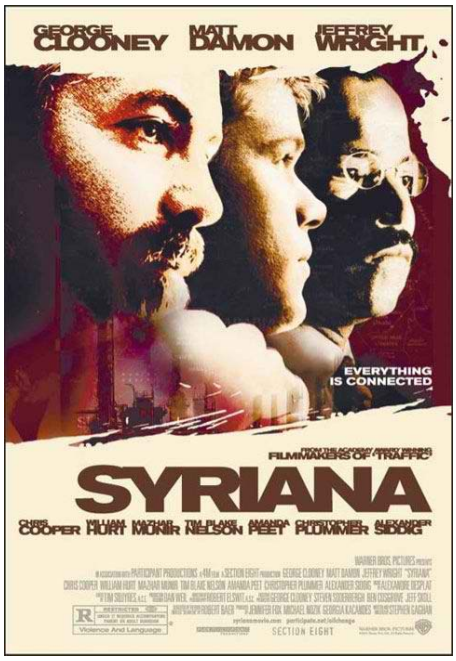
The 1980s: enter religious fanatics and red infiltrators

This more or less distanced perspective on terrorism changed abruptly once the US was directly confronted with major acts of terrorism abroad: the 444 days long Iranian hostage crisis (1979), the American involvement in the Lebanese civil war (1983), and the resulting confrontation with Shi'ite extremism. Terrorism rapidly acquired an extraordinary salience in American public opinion. In Nighthawks (1981) – one of the first films to address the media fixation of modern terrorism – the international terrorist mastermind Wulfgar (Rutger Hauer) brags: "There is no security". His network of Palestinian, German, and Irish activists spreads terror in New York until policeman DaSilva (Sylvester Stallone) is finally prepared to absorb the lessons of his British counterterrorism mentor: terrorism has to be fought outside of the law. This is the logic of "lesser evil": in order to keep a fragile democratic system safe from its enemies one has to forget democratic niceties and the rule of law. Such emphasis on extra-legal counter-terrorism became a key motif in many movies to come: it is as if the agonising inefficacy of the US in Ronald Reagan's actual poor handling of terrorism had to be compensated in the sphere of imagination. One of the most intriguing examples is Delta Force (1986). The film sets off with a portrayal of the 1985 skyjacking of TWA 847 by the Shiite Islamic Jihad. While this hostage scenario was ended following secret negotiations, Delta Force gives free rein to a military solution inspired by Israeli Entebbe strategy to achieve "victories over terrorism". In the film the counter-terrorist elite force is dispatched to liberate the hostages, who in the meantime have been taken from the airliner to the urban jungle of Beirut where they are dispersed in underground dungeons. The rescuers blast their way through the city, kill scores of enemy fighters, and lead the American hostages back to safety. The numerous enemies are portrait as Shiite Muslims with a clear connection to the Iranian regime. When the terrorists are first introduced, they are shown in an extreme low angle shot, which further distorts their already shabby appearance with their loosened ties, unkempt hair, and maniacal stare. Their savage "otherness" is a mixture of ethnicity and psychosis – most evident in the manic outbursts of their leader Abdul (Robert Foster) towards the hostages. Most films of this genre in the 1980s did not address actual events like Delta Force, but drew ever more alarming pictures of the terrorist threat, especially in the B-movie genre (Hostage, 1986; Death before Dishonor, 1987; Terror in Beverly Hills, 1988). Corresponding with the aggressive stance first taken by the Reagan administration towards the Soviet Union, the spectre of Red Terror was particularly prominent in Invasion U.S.A. (1985). It depicted a mixed force of Cubans, East Germans, and Russians, led by the maniac psychopath Major Rostov (Richard Lynch), whose team secretly lands on a peaceful Florida beach to spread chaos and violence. Since ordinary law enforcement is helpless against this onslaught, the government re-activates retired CIA-counterterrorism specialist Matt Hunter (Chuck Norris). He understands the mindset of the terrorists and devises a trap in which the enemy is consequently tricked into. The 1990s:

action films and new threats Invasion U.S.A, Delta Force, and later Die Hard (1988) were trendsetters for a whole genre of action movies in which a lone hero has to defeat single-handedly numerous terrorist enemies in a spectacular action showdown: Die Hard II (1992), Red Alert (1992), Passenger 57 (1992), Speed (1995), Sudden Death (1995), Die Hard III (1995), The Rock (1996), Operation Broken Arrow (1997), or Air Force One (1997). The plot line of these movies stays basically the same: first the terrorists succeed in securing control over public places (skyscrapers, banks, airplanes, trains, ships, prisons, and buses), taking hostages, and defeating any countermeasures by the authorities. But their triumph lasts only for a short time as their nemesis, whether it is the policeman John McClane (Bruce Willis in Die Hard), Ex-US Navy Seal Casey Ryback (Steven Segal in Red Alert) or Ex-fireman Daren McCord (Jean Claude Vandamme in Sudden Death), is already in their midst – most often simply out of coincidence. The lone hero has then to engage one opponent after the other, until the spectacular killing of the terrorist ringleader releases the builtup tension. With regard to their background, the featured villains mirror the climate of political correctness in the first post-Cold War period: a decadent British aristocrat (Passenger 57), a group of "homeless" Stasi agents (Die Hard III), or corrupt Russian military figures in alliance with resentful Bosnian Serbs (The Peacemaker, 1997). But most of them are "home grown":disgruntled former employees of law enforcement agencies (Speed) or renegade soldiers (Die Hard II, Operation Broken Arrow, The Rock). What unites most of them is the simple fact that they kill and maim mainly for money. They are depicted as

ordinary criminals hiding behind a political ideology. For instance in Die Hard I, the "Volksfrei"-movement, a West German leftwing terrorist group, attacks a party at the headquarters of a Japanese cooperation in Los Angeles and takes the guests hostage. Their declared aim is to force the liberation of "revolutionary brothers and sisters" from prison. However, this turns out to be only a diversion; the group real aim is to rob 640 million dollars from a safe. Another telling example is the disgruntled expoliceman Howard Payne in Speed. He informs his opponent via mobile phone about the sole motivation of his blackmail scheme: "Well, I want money, Jack. I wish that I had some loftier purpose, but I'm afraid in the end, it's all about the money". Yet there is also a new threat emerging in1990s cinema that has nothing to do with those apolitical gangsters – in response to renewed public interest sparked by the (largely unsuccessful) bombing of New York's World Trade Center in 1993, the radical Islamist terrorist was introduced on the movie screen with True Lies (1994), Executive Decision (1996), and The Siege (1999). These three films depict jihadists as backward lunatics and potential mass murderers whose onslaught had to be fought by all means necessary. In True Lies, a group called "Crimson Jihad" has smuggled nuclear weapons out of the former Soviet republic Kazakhstan and attempts to blackmail the US government. To demonstrate their seriousness they detonate the first bomb on an uninhabited island of the Florida Keys. The "pillar of holy fire" that rises at this place threatens a nuclear holocaust. Spymaster Trilby (Charlton Heston) urges his troops to locate ringleader Aziz (Art Malik) and his men before "somebody parks a car in front of the White House with a nuclear bomb in the trunk." This job is effectively done by Harry Tasker (Arnold Schwarzenegger), agent of the "Omega Sector", a clandestine unit specialising in counter-proliferation. Executive Decision features Arabs hijacking a Boeing 747 with the intention of blowing up the plane, and smuggle enough nerve gas on board to wipe out the entire East Coast of the US. When a US senator, who happens to be on board, wants to negotiate to advance his own career interests, he receives a "punishing" bullet in the head. Instead Executive Decision aims straight for a climatic shoot-out at the very last moment a Special Forces team that had slipped into the belly of the plane in mid-flight via a "decompression tunnel" intervenes and shoots all hijackers. The enemy within and the reaction of the American public in the face of terrorist violence are the main concern in The Siege. To force the US government to release a terrorist leader - he had been kidnapped by American forces - several terrorist cells undertake suicide missions in New York When the crisis reaches its peak, the president declares martial law and all able-bodied Muslims who do not cooperate, are detained behind barbed wire. Liberal FBI investigator Frank Hubbard (Denzel Washington), who managed the investigation before

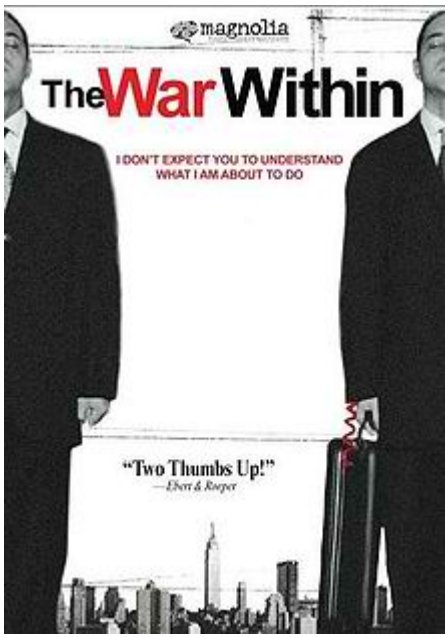




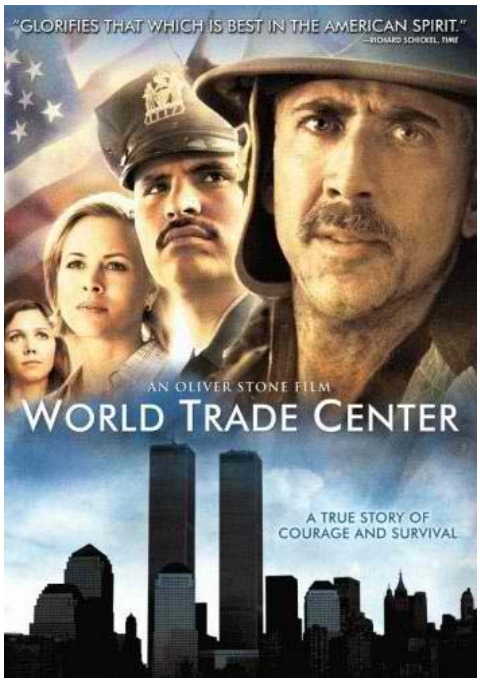
the army was called in, is the exact opposite of commanding General William Deveraux (Bruce Willis). While the latter uses his troops like a "broadsword", Hubbard "plays by the book" and upholds constitutional rights. In the end he arrests not only Deveraux for murdering a prisoner, but disposes of the last attacker, who exclaims both defiant and threatening: "There will never be a last cell!"

After 9/11: the changing face of terrorism

In the immediate period after 9/11, Hollywood indeed shunned away from the subject of terrorism, focusing instead on fantastical escapism, Science Fiction and family entertainment. Tellingly, the Twin Towers were edited out of most movies in the production line that showed the New York skyline. One of the first movies to address terrorism after 9/11, The Sum of all Fears (2002), featured the destruction of Baltimore by an atomic bomb. Overall the film was considered as out of touch with the post 9/11 reality since the story focuses on the ensuing escalating tensions between the US and Russia. With terrorism more or less out of the picture, threats were depicted as extraterrestrial (War of the Worlds, 2005), in the form of disease (I am Legend, 2007) or as a result of rapid climate change (The Day after Tomorrow, 2005). Besides commercial considerations with regard to a weary public, both domestic and international, but also because previous scenarios considered fantastic and purely entertaining had been so "brutally realized" on 11 September 2001, the subject of terrorism was not addressed in a major way for some years in Hollywood's production studios. The War Within (2005) was one of the earliest examples of movies addressing the situation in post 9/11 America: it focuses on Hassan (Ayad Akhtar), a Pakistani engineer, who was wrongly suspected of terrorist activities and tortured in prison. The violent experience transforms Hassan into a radical who seeks revenge for the injustice done to him. He connects with a terrorist cell that is in the middle of planning an attack on the Grand Central Station in New York. But his logic is put under severe pressure by contradictions and conflicting emotions: the war, in which he sees himself, is fought "within" – in his own psyche. The search for answers also motivates Syriana, a 2005 movie that is partly based on the memoirs of Ex-CIA agent Robert Baer. It explores the political, economic, legal, and social effects of the oil business, and how its mechanisms breed terrorism. The main character, elderly CIA agent Bob Barnes (George Clooney), is embedded in a network of power relations connecting mighty Washingtonian law firms, Texan oil business, the US government, and the corrupt elites of a Middle Eastern sheikdom. In the script, this "system" uses all means necessary to advance its political-economic interests and produces terrorism as a form of blowback. A sub-plot illustrates this on the basis of the radicalisation of two Pakistani oil workers, who simply want to improve their lives and are prevented from doing so. Stephen Spielberg addressed the conflict via historical analogy in Munich (2005). His adaptation of a novel on the Israeli revenge for the massacre of its athletes during the 1972 Olympics was also a critical exploration of the cycle of violence engulfing the Middle East and, indirectly, a "prayer for peace". It took more than five years for the entertainment industry to tackle 9/11 directly. In United 93 (2006), Paul Greengrass retold the story of the hijacked flight that did not reach its intended target on September 11th. Instead it crashed into a field in Pennsylvania, supposedly because the passengers revolted against the hijackers. The director offers only a distanced portrait of the hijackers – although the first scene in the movie, a prayer ritual in the morning hours of September 11th, 2001, depicts them as devout Muslims on a mission. But since United 93 is all about the heroic actions of the passengers and their sacrifice, the motivation and personal background of the terrorists



remain rather obscure to the moviegoer. Oliver Stone's World Trade Center (2006) did not even show the planes hitting the towers. Instead, Stone concentrated on a human interest story based on the miraculous rescue of two survivors from Ground Zero. With growing distance, movie makers began to focus on the War on Terror, its progress and implications, both domestic and international. In Body of Lies (2008), CIA agent Roger Ferris (Leonardo Di Caprio) sets up a fictitious terror group, equips it with fake bank accounts, and plants messages in fundamentalist chat rooms. A staged attack on a US Army base in Turkey aims to flush out a jealous Al Qaeda mastermind - the Syrian born, American educated Al-Sameen (Alon Aboutboul). The plan works although the situation becomes desperate for the agent. He has to endure torture when caught by Al-Sameen and is about to be executed on video when Jordanian intelligence agents burst into the room and kill all terrorists. It turns out that Ferris's principal ally, the deceptive spymaster Hani Salaam (Mark Strong), is a far more effective manipulator than previously assumed, making the most of a partnership of convenience. Finally, The Kingdom (2007) can be read as an alternative scenario to the real life War on Terror in its depiction of successful counterterrorism as the result of cooperation between Western and Middle Eastern police forces. A team of FBI investigators works closely with the Saudi police Colonel Al Ghazi (Ashraf Barhom) to hunt down Abu Hamza, a mid-level al- Qaeda operative, who is responsible for a bombing attack on an American compound in Saudi-Arabia. Overall the film offers a "utopian spectacle of wounded Americans heading home, mission accomplished," as Jim Hoberman remarked. Comparing depictions of terrorism: 1970s – 2000s In order to clarify the relationship between context and cultural output, the four ten year periods are put in comparison with each other. This analysis highlights how the differing depiction of terrorism indicates shifts in the public's understanding – in line with the specific political and social "Zeitgeist" of the decade, or in reference to hegemonic ideas about the interpretation of terrorism in the public discourse.

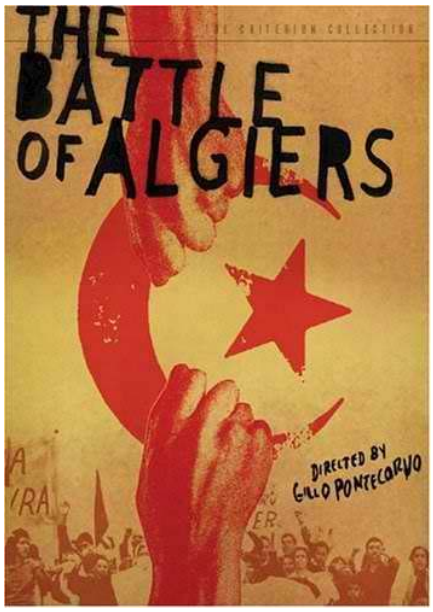


In 1970s cinema terrorism was escapist entertainment with little basis in reality. Nevertheless it featured many characteristics like air piracy, attacks on vital city infrastructures and mass gatherings. Fitting the Cold War framework the enemy "other" consisted of left-wingers, Third World guerrillas, as well as "home-grown" radicals and "lone wolfs". Where Middle Eastern terrorists appeared, their background was primarily secular, national liberation on their agenda. What unites this diverse lot is the more or less subjective motivation: the real driving forces for the perpetrators are not political, but hatred of society, psychosis, or simply greed. This mode of representation changed during the 1980s – greatly influenced by the engagement of the US in the Middle East and the experience of devastating attacks like those in Beirut in 1983. The terrorist"" was finally established as a sworn public enemy of everything America stands for: - be he a Communist infiltrator or a Shiite extremist. Against this threat the whole arsenal of military might is mobilised'. To fight fire with fire is depicted by many movies as the most effective way to deal with terrorism (Nighthawks, Invasion U.S.A, Delta Force). Terrorism is now no longer the brainchild of twisted minds, but a form of proxy warfare – organised, equipped, and paid for in secret by rogue states like the Soviet Union or Iran. The message is that terrorism can not claim any "true" political underpinning or legitimate causes – it's either the product of "loony" fanaticism or of a criminal enterprise orchestrated by its secret paymasters. The 1990s were both a time of easing and one of heightening awareness of new threats: since the ideological struggle of the Cold War had ended, the former stereotypical villains lost much of their symbolic value. They kept

appearing, like the East-Germans in Die Hard, but had morphed into a criminal syndicate. At the same time 90s cinema envisioned a crumbling world order with failing state power, the emergence of asymmetric threats, and new players in the form of transnational networks. In doing so, the movies captured the phenomenon of decentralised local initiatives replacing the old-fashioned state sponsored terrorism of the 1970s and 1980s quite accurately. Films like The Siege or Executive Decision made it clear that the mode of operation had changed as well. The first attack on the World Trade Center in 1993 and the Embassy bombings of 1998 in East Africa had demonstrated that the "new Jackals" aimed to achieve spectacular violence against highly symbolic targets while also inflicting mass casualties. Prior to that, terrorist groups had observed some limits of violence since it would have weakened their base of popular support. The terrorist cells in The Siege and in Executive Decision act according to this modus operandi: they orchestrate suicide bombings, rely on the media to broadcast their message, and intend to set off a chain reaction of escalating violence. More recent movies deliberately aim to capture the phenomenon even more realistically. To utilize politically agenda-free terrorist figures as opponents would not fit the post 9/11 environment. Yet while terrorism is the prime subject of several popular TV series – e.g. 24, The Unit, or Sleeper Cell - it was picked up only reluctantly by the Hollywood movie industry after 2001. The commercial failure of Body of Lies or The Kingdom had apparently put a lid – at least temporarily – on terrorism-related movies.

The relationship between real and (movie) reel terrorism

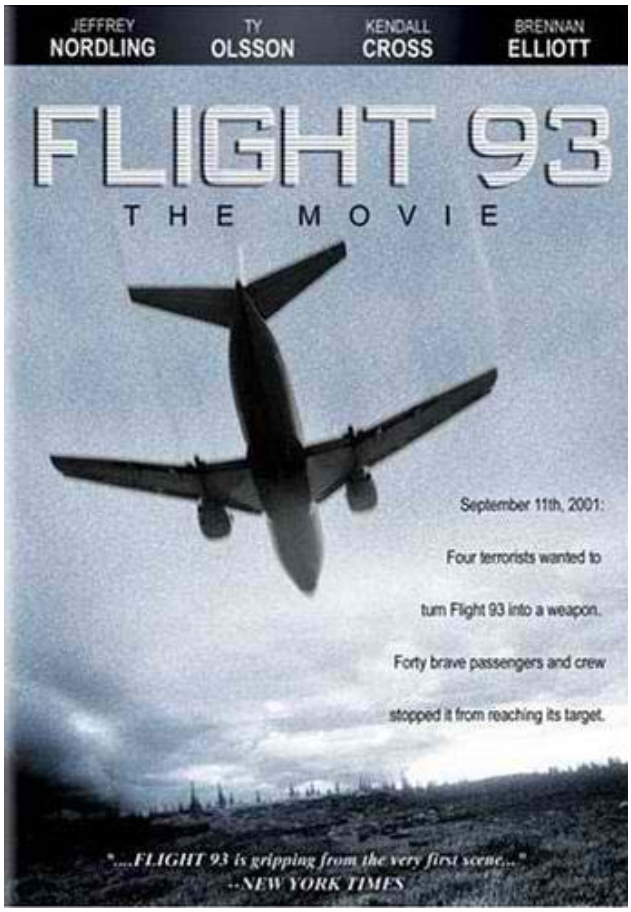
Since the public's understanding of terrorism is clearly affected by the latter's mass cultural representation, the question remains if this can also be applied to terrorists themselves? There is indeed some evidence that terrorists picked ideas from movie scenarios or imitated what they saw on the screen. Gillo Pontecorvo's The Battle of Algiers (1965), a dramatization of the real life conflict between Algerian FLN rebels and the French army, inspired many left-wing revolutionary groups as well as terrorists: it is said that the IRA, the Tamil Tigers, and the Black Panthers screened it to their members for training purposes since The Battle of Algiers quite authentically depicts the inner workings and dynamics of an insurgent struggle and the alleged effectiveness of urban terrorism. In Western Germany, the leader of the Red Army Faction (RAF), Andreas Baader, was an keen student of Pontecorvo's pseudo-documentary. According to his biographers Klaus Stern and Jörg Herrmann, Baader modelled the "Dreierschlag" of 1970 – the simultaneous robbing of three banks in West Berlin – after a key scene in his favourite movie. A more recent example was used as evidence in a British trial of an Al Qaeda sympathiser in 2006. When investigators played a video he owned – Die Hard with a Vengeance (1995) – the tape abruptly ended after 60 minutes and instead began to show pictures of New York landmarks, while a voice in the background imitated explosion sounds. In regard to 9/11, several commentators like Tom Engelhardt even assumed that the terrorists had modelled their plot after a Hollywood scenario: "What if those pre-existing frameworks hadn't been quite so well primed to emerge in no time at all? What if we (and our enemies as well) hadn't been at the movies all those years?, they asked". To claim that terrorism is simply a form of copy cat crime is of course far-fetched – even in the case of The Battle of Algiers it is very difficult to determine if there was any direct nexus between viewing it and the practical application of insurrectionary tactics depicted therein. What is certain is that the movie's inspirational force roused passions, made people identify with the cause of anti-colonialism and international struggles that were in full swing at that time. What



can be assumed is that violent extremists tend to get inspiration and ideas from popular culture like everyone else, but for different reasons and motives.

Conclusion

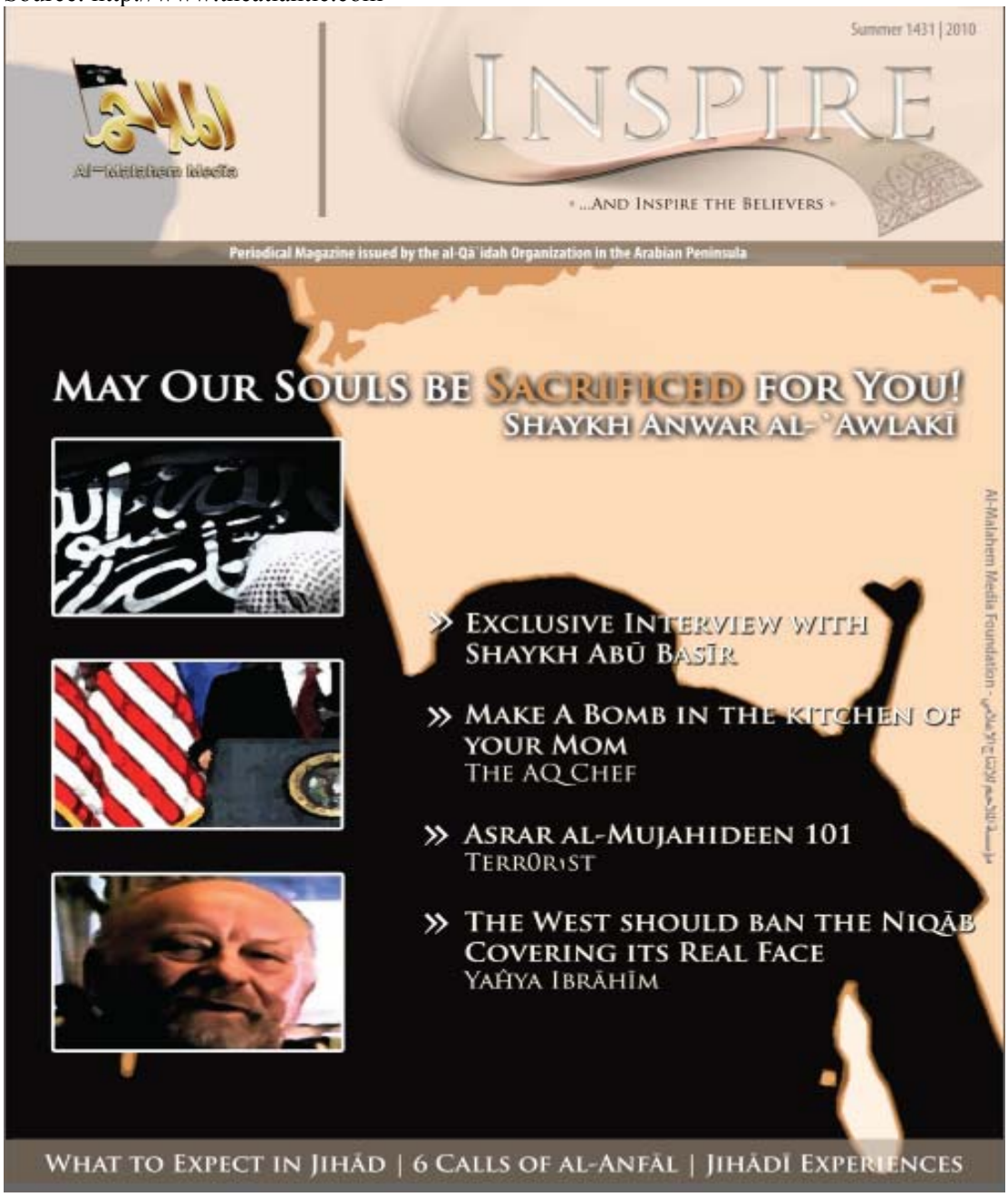
For Hollywood movies terrorism was first of all a thrilling piece of entertainment: the plots are all but spectacular, the villains mostly represent archetypes of "evil", and ultimately the threat is averted by righteous forces. Although as exaggerated and deformed Hollywood's interpretation of terrorism may be, the movies can be "read" in an insightful way: as a sort of "snapshot" of the cultural context from which they originate, the cinematic texts tell us about prevailing mass fears, fantasies, and projections about terrorism. They represent the status quo of the public discourse at that time, reproducing hegemonic ideas promoted by many politicians, the media, or think tank experts. Thus, both the meaning of terrorism and what is projected into it can not be understood, without paying close attention to what is happening on the cinema screen. This "mirror(ed) image" of terrorism is revealing because ultimately it expresses certain dimensions we prepare to confront in real life: the spectre of unspeakable atrocities, the notion of extra-legal violence to be employed against terrorists, or the establishment of a "state of siege" ending all civil liberties. Of course there are also risks associated with this: the review of relevant movies demonstrates that the mass culture representation of terrorism is problematic due to the highly suggestive effect of imaginary combined with ideological subtext. In Hollywood movies terrorism is essentialised – that is, often presented as de-politicised and merely pathological or criminal. Its cinematic representation generates a high degree of assurance in the effectiveness of simple, quick solutions to highly complex problems. It also legitimises extra-legal and military approaches while denouncing compromise and negotiations as appeasement. In short, it tends to reduce reality's complexity to a simple dichotomy of good and evil. The result is a kind of false conscience that hampers a better understanding of terrorism and political violence in regard to its causes, intentions, and the spectrum of possibilities for counteraction. There can be little doubt that cinema and popular culture in general can provide valuable insight into shifting political and ideological trends, re-arrangements of frameworks beyond the obvious public fascination with the subject of terrorism.



Dr. Thomas Riegler studied history and politics at Vienna and Edinburgh Universities. He now works as a journalist and historian in Vienna. He has published on a wide range of topics, including terrorism, film studies, and contemporary history. His most recent book is: Terrorism. Actors, Structures, Trends (2009, in German).

Al Qaeda's First English Language Magazine Is Here

Source: http://www.theatlantic.com

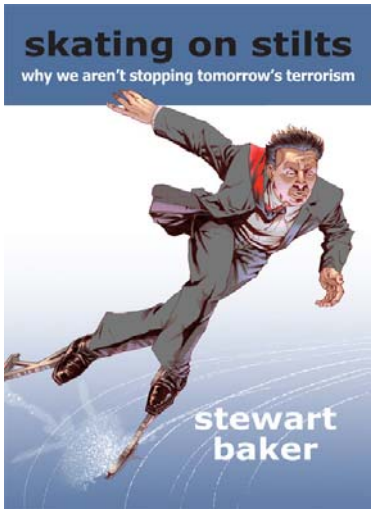


As the U.S. struggles to manage its efforts to influence opinion about Al Qaeda abroad, Al Qaeda on the Arabian Peninsula has produced its first English-language propaganda magazine. It's called "Inspire," and you can read parts of it below. A U.S. official said early this morning that the magazine appears to be authentic."Inspire" includes a "message to the people of Yemen" directly transcribed from Ayman Al-Zawahari, Al Qaeda's second in command, a message from Osama Bin Laden on "how to save the earth," and the cover includes a quotation from Anwar Al-Awlaki, the American born cleric who is believed to be directly connected to the attempt to destroy an airplane over Detroit by Umar Farouk Abdulmutallab on Christmas Day. (The director of the National Counterterrorism Center, Michael Leiter, made that disclosure at a security forum in Aspen, CO, Fox News reported.) The table of contents teases an interview with the leader of AQAP who promises to "answer various questions pertaining to the jihad in the Arabian Peninsula." It includes a feature about

how to "make a bomb in the kitchen of your mom."AQAP's first effort to post the magazine to jihadist websites failed Wednesday, as many of the pages were contaminated with a virus. (I half seriously believe that U.S. cyber warriors might have had a hand in that little surprise.) The U.S. is quite worried about Al Qaeda's new publishing ambitions, which mark a more sophisticated effort to engage the English-language world and to recruit English-speaking Muslims to join the cause.The copy was obtained from a private researcher. AQAP had advertised for days that the magazine would appear with the interviews specified in the table of contents. It is possible, although not likely, that the magazine is a fabrication, a production of a Western intelligence agency that wants to undermine Al Qaeda by eroding confidence in its production and distribution networks. The U.S. is engaged in direct net-based warfare with jihadis; this sort of operation would not be too difficult to pull off. Since I am not completely certain that the clean PDF doesn't contain a hidden virus, I've elected not to post it just yet.

Book review: 'Skating on Stilts: Why We Aren't Stopping Tomorrow's Terrorism'

Source: http://www.latimes.com/entertainment/news/la-et-book-20100706,0,6332849.story



Author Stewart Baker, former Homeland Security policy chief, says civil-liberty advocates are putting Americans at risk.

Last Christmas Day, after a Nigerian walked onto a Detroit-bound passenger jet with powdered explosives sewn into his underwear, people wondered: Isn't there a machine that could find that sort of stuff? In fact, there is: Full-body scanners that peer under clothing to detect anomalies. While there's no certainty the machines would have caught Umar Farouk Abdulmutallab, no one disputes they are superior to metal detectors at finding explosives, which is why the U.S. Transportation Security Administration is now deploying the imagers at airports nationwide. So why weren't the machines in place before? A well-oiled coalition of privacy advocates

on the Left and Right had stopped them, writes Stewart Baker, the former policy chief of the Department of Homeland Security, in his book "Skating on Stilts: Why We Aren't Stopping Tomorrow's Terrorism." The advocates, including the liberal Electronic Privacy Information Center and the conservative Gun Owners of America, helped convince the House of Representatives to pass a resolution in June 2009 forbidding the government from using the body imagers for primary screening. It was one of a number of victories the civil-liberties coalition won in the wake of the Sept. 11 attacks — victories that have left the U.S. vulnerable, writes Baker, a lawyer now in private practice. Around that thesis, he weaves what is partly a memoir of his time as a senior aide to Homeland Security Secretary Michael Chertoff and partly a blistering polemic aimed at what he calls the Privacy Lobby. "There's a well-established civil libertarian mythology about the nation's response to 9/11," Baker writes. "In the myth, a frightened U.S. government throws civil liberties out the window within weeks of the attacks, launching a seven-year attack on our privacy that a new administration is only now slowly … beginning to moderate. In real life, privacy groups mobilized within weeks of 9/11, and they won victory after victory, right from the start." The scary near-miss by Abdulmutallab, whose bomb burned but failed to detonate, overwhelmed the privacy arguments against the body scanners, which have been likened to virtual strip searches. The TSA addressed that issue by blurring the facial image, insuring the image-reader would not see the passenger, and allowing people to opt for a pat down. According to the TSA, almost everyone chooses the machine. Yet the case of the underwear bomber exposed another privacy-related security flaw that has not been fixed, Baker writes. The Nigerian was on a terrorism watch list, but airline security officials never knew it. In 2003, the ACLU and other groups filed suit to stop the TSA from gathering passenger reservation information, a tool the agency wanted to use to decide who merited extra screening. Congressional appropriators essentially killed the program, and DHS replaced it in 2008 with what Baker calls "a pale imitation … that gave TSA access to no information other than name, gender and birthdate." Baker concludes: "If you've wondered why, eight years after 9/11, we're still looking for weapons and not for terrorists, now you know. Privacy advocates turned the use of even ordinary data like travel reservations into the policy equivalent of a toxic waste site." "Skating on Stilts" is full of such anecdotes, and Baker, who was a key Homeland Security player from 2005 to 2009, makes a persuasive case against the privacy absolutists. He reprises his successful effort to pry airline passenger data out of the Europeans, who are even more uncompromising about privacy than American activists. He tells the story of how the wall erected between intelligence-gathering by the FBI and law enforcement, though designed to protect civil liberties, ended up blinding authorities to the unfolding 9/11 plot. And he recounts how other agencies blocked, on privacy grounds, DHS' bid to maintain and update a database to continually screen the backgrounds of scientists who work with deadly biological pathogens. Baker deftly skewers the original legal theorist behind the right to privacy, Supreme Court Justice Louis Brandeis, who was scandalized in 1890 by the fact that newspapers published flattering details about a party at his house. Brandeis also found it outrageous that a newspaper could take and publish a photo of a person without his permission. Obviously, the idea of what constitutes an invasion of privacy has evolved dramatically. Baker portrays privacy advocates as fussy Luddites. When the government collects information about people, Baker acknowledges, some bureaucrats may improperly access it, as when State Department employees rifled Barack Obama's passport file during the 2008 presidential campaign. But the employees were easily caught and disciplined, Baker notes. The answer is to hold bureaucrats accountable for abuses, he says, not deny them important security tools. It's not always easy to do that, though, and Baker is sometimes glib about the potential for government misdeeds. He doesn't mention that the passenger screening plan Congress killed would have allowed TSA, an agency that is subject to near-daily complaints about surly, abusive airport screeners, to create a risk profile for passengers to determine how they were treated at the security checkpoint. For many, that's a frightening prospect. When Nancy Anne Phillips, a 63-year-old retired professor from Southern California, complained in April that a screener brushed her crotch with a metal-detecting wand at Philadelphia's airport, TSA denied her allegation but said the security tape of the

incident had been destroyed. At the same airport in March, a TSA employee made a 4-year-old boy struggle through a metal detector without his supportive leg braces, the Philadelphia Inquirer reported. The agency apologized to the boy's father after the incident was publicized but blew him off at the time, he recounted. Baker would retort that TSA wouldn't be screening 4-year-old children if the privacy lobby hadn't made it impossible to craft an intelligence-based system. And he might say something else: No TSA slight carries the force of a terrorist bomb.

De-Radicalization Of Terrorists Shows Promise In Comprehensive Study

Source: http://www.medicalnewstoday.com/articles/193812.php

Prison-based programs to de-radicalize terrorists show promise, if well-run, says a new joint report from U.S. and British researchers. Their initial findings - the most comprehensive to date, based on programs in 15 nations - were presented at a recent conference. Prisons and Terrorism: Radicalization and De-radicalization in Countries is a joint report of the National Consortium for the Study of Terrorism and Responses to Terrorism (START), based at the University of Maryland, and the International Center for the Study of Radicalization (ICSR), based at Kings College in London. The report concludes that individual de-radicalization and disengagement programs, such as those in Saudi-Arabia, Singapore, Indonesia and other nations, "can make a difference." The researchers say their work could have policy implications for prisoners detained at Guantanamo Bay, Afghanistan and Iraq. "This is a much bigger issue than most people appreciate," says University of Maryland professor and START Director Gary LaFree. "It's a classic problem really. Prisons change behavior for both good and for bad. It's difficult to detain prisoners forever, but when is it safe to let them go?" The final report will be presented in Washington, D.C. this fall. "Initial results indicate that the programs can work, though probably not 100 percent of the time," LaFree adds. "Just as with regular criminals, individual and community supports help combat recidivism. But with terrorism and ideology there's an added dimension. In general, it's easier to de-radicalize when a movement is on the decline, when the battle seems lost."

Key Findings and Recommendations

The report identifies principles and best practices to help governments and policymakers avoid costly and counterproductive mistakes. These include:

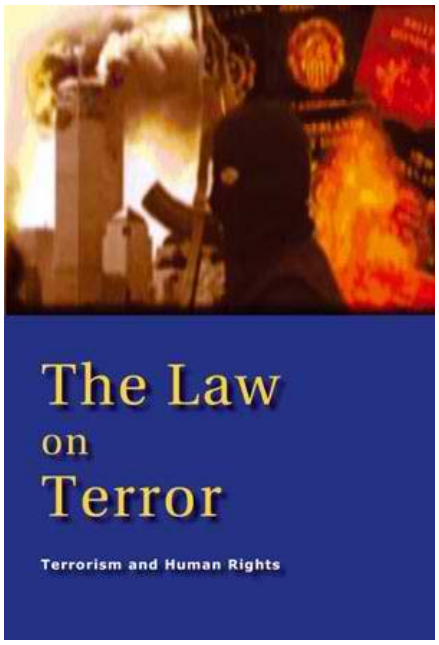
- Prison services should be more ambitious in promoting positive influences inside prison, and develop more innovative approaches to facilitate extremists' transition back into mainstream society. The current emphasis on security and containment of terrorists leads to missed opportunities to promote reform.
- Over-crowding and under-staffing amplify the conditions that lend themselves to radicalization. Badly run prisons make the detection of radicalization difficult, and they also create the physical and ideological space in which extremist recruiters can operate freely.
- Religious conversion is not the same as radicalization. Good counter-radicalization policies - whether in or outside prison - never fail to distinguish between legitimate expression of faith and extremist ideologies. Prison services should invest more in staff training and consider sharing specialized resources.
- Individual de-radicalization and disengagement programs - such as those in Saudi-Arabia, Singapore, Indonesia, and other countries - can make a difference. Their positive and outward-looking approach should serve as an inspiration for governments and policymakers everywhere.
- Even in the best circumstances, de-radicalization and disengagement programs complement rather than replace other instruments in the fight against terrorism. They work best when the political momentum is no longer with the terrorists or insurgents.

The report was made possible by funding from the governments of Australia, the Netherlands and the United Kingdom. It is based on research by 16 of the world's leading terrorism experts. START is funded by the U.S. Department of Homeland Security and is based at the University of Maryland.

Balancing Terrorism Prevention And Human Rights

Source: http://www.medicalnewstoday.com/articles/193727.php

A new research symposium investigates the interrelationships between terrorism and governmental respect for human rights, regarding both how political authorities respond to terrorist violence and how human rights abuses can predict subsequent terrorist attacks. Responding to a lack of systematic evidence and granular data on the linkages between these two areas, the symposium addresses issues both domestic and international, ranging from public opinion on torture to the Guantanamo detention facility, sexual abuse in Israeli prisons, and the American profile abroad. The research appears in the July issue of PS: Political Science and Politics, a journal of the American Political Science Association. The symposium was guest edited by James A. Piazza, an associate professor of political science at Pennsylvania State University, and James Igoe Walsh, an associate professor of political science at the University of North Carolina at Charlotte. The entire set of articles can be found online through the Cambridge University Press site. Piazza and Walsh's groundbreaking preliminary study uses empirical analysis to investigate the effects of different types of human rights abuses on a state's susceptibility to terrorist attack. Categorizing abuse into torture, political imprisonment, disappearances, and extrajudicial killings, the authors conclude that the restriction of citizens' rights actually fuel terrorism. However, they also find that governmental repression in response to terrorism is limited, suggesting that human rights advocates might more effectively focus on other areas of threat. The symposium includes six additional articles. Emilie Hafner-Burton (University of California-San Diego) and Jacob Shapiro (Princeton University) examine the validity of commonly held beliefs that terrorism creates strong pressures on governments - especially democracies - to restrict human rights, and that these restrictions are both immoral and counterproductive to curbing terrorism. Will H. Moore (Florida State University) uses democratic theory to explore state responses of repression to terrorist activity. Adopting a similar theoretical approach, Michael Desch (University of Notre Dame) draws parallels between the Obama and Bush administrations' responses to counterterrorism policy, arguing that both presidents have pursued essentially the same course. Mia Bloom (Penn State University) uses the framework of a descriptive case study of Israeli-occupied lands to investigate how the abuse of women by occupying powers influences local support for insurgents and terrorists. Several articles introduce crucial new datasets to the discourse that will be invaluable in later research and policy formulation. Jennifer Holmes and Linda Camp Keith (University of Texas at Dallas) use independent data to investigate the effects of the September 11 attacks on U.S. asylum policy, particularly as it pertains to applicants who speak Arabic or come from countries that house members of Al Qaeda. Paul Gronke and Darius Rejali (Reed College) offer a new set of data about public opinion on torture at the time of the 2008 election that shows that, despite the common assumption, the U.S. public did not favor the use of torture until six months into the Obama administration. Their article vigorously addresses the question of how opinion came to be so

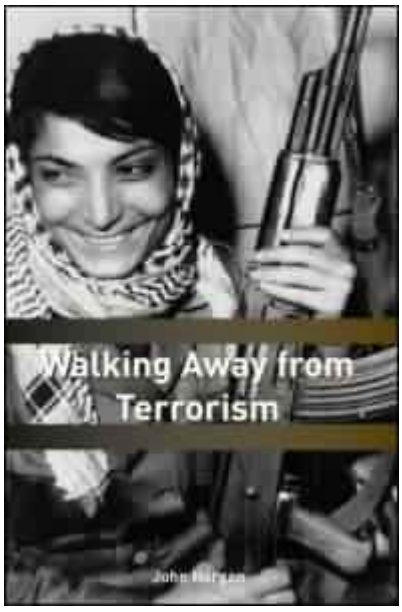


badly misrepresented in the media. The scholarship offered by this symposium poses a significant contribution not only to academic circles, but also to the policymaking community. New data regarding public opinion and policy outcomes in the face of terrorist activity and theoretical investigations of the underpinnings of national policy decisions allow more informed future discourse. Given the high stakes of counterterrorism decisions, such research is crucial for advancing broad understanding and the attainment of national goals.

Former Terrorists' Experiences Could Sway Potential Recruits

Source: http://www.medicalnewstoday.com/articles/193549.php

A better understanding of why people leave terrorism could be more important than why they became a terrorist, according to a Penn State terrorism expert. The information could also help counterterrorist agencies discredit militant outfits and prevent them from attracting fresh recruits. "The key issue here is that we need to pay more attention to the disengagement process because former terrorists are willing to speak about their experiences," said John Horgan, director of Penn State's International Center for the Study of Terrorism. "We need to identify those lessons, showcase them, and use them to combat the imagery, myths and credibility of the terrorist movements." In his book "Walking Away From Terrorism" (Routledge, 2009) Horgan argues that understanding how a terrorist becomes gradually disillusioned and ultimately abandons terrorism could be crucial to stemming recruitment to terrorism. "Just as there is a flow of recruits into a terrorist organization, there is also a number of recruits who leave or disengage," said Horgan. "But there is practically no academic research on this process of disengagement from terrorism." With the help of interviews with former terrorists from around the world, Horgan is trying to deconstruct how, why and when a person disengages from terrorism. "I really wanted to understand the process of disengagement, not deradicalization," explained Horgan. "Disengagement is the process where people move away from the terrorist group, but they may or may not necessarily be deradicalized." "Walking Away From Terrorism" makes clear that while many people become radicalized for one reason or another, they do not necessarily become terrorists. Instead, the book focuses on people who become radicalized and then join a terrorist organization. Horgan believes that despite the complexities involved in studying terrorism, there are clear patterns that could help devise a strategy for intervention. For instance, many people join terrorist groups sensing a higher social status, camaraderie and excitement at being part of a particular movement. But after joining, they realize they do not call the shots and do not necessarily get to do what they want. "They may realize that it is a lot more stressful than they originally thought," said Horgan. "Or they may realize that it is a lot more boring than they originally thought. Remember, nobody is a full-time terrorist." Disillusionment may also set in when a terrorist realizes, for instance, that superiors have unattractive personal qualities, indulge in petty thievery or knowingly target innocent civilians. Because terrorist groups rely on "street cred" and imagery to lure young kids, publicizing these disillusionments could have enormous preventive implications. "We are not trying to say it is wrong to have radical views; we are more interested in blocking off that attraction of one particular avenue for people who are radicalized," Horgan added. Currently, there are a number of fledgling programs around the world trying to get terrorists to disengage, but Horgan cautions that it could be a mistake to lump them all together because each program is specific to a certain region. What works in one area is not necessarily going to succeed elsewhere. In Colombia, for instance, the government has launched an innovative



initiative to create an exit pathway from the FARC paramilitary group. When individuals lay down their arms, they receive reduced prison sentences, and are helped in finding a job and becoming a part of society. Such initiatives could be as slow and idiosyncratic as the initial move toward terrorism but Horgan cautiously believes at least some of them may offer opportunities for checking terrorism. "There is potential for tension in the promotion of disengagement initiatives, given renewed arguments that terrorism is not a problem that has a military solution," explained Horgan. "But greater knowledge of the disengagement process could play a critical first step in future solutions."

Anxiety May Be At The Root Of Religious Extremism

Source: http://www.medicalnewstoday.com/articles/193902.php

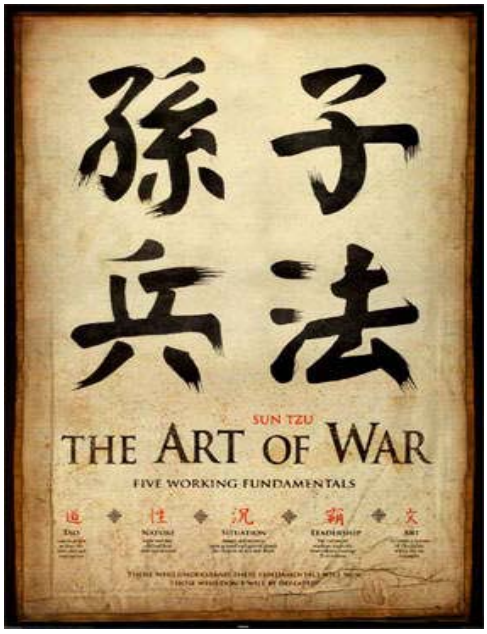
Anxiety and uncertainty can cause us to become more idealistic and more radical in our religious beliefs, according to new findings by York University researchers, published in this month's issue of the Journal of Personality and Social Psychology. In a series of studies, more than 600 participants were placed in anxiety-provoking or neutral situations and then asked to describe their personal goals and rate their degree of conviction for their religious ideals. This included asking participants whether they would give their lives for their faith or support a war in its defence. Across all studies, anxious conditions caused participants to become more eagerly engaged in their ideals and extreme in their religious convictions. In one study, mulling over a personal dilemma caused a general surge toward more idealistic personal goals. In another, struggling with a confusing mathematical passage caused a spike in radical religious extremes. In yet another, reflecting on relationship uncertainties caused the same religious zeal reaction. Researchers found that religious zeal reactions were most pronounced among participants with bold personalities (defined as having high self-esteem and being action-oriented, eager and tenacious), who were already vulnerable to anxiety, and felt most hopeless about their daily goals in life. A basic motivational process called Reactive Approach Motivation (RAM) is responsible, According to lead researcher Ian McGregor, Associate Professor in York's Department of Psychology, Faculty of Health. "Approach motivation is a tenacious state in which people become 'locked and loaded' on whatever goal or ideal they are promoting. They feel powerful, and thoughts and feelings related to other issues recede," he says. "RAM is usually an adaptive goal regulation process that can re-orient people toward alternative avenues for effective goal pursuit when they hit a snag. Our research shows that humans can sometimes co-opt RAM for short term relief from anxiety, however. By simply promoting ideals and convictions in their own minds, people can activate approach motivation, narrow their motivational focus away from anxious problems, and feel serene as a result," says McGregor. Researchers also measured participants' superstitious beliefs and deference toward a controlling God in order to distinguish religious zeal from meeker forms of devotion. "Anxiety-provoking threats sometimes also cause people to become paranoid and more submissive to externally-controlling forces, so we wanted to rule out that interpretation for our results," he says. Anxious uncertainty had no effect on either superstition or religious submission. Findings published last year in the journal Psychological Science by the same authors and collaborators at the University of Toronto found that strong religious beliefs are associated with low activity in the anterior cingulate cortex, the part of the brain that becomes active in anxious predicaments. "Taken together, the results of this research program suggest that bold but vulnerable people gravitate to idealistic and religious extremes for relief from anxiety," McGregor says. The findings, reported in two separate articles, "Anxious Uncertainty and Reactive Approach Motivation (RAM)" and "Reactive Approach Motivation (RAM) for Religion," were co-authored by McGregor and York University graduate students

Kyle Nash, Mike Prentice, Nikki Mann, and Curtis Phills. Both appear in the July issue of Journal of Personality and Social Psychology.

'Art of War' for emergency managers: mitigation and preparedness

By Joseph L. Giacalone

Source: http://theklaxon.com/art-of-war-for-emergency-managers-mitigation-and-preparedness#more-2137



The "Art of War" by Sun Tzu has been used over the centuries to teach everything from warfare to marketing and selling products. Emergency Management is no different. From fires to terrorism, the "Art of War" contains strategies that emergency managers (EM) can adopt and put into practice. The words of Sun Tzu explain to the EM how to apply the four principles of emergency management—mitigation, preparedness, response and recovery—when anticipating the myriad of hazards, both internal and external, that they face on a daily basis. Sun Tzu was always prepared and EMs should take note of his meticulous planning. As he said, "If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."

Mitigation

Mitigation is the first principle of emergency management and may be the most important one. The goal of mitigation is to reduce or eliminate the risks from hazards that an enterprise faces. Sun Tzu tells the EM that you must know everything about the organization. How does an EM become familiar with the technological, accidental and natural hazards that the organization faces? This task is completed through the use of risk analysis, threat and vulnerability assessments, interviews and most importantly historical references. In order to complete an effective analysis, every tour must be examined. Threats and vulnerabilities can arise during different hours of the day and each one must be mitigated against. "It is a matter of life and death, a road either to safety or to ruin. Hence it is a subject of inquiry which can on no account be neglected." The road for EMs concentrates on two main factors: probability and criticality. The probability is the likelihood of an event occurring and the criticality is how horrific it can be if it happens. Each threat is analyzed, and the decision on which ones to mitigate against, is based on the two factors. How is the decision made? The EM carefully has to prepare a Cost/Benefit Analysis and a Risk Analysis Matrix. The Cost/Benefit Analysis is used to identify which hazards are the most cost effective to mitigate against, and the matrix identifies the most critical and probable events. Only the most cost-effective techniques will be used to mitigate the problem. A mitigation plan is based on the threats, hazards and vulnerabilities of the organization, and can prevent the necessity of having a continuity plan altogether. An investment in the mitigation strategy can save millions in damages and ensure the survival of the organization. If the EM can only concentrate on one area, it must be on Mitigation strategies.

Preparedness

Preparedness is being ready to face the challenges of a disaster or any other type of emergency. How well an EM plans is the tell-all of survival. Without preparedness, the EM

will have no response or recovery. Sun Tzu knew that it didn't matter if the enemy was coming or not, but he was ready. EMs must give this same thinking to their enemy. The planning process actually is established in the mitigation phase. The EM must be prepared for anything at anytime, which is why it is called emergency management. For those entering or thinking about entering the field of emergency management, he or she must realize that the job of an EM is 24/7, and there are no such things as weekend or holidays. EMs have to be prepared mentally as well for this job. "Those who hold onto favorite processes, business models, techniques, or ideas that no longer match the reality of the environment will fail in their mission. Those who embrace new ideas for the sake of newness will also fail." When creating plans the EM has to be flexible in any environment. EMs will not fall into either of these traps because all plans must constantly be evaluated. Also, EMs must live by the old maxim when creating plans, "If it ain't broke don't fix it," but when the evidence tells you to change, you must. "If words of command are not clear and distinct, if orders are not thoroughly understood, the general is to blame. But if his orders are clear, and the soldiers nevertheless disobey, then it is the fault of their officers." All plans must be written so that anyone that reads it can clearly understand what needs to be done. They should be laid out in a manner that flows as well as be clear, concise and correct. A confusing and long winded plan will only mean one thing; no one is going to read it. In addition, the EM be flexible and be ready to adjust schedules, personnel and resources whenever necessary. Planning is critical to the response phase during an emergency. The National Response Framework, published by the U.S. Department of Homeland Security (DHS), provides the basic outline for non-fire hazard planning. There are two types of plans that EMs must maintain and constantly update: A Fire Safety Plan and an Emergency Action Plan (EAP), also known as an Incident Action Plan (IAP). The Fire Safety Plan covers only fire emergencies and the EAP covers all other hazards. These plans must be kept separate from each other and must be tested often to ensure their viability.

Response

"Ponder and deliberate before you make a move." Whenever disaster strikes, the public expects some sort of response and rescue. The response can come from the building's EM, the local police and, in extreme cases, the National Guard. Their job is to protect life, property and maintain order. However, when responding to any emergency, the EM must first evaluate the extent of the incident. A rash decision to move quickly into an emergency can be deadly. EMs don't want to have to rescue the rescuers. This is the point that is often most criticized by "Monday Morning Quarterbacks." Move too soon and the EM risks the entire operation; move too late and the costs can be insurmountable. "The control of a large force is the same principle as the control of a few men: it is merely a question of dividing up their numbers." The response phase often is chaotic and EMs must maintain a disciplined span of control. If the plan was tested during "peaceful" times, then everyone should know his or her roles. This makes the chaos a little more controlled because the EM knows "who is where and doing what." Therefore, the incident commander must be a strong leader and a good communicator.
"In battle, there are not more than two methods of attack—the direct and the indirect; yet these two in combination give rise to an endless series of maneuvers." EMs often are faced with the tough decision on how to approach the response to a disaster. This problem is often associated with what to do first. The primary response in any disaster is to protect life by rescuing those that can be immediately secured and then attending to the situations that can cause more hazards. Remember: Not everyone can be rescued at the same time.

Recovery

"In respect of military method, we have, firstly, Measurement; secondly, Estimation of quantity; thirdly, Calculation; fourthly, Balancing of chances; fifthly, Victory." During recovery, there are two main focuses: to return the community (or business) to normalcy, and to mitigate against future occurrences. Unfortunately, after an incident, the EM has the ability to establish a new focus on mitigation based on how bad the event was or how bad it could have transpired. The lessons learned, better known as the After Action Report (AAR), can

provide the information that is critical to balance the chances of fairing better in the future against the same type of event. Before an EM can ever think about a "victory" against a particular hazard, he or she must carefully examine how the event unfolded, measuring each step that was taken during the planning and response phases. Even though the "Art of War" was written centuries ago for generals during wartime, it holds an important significance in the role of the emergency manager. Identifying potential hazards and mitigating against them is a constant battle. EMs prepare for these battles in two ways: experience and education. Experience is often the best teacher, but also the cruelest. Sometimes EMs don't get a second chance. Like Sun Tzu, the EM does not know when or if the "enemy" will attack, but the EM will be prepared for him.

PTSD treatment a necessity for military, civilian first responders

By Tom Carey
Source: http://theklaxon.com/ptsd-treatment-a-necessity-for-military-civilian-first-responders#more-5025

Trying to grasp everything that is going on around oneself during a traumatic event can take its toll on the soul. Military and civilian first responders responsible for managing chaos on a daily basis can push their team to the limit. The multitasking you must perform as you make timely decisions, while providing some direction to others, is continuous. Providing for the well-being and care of your subordinates doesn't stop after an event—it begins. How many

have received the check the box treatment? Responders go to class, read the slides, watch a video and sign here. Sound familiar? Are they OK now? Maybe some responders are, but not everyone deals with the effects a catastrophic event, war or a life-threatening situation the same way. Recovery can be a longer process for some to achieve than others. Not all practitioners require the same amount of care. Given enough trauma, any individual could develop what is called post-traumatic stress disorder (PTSD). Senior managers owe proper care to their subordinates (as well as themselves) in promoting both awareness and obtaining quality and continuous treatment for this affliction. Whether it's an ER nurse at the Combat Surgical Hospital (CSH) in downtown Baghdad or at Bellevue Hospital in New York, the demand of one's expertise is needed at that very second to perform to the best of their ability to save a life. The soldier in the combat zone often states, "That mortar round was kind of close," but they keep on coming. As the smoke thickens with the threat of being burned by the

unbearable heat, the firemen continue to evacuate victims. The police officer, while trying to apprehend a suspect, is wrestled to the edge of an oncoming subway train and manages to make the arrest. When should one decompress these types of events? For most, it's either a shrug off the shoulder or run to the local bar. The best piece of advice is to talk about events with a trustful person. Some of them can be co-workers who are experiencing the same situations or others that have gone through similar actions. Sometimes an event can be too much for one's body and mind to process and comprehend. Then, for some, it takes a lot of time to let out that experienced situation. The worst thing one can do is keep it to themselves.

What is PTSD?

Post-traumatic stress disorder (PTSD) is a disorder that can develop following a traumatic event that threatens safety or makes one feel helpless. Dr. Frank Ochberg, a psychiatrist who has worked with and studied victims of war, terrorism, domestic violence, rape, incest and natural disaster in many countries, recognizes PTSD as three reactions that happen simultaneously. These reactions, known as the 'Triad of Disabling Responses," is all caused by an event that terrifies, horrifies or renders one helpless. The Triad of Disabling Responses is:

1. Recurring intrusive recollections.
2. Emotional numbing and constriction of life activity.
3. A physiological shift in the fear threshold affecting sleep,concentration and sense of security.

Why Should I Get Help?

Symptoms of PTSD may worsen over time. Finding the right treatment can only start by addressing that someone may need help. PTSD symptoms even can cause difficulty in family relationships, and responders might find themselves pulling away from loved ones. PTSD also can worsen physical health, such as heart problems. In an effort to help individuals exposed to traumatic events, The Klaxon spoke with Dr. Gerald Cohen, director of clinical affairs for the Division of Mental Hygiene at New York City Department of Health and Mental Hygiene, in offering tips for individuals involved in experiencing psychological problems following a disaster or responding to emergency situations.

[Note from the author: Being both a combat veteran and Sept. 11 first responder, I understand the reasons people don't want to recognize PTSD or receive outside assistance. No one wants to be labeled or be known to have some sort mental issue resulting in a catastrophic event. "If everyone else is OK, so am I," is a coping mechanism that many unfortunately buy into. Many times PTSD victims are told by others they have it instead of them recognizing the symptoms themselves.]

Hand Sculpted Roses

Source: http://www.rocketsintoroses.com/products.html

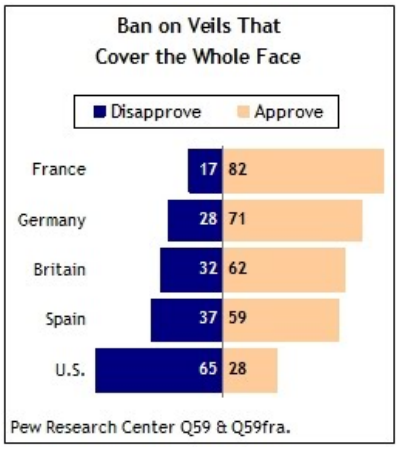
With just a hammer, anvil and furnace, artist Yaron Bob (a teacher and a part-time metal sculptor in Moshav Yated, Israel),, melts, moulds and sculpts Kassam rocket metal into gorgeous flowers. Each rose is a unique hand-sculpted piece of art, fashioned by metal sculptor Yaron Bob from actual rockets that landed in Israel. No two roses are alike. Each rose is a one of a kind, custom, hand-made, very limited edition collector's item. The standard rose takes about three to four hours of turning and twisting the steel. Then, hand sculpting intricate petals and leaves on the rose. The sculpture's base is a map of Israel with the rose growing out of the border with Gaza. The stem is mounted

on a base in the shape of Israel, with each rose "growing" from the region where most of the have rockets landed. Although the rose, stem and base are made of Kassam remains, there is no sign the flower comes from rocket metal. The larger more detailed roses can take significantly longer to create, especially the bouquets. The premium and ultimate rose have a rounder shape flower. They also have drooping greenery below the flower. The petals are finer, thinner and more elegant than the standard and long-stemmed rose. There is significantly more work, craftsmanship and attention to detail involved in creating this masterpiece. A portion of the proceeds of each item sold will be donated to Operation Lifeshield to build bomb shelters in the city of Ashkelon. We are committed to raising a minimum of $300,000 for building bomb shelters in Ashkelon. Please help us in reaching our goal of raising $300,000.00 by purchasing a Rocket into Rose or keychain today. The city of Ashkelon and Yaron Bob are most grateful for your support. And please refer all your friends, family and associates to our site. We would appreciate your help in spreading this powerful life changing message of Rockets into Roses around the world. Yaron's roses are truly a piece of history - living proof that Israel has endured missile attacks for years. They have been presented to dignitaries such as Secretary of State Hillary Clinton, Senator John Kerry and UN Secretary General Ban Ki-Moon. Yaron Bob has become world famous because of all the media attention and as result his Kassam rocket sculpted roses have become collector's items. He has literally transformed instruments of death, a weapon of war, into an object of great beauty, representing hope, life and peace. At the same time you are helping to protect the citizens of Israel from future rocket attacks by providing much needed above-ground portable shelters. There are only a limited number of each item offered for sale. A signed and numbered certificate of authenticity accompanies each rose. It is our hope that Yaron's roses remain very limited edition pieces. Due to the custom, handmade nature of our products and shipping time from Israel, please allow 2-3 weeks for delivery.

Europe: Widespread support for burka ban

Source: islamineurope.blogspot.com

On July 13, members of the lower house of the French parliament are expected to vote on a bill that would make it illegal for Muslim women to wear full veils -- those that cover all of the face except the eyes -- in public places. A survey by the Pew Research Center's Global Attitudes Project, conducted April 7 to May 8, finds that the French public overwhelmingly endorses this measure; 82% approve of a ban on Muslim women wearing full veils in public, including schools, hospitals and government offices, while just 17% disapprove.1 Majorities in Germany (71%), Britain (62%) and Spain (59%) would also support a similar ban in their own countries. In contrast, most Americans would oppose such a measure; 65% say they would disapprove of a ban on Muslim women wearing full veils in public places compared with 28% who say they would approve.



In the four Western European countries surveyed as well as in the U.S., support for a ban on Muslim women wearing a full veil is more pronounced among those who are age 55 and older, although majorities across all age groups in France, Germany and Britain favor a ban. For example, 91% of French respondents age 55 and older approve of restrictions on Muslim women covering their face, compared with 81% of those ages 35 to 54 and 72% of those younger than 35.

Fewer Coordinated Attacks Despite More Terror Groups Globally

Source: http://www.medicalnewstoday.com/articles/194127.php

The deadly, coordinated terror strikes in London five years ago - the 7/7 transit attacks - reflect emerging global trends, reports the National Consortium for the Study of Terrorism and Responses to Terrorism (START), based at the University of Maryland. These trends include the rise in the number of new terror groups and a continued drop in the number of coordinated attacks, which are usually far more lethal. The report is based on START's unclassified Global Terrorism Database, the most comprehensive of its kind in the world.

NEW PERPETRATORS: The report notes the rising number of new terror organizations world wide - on average 41 new organizations per year since 2000. The number of new organizations increased each year since 2004. "This emergence of new groups, with no past history of terrorist attacks, is a discernible global trend in this decade," the START report says. "This trend is similar to peaks evident in the late-1980s - an era of high levels of terrorist activity."

COORDINATED TERROR ATTACKS: Because of the sophistication involved, coordinated attacks, such as those in London five years ago, have always represented a small portion of all terrorism, but the rate has been declining from the previous decade. Relatively rare in the 1970s and early 1980s (up to 10 percent of all attacks), this figure doubled a few years later, peaking at 30 percent in 1998. There has been a steady decline ever since. Still the coordinated terror attacks in the 21st century have been both lethal and notable, including the 9/11 attacks, Bali nightclub bombings in 2002, Madrid 2004, 7/71 London attacks in 2005 and the armed assaults in Mumbai in 2008. On average, coordinated attacks are 44 percent more lethal than uncoordinated ones.

SUICIDE ATTACKS: The new START analysis reports a modest drop in suicide attacks globally in 2008 (191 such attacks, the latest data available), after rising in recent years. Still, this number is "well above average." The 7/7 attacks were Great Britain's first to involve suicide bombers, and the only successful such attacks there to date.

IDEOLOGICAL VARIATION: "Emergent organizations today do not reflect one ideology, but rather, there are new groups representing a wide array of ideological beliefs and particular goals, complicating counterterrorism and anti-terrorism efforts in countries around the world," the START researchers find.

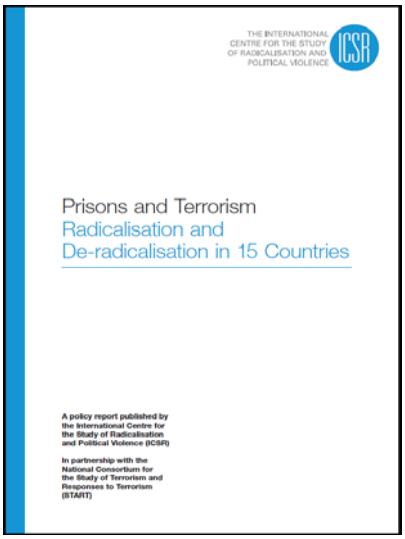
GLOBAL TERRORISM DATABASE: The START report is based on analysis of its Global Terrorism Database (GTD) - the world's most comprehensive unclassified database. It includes details on more than 87,000 terror incidents from 1970 to 2008. Figures for 2009 are presently being collected and coded. The GTD is publicly accessible online.

7/7 ATTACKS: In 2005, terrorists launched a coordinated attack against London's transportation system with three bombs detonating simultaneously at three different Metro stations and a fourth bomb exploding an hour later on a city bus. In all, there were 52 victims in these bombings with an additional 700 injuries resulting. The four terrorists who executed the attacks were killed in the explosions.

Prisons and Terrorism: Combating Extremism

Source: http://knxas1.hsdl.org/hslog/?q=category/1/12

Prison and Terrorism: Radicalisation and De-radicalisation in 15 Countries



"Western prisons are one of the main recruitment grounds for Al Qaeda." In this report, the International Centre for the Study of Radicalisation and Political Violence provides a wide-ranging analysis on the role that prisons play in radicalizing individuals. History has taught that prisons matter and have played large roles in every radical and militant movement in the modern period. Yet when well managed, prisons can play a positive role in preventing extremism. The report claims that the policies present in prison systems determine whether they will be centers for radicalization or incubators for peaceful change and transformation.

The findings and recommendations of this report include:

• The current emphasis on security and containment leads to missed opportunities to promote reform. Prison services should be more ambitious in promoting positive influences inside prison, and develop more innovative approaches to facilitate extremists' transition back into mainstream society.

• Religious conversion is not the same as radicalization. Good counter-radicalisation policies – whether in or outside prison – never fail to distinguish between legitimate expression of faith and extremist ideologies. Prison services should invest more in staff training, and consider sharing specialized resources.

• Even in the best circumstances, however, such programmes complement rather than replace other instruments in the fight against terrorism. They work best when the political momentum is no longer with the terrorists or insurgents.

Madrasas and Militancy in Pakistan

Source: http://knxas1.hsdl.org/hslog/?q=category/1/12

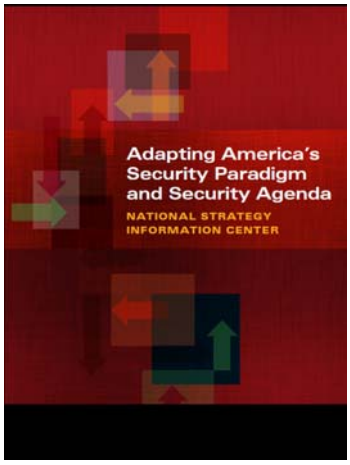
"Although hard data on education and its links with militancy in Pakistan are limited, a thorough review of the evidence indicates that the education sector and low attainment rates most likely do enhance the risk of support for and direct involvement in militancy." This new report by the Brookings Institution examines whether and how Pakistan's education system, including but not limited to its madrasas, may be contributing to militancy. The report

provides key findings and gives recommendations on education reforms that "can mitigate militancy and support Pakistan's long-term stability."

How Can the United States Prepare for the Threats of Tomorrow?

Source: http://knxas1.hsdl.org/hslog/?q=category/1/12

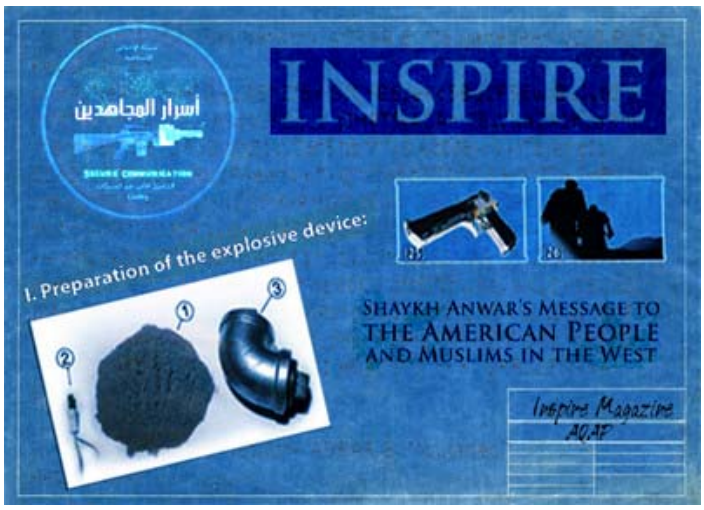
"The old paradigm was that of interstate industrialized war. The new one is the paradigm of war amongst the people . . . [It] can take place anywhere: in the presence of civilians, against civilians, in defense of civilians." This new report (Adapting America's Security Paradigm and Security Agenda) released by the National Strategy Information Center discusses how the United States should face threats in the constantly changing world. According to the report: "Although the 21st-century environment is more complex, some patterns are discernible. Among them are the predominant security challenges arising from weak states, armed groups (even without weapons of mass destruction), other super-empowered non-state actors and authoritarian regimes using irregular techniques." The report places high priority on a number of steps including: the development of highly skilled civilian and military professionals, reorientation of the military to prevail in nontraditional irregular conflicts, continued intelligence dominance through collection, analysis, and exploitation derived from local knowledge and operations in conflict zones, improved strategic communication principles, and political capabilities performed by small corps of trained professionals with the ability to forge coalitions among foreign state and non-state actors.



Al Qaida's English-language Terrorism Blueprint

Source: http://www.rightsidenews.com/2010071410990/homeland-security/al-qaidas-english-language-terrorism-blueprint.html

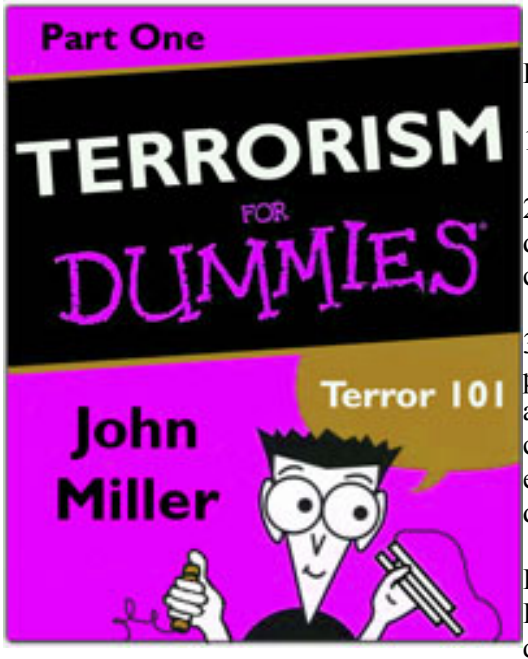
Packed with detailed technical instructions, captivating aesthetics and extremist rhetoric, a new English-language magazine issued by Al-Qaida in the Arabian Peninsula (AQAP) constitutes a recruiting tool with lethal potential. Perhaps due to its impressive presentation, media outlets may be making a conscious decision to limit access to the first issue of Inspire. Stories describe its content but do not actually show the magazine. The Investigative Project on Terorrism reviewed a copy posted on the website Scribd, but it is no longer available. Now, the link leads to this message: "This document has been removed from Scribd." It offers, in explicit detail, a blueprint for planning and executing terrorist attacks while avoiding the watchful eye of the government. From ideology to execution, Inspire presents a total package for a would-be bomber. This is the latest strategic move by AQAP, which has risen to prominence since embracing American-born preacher Anwar al-Awlaki. Awlaki's speeches have played a major



role in worldwide terror plots among non-Arabic speaking terrorists. These have included more than a dozen plots in Canada and America, England and Europe and even as far afield as Singapore. Inspire is the first written publication directly from Al-Qaida advocating Islamist terrorism for English-speaking consumers, with a glossy and easily readable text. Inspire makes no effort at subtlety, as shown in the opening of a how-to piece on building a homemade bomb. The article, entitled, 'Make a bomb in the kitchen of your Mom,' poses this scenario: "Can I make an effective bomb that causes damage to the enemy from ingredients available in any kitchen in the world? The answer is yes." The piece augments its precise written instructions with color pictures and a clear, sequential format. The article describes making a bomb whose "ingredients are readily available" and promises that "buying these ingredients does not raise suspicion." It also states that the bomb is "easily disposed of if the enemy searches your home. Sniffing dogs are not trained to recognize them as bomb making ingredients." Likewise the lethality of the bomb, which includes specific instructions about the choice of shrapnel, promises to create a bomb that "in one of two days... could be ready to kill at least ten people. In a month you may make a bigger and more lethal bomb that could kill tens of people." Another article, "How to use Asrar al-Mujahideen," explains how to send and receive messages via a terrorist-developed, encrypted email service. Beyond the skill training offered in the magazine, this shows how technically sophisticated Al-Qaeda has become, with the ability to build an encryption program with strong security features. The article also explains in easy language how to use proxy servers and alternative email addresses. It's all part of AQAP's focus on "Open Source Jihad." As the organization states Inspire is: "A resource manual for those who loathe tyrants... a disaster for the repressive imperialistic nations: the open source jihad is America's worst nightmare." The publication also presents a unique picture of Al-Qaida, including articles on contemporary topics for an informed reader. While much of the fiercely ideological rhetoric is to be expected from AQAP, an article supposedly authored by Usamah bin Ladin cites Noam Chomsky and global warming. It concludes that spiritual corruption and environmental devastation are linked, so destroying the American economy will end pollution that affects the globe. Yahya Ibrahim's piece, "The West should ban the Niqab covering its Real Face," ties together France's banning of the face covering, assaults on Muhammad, and the Swiss outlawing of minarets. Linking up with popular grievances, the author turns to war on the West and states, "one should only expect the West to remain a field of operation for the mujahideen... There is no reason to believe that such attacks would abate." The timing of the magazine's release is consistent with AQAP's shifting strategy, one that places a much greater emphasis on lone wolf bombers and broadening its focus toward attacking the West. By publishing a magazine that includes detailed, English-language instructions in an easily comprehensible form, AQAP seems to be trying to give American jihadists a guide to which they can refer for both ideological reinforcement and valuable technical expertise. In this manner, AQAP has theoretically eliminated the need for aspiring militants to travel to the Muslim world for training. To travel to Pakistan and other parts of the Islamic world in which terrorist groups operate freely is to risk detection. The independent jihadist who can assemble an effective bomb, without attracting attention by purchasing hazardous materials and/or attending a terrorist training camp, leaves a considerably smaller 'paper trail' to track. Inspire magazine is the manual to complete Al-Qaeda's new theory. These facts were not lost on the magazine's authors, who note: ...it [the magazine] allows Muslims to train at home instead of risking a dangerous travel abroad: Look no further, the open source jihad is now at hands reach." [Emphasis original] Homegrown terrorists have tried to offer online instruction guides before. But none had the reach or sophistication evident in Inspire. Awlaki's charismatic preaching already helped fuel attacks launched by Nidal Hasan at Fort Hood, Faisal Shahzad in Times Square, and Umar Farouq Abdulmutallab in the skies over Detroit. In an interview with National Public Radio, former Bush Administration Deputy National Security Advisor Juan Zarate said Inspire is a sign AQAP is after many more Western recruits. "I think what they're hoping with this particular journal is to build on that message," Zarata said, "to build on that momentum to try to attract as many people to take up the violent cause and to commit some act of violence in the U.S. and in the West."

Terrorism For Dummies - Part One

Source: http://www.familysecuritymatters.org/publications/id.6991/pub_detail.asp



Definitions

Let us commence with the basics.

1. The objective of terrorism is to terrorize.

2. An act of terrorism conducted against the duly elected and democratic government is a criminal offense subject to full rigor of the law.

3. The subsidiary aim of terrorism is to keep a population frightened, fearful, and concerned about personal safety. It is also intended to erode confidence in a government and its policies, especially if they are opposed to terrorist demands.

It matters little how you care to define terrorism. It has become almost an industry in itself as a quick Google search will show. The Random House dictionary defines terrorism as:

noun 1. the use of violence and threats to intimidate or coerce, especially for political purposes.
2. The state of fear and submission produced by terrorism or terrorization.
3. A terroristic method of governing or of resisting a government.

It is pointless to argue about the origins of terrorism because it has always been with us since man first gathered in communities and became engaged in conflict with neighboring groups. Systematic terrorism is held to date from the French Revolution, when the Jacobins carried out systematic terror, making wide use of Mme. Guillotine, and as often happens, the inventor was one of the first victims. The French Revolution pointed to the more modern problem of the effects of terrorism on a population encapsulated in the French phrase: “Le grande peur" which usually translates into English as the grand or great fear, or terror. Historians of the time noted the chaotic effect on populations by state organized terrorism and under various more modern forms of government, especially communism, Nazism and military dictatorships, the population is subjugated by implied or implicit threat, or as a refugee said to me, “I lived in fear of the knock on the door at two o'clock in the morning. Some of my neighbors had vanished at that hour, courtesy of the KGB and they were never seen again.” Terrorism practiced by groups outside government has long been problematic. Yesterday's terrorist is today's freedom fighter and tomorrow's statesman and we have seen examples of that around the world over the past half century. Jomo Kenyatta and Nelson Mandela readily spring to mind and contemporary historians point to the fact that such people were seeking freedom and independence or throwing off the shackles of empire. Thus, in some cases the terrorists can be seen as having noble or lofty objectives and how many would deny Nelson Mandela a place in history as a great and dignified leader of his people? Yet for those of us who served during the Cold War, there is always the recollection that the former Soviet Union clandestinely funded armed and trained groups around the world which claimed to be authentic liberation movements when in fact they were revolutionaries and terrorists. Indeed, there are suggestions that the current Russian government has links to certain terrorist organizations, a claim that will be examined later in the series.

One last tedious note on definition:

"Acts of violence committed by groups that view themselves as victimized by some notable historical wrong. Although these groups have no formal connection with governments, they usually have the financial and moral backing of sympathetic governments. Typically, they stage unexpected attacks on civilian targets, including embassies and airliners, with the aim of sowing fear and confusion. Israel has been a frequent target of terrorism, but the United States has increasingly become its main target.

Given that there is no internationally accepted definition of terrorism, I have sufficient respect for the American Heritage Cultural Dictionary to use the definition above for the purposes of this series. What it doesn't mention are various modes of terrorism, most notably asymmetrical warfare against government and terrorist attacks on the home soil of various governments, which are two sides of the same coin.

Readers of this series will be bored interminably by constant references to past experience. I make no apology whatsoever for adopting this course of action. During my time in intelligence, I was always aware of the injunction: "Those who do not learn from history are doomed to repeat it." (George Santayana 1863- 1952, Spanish born American philosopher poet and humanist). And I was always struck by another quote from the same person: "History is a pack of lies about events that never happened told by people who weren't there." The universities are full of them!

If anything comes of this series I hope that it comes in the form of people remembering the past and being alert to those who would fiddle with history and airbrush facts, especially the most inconvenient variety, out of existence. And so, without further ado let us home in on the subject matter of terrorism.

We live in interesting and dangerous times.

Way back in June 1966, Robert F. Kennedy, brother of the slain President of the United States made a speech in Cape Town during which he said: "There is a Chinese curse which says, 'May he live in interesting times.' Like it or not we live in interesting times." There appears to be a consensus that the saying originated with the Chinese philosopher Confucius, although this has not been proven conclusively. It is used when a Chinese does not want to see someone happy but it is said politely in order not to sound offensive. (The original he is often transposed as you in modern times).

We live in very interesting times, and of that, there can be no doubt. Less than a decade after the end of the Cold War, America was attacked by terrorists. It now appears fairly conclusive that the first bombing of the World Trade Center in New York (the twin towers) on February 26, 1993, was carried out by people associated with Osama bin Laden and al-Qaeda. Even Wikipedia, which is not always given to great accuracy, concedes that a group of conspirators including Ramzi Yousef, Mahmud Abouhalima, Mohammad Salameh, Nidal A. Ayyad, Abdul Rahman Yasin and Ahmad Ajaj, used a fairly primitive truck bomb, described as a 1500lb urea-nitrate-hydrogen gas enhanced device which was intended to bring down the North Tower causing it to fall on the South Tower, bringing both to the ground.

The plot was allegedly financed by Khaled Shaik Mohammed, who is one of the more celebrated prisoners from Guantanamo Bay (Gitmo) due to be tried in US courts, probably in New York in the near future. In the US, the conspirators received guidance from the notorious "blind Sheikh," Omar Abdel Rahman, who was also involved in the killing of Rabbi Meir Kahane. Presumably some of the guidance was spiritual but the Egyptian "cleric" is fortunate in so far as he is serving a life sentence in a federal penitentiary in North Carolina.

The detonation was insufficient to destroy the World Trade Center but it caused considerable damage, as the truck bomb was parked in underground garage and the official casualty list comprised six killed and 1,042 others injured, many during the evacuation of the building - a lesson that was lost on the authorities, although it was claimed that security was improved.

According to some reports, which remain to be authenticated, letters from Ramzi Yousef were mailed to various New York newspapers shortly before the attack and there were three demands which can be taken as a common leaf motif for subsequent terrorist attacks. These are simple:

1. The US government was to cease all aid to Israel.

2. Cease diplomatic relations with that country and

3. pledge to end interference in the affairs of Middle Eastern countries.

Yousef claimed to be a member of the "Liberation Army, Fifth Battalion" and in his letters, he stated that the WTC bombing was an act of terrorism but justified by Israeli practices supported by the US - in short, meeting violence with violence. Simplistic in itself, these demand underscore ongoing demands made of the US and the Western alliance. They illustrate that there is nothing particularly sophisticated about the demands but realpolitik demands that we understand that these are deeply held beliefs and are not sustainable or achievable, let alone desirable in the interests of the US and its allies.

The al-Qadea fatwa and declaration of war on the West

It comes as something of a surprise to those whom we might describe in a variety of forms as ranging from the intelligentsia to the ignorant that Al Qaeda actually declared war on the West. The genesis of the war cannot be proven conclusively because the first attack on the World Trade Center preceded the fatwa issued by Osama bin Laden in 1996 and again in 1998 and yet it is said to have his handiwork behind it.

In understanding the nature of the terrorist threat, it is important to recognize the position of Osama bin Laden (or Usamah bin Ladin*) and his importance as a totemic leader and revolutionary because he was and is in many respects the key factor in the scenario of terrorism, which has gained impetus over the past two decades. It has always been important for revolutionary movements and indeed, popular democratic movements to have charismatic leadership. There is nothing particularly new about that notion. From Pericles of Athens, Leonadis of Sparta; Julius Caesar, Emperor of Rome right through the Christian era, we have experienced the power of charismatic leadership. It has been a necessary precondition for revolutionaries across the ages and without delving too far into history, Vladimir Il'yich Lenin, Adolf Hitler, Benito Mussolini, Francisco Franco, Mao Zeodong, Ho Chi Minh, Fidel Castro, Daniel Ortega and more recently Hugo Chavez spring readily to mind and you will note some are of the extreme left and others are their polar opposites but surprisingly, they have a great deal in common.

However, charisma is not the sole province of revolutionaries. Where would the US have been across the years with soldiers and political leaders such as George Washington, Theodore Roosevelt, FDR, JFK, Ronald Reagan and add your own names whom you believe capture the greatness of America? (Long before I knew anything about American presidents, I knew about Buffalo Bill, Wyatt Earp and George W. Custer). Each Western country has had its share of charismatic leaders: for the UK there was a succession of monarchs with Elizabeth I being seen as framing an independent England and Britain; Oliver Cromwell, damned by many, praised by few, created the first truly modern army and of course, no contemporary

Englishman will ever forget Lloyd George and Winston Churchill. France and Germany have their own heroes and I do not propose to list them but in passing it would be unfair to omit mention of Napoleon Bonaparte, Gen. Charles de Gaulle and in Germany, a succession of strong but not controversial chancellors since World War II, especially Konrad Adenauer, who have rehabilitated Germany from the scourge of the Nazis to being a responsible and reliable partner in Europe.

Unfortunately charisma is a word used fairly lightly and where some might ask why no mention is made of Elvis Presley and a whole host of entertainers who had enormous cultural influence, I tend to use charisma in the terms of the German sociologist Max Weber. I do not intend to sidetrack readers especially when it comes to translating from German. For the purposes of this piece, I would refer to charismatic leaders as people who can motivate the majority, galvanize them into action and possess what our French cousins call a certain "Je ne sais quoi" - a little of what cannot be grasped or perceived, let alone categorized. As an aside, in the last presidential election campaign the dominant personalities were Barack Obama and Sarah Palin and to a certain extent, they had charisma but it was of the variety usually attributed to professional image makers.

As they say in the classics, Osama bin Laden is a horse from a different stable. In a book I was writing with an academic about 9/11, I spent a considerable amount of time looking at bin Laden's background. It's common knowledge that he came from a rich Saudi family and volunteered to fight for the mujahedin in Afghanistan, against the Soviet armed forces. Without external support, it is my considered opinion that the Afghan mujahedin would have prevailed against the Soviets by attrition but with arms and training from the West, usually channeled through the Pakistani ISI and its contacts, the insurrection took on a different complexion. To use Soviet era jargon, the balance and correlation of forces shifted decisively against the Soviet armed forces. And it instructive to read Kremlin documents freely available, on the factions within the CPSU who were firmly in favor of intervening in Afghanistan, most notably the inner core of the Communist Party and the KGB, who prevailed over the views of the Soviet Defense Ministry and Soviet military intelligence - the GRU. And I have heard first-hand from former Soviet veterans of that conflict that even the much vaunted Spetsnaz (special forces) found the going extremely hard, like every power that has ever been involved in conflict in Afghanistan. For the Soviet Union, there was never a chance of victory in that country and 10 years of conflict exacted an enormous toll on the battlefield and at home.

An academic colleague of mine claims that the assistance to the Afghan mujahedin could be likened to forging a fine sword, tempered with heat and possessing deadly characteristics. He maintains that the sword turned in our hands and there is something to commend that view. What is abundantly clear is that the Afghan mujahedin was supported by the West militarily, with arms and training but it was in fact a jihad against the Soviets and as such, it drew Muslims from many countries into the conflict, especially from the Middle East.

By any judgment, the Soviet withdrawal from Afghanistan left a basically feudal society virtually untouched by the presence of Western influence and the tribal infighting, which is characteristic of Afghanistan and other countries in the region, continued because the Soviet legacy was an unpopular Afghan leader, whom they had chosen, Mohammad Najibullah, the former head of the Afghan secret police (KHAD) allegedly elected with a new constitution and a pacification program devised by CPSU 'experts' something of a misnomer. The Geneva Accords of 1988 which led ultimately to the Soviet withdrawal in early 1989 left Afghanistan in ruins and virtually ungovernable. This is a critical period of history and one day, someone will join the dots. The tragedy is that US and allied interest in the country waned dramatically after the Soviets withdrew and before the year was out, the Berlin Wall had fallen and the writing was on other walls for the USSR and its satellite states in Eastern Europe.

It is axiomatic that nature abhors a vacuum and it could scarcely be described as surprising that Pakistan took advantage of the situation to secure its own borders and at the same time ensure that an Afghan regime would be friendly towards Islamabad. The "hidden hand" in subsequent events, was, it would appear, the Pakistani ISI and its formidable leader Lieut. Gen. Hamid Gul.

The tragedy of liberal Western democracy is that it has a tendency to forget key events and even the modern attention span has decreased markedly. So, "Those who do not learn from history are doomed to repeat it."

*There are considerable problems for Western intelligence in the transliteration of Arabic to American English. I have opted for the most common usage in spelling of Arabic names but the US State Department has its own lexicon, which I would normally use but not in this type of document.

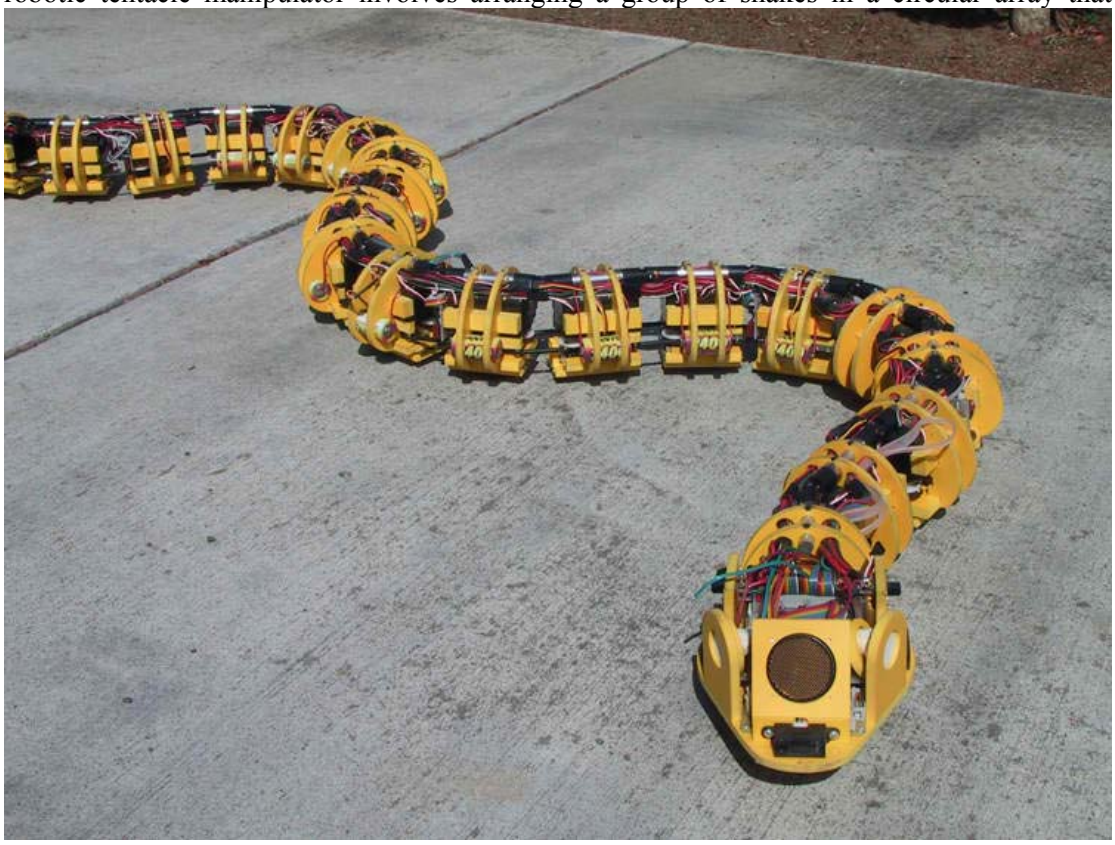
Part Two will examine the crucible of fundamentalist Islamic terrorism and the events leading to 9/11.

FamilySecurityMatters.org - Contributing Editor John W. Miller is a former senior intelligence officer with NATO and allied forces, with considerable experience in Russian (Soviet) affairs and counterterrorism.

US Military Scientists Develop Snake Robotics

http://www.army-technology.com/news/news91977.html?WT.mc_id=DN_News

Scientists at the US Army Research Laboratory (ARL) are developing snake-like technology in an effort to create robotic snakes for search-and-rescue missions. The project, known as the robotic tentacle manipulator involves arranging a group of snakes in a circular array that



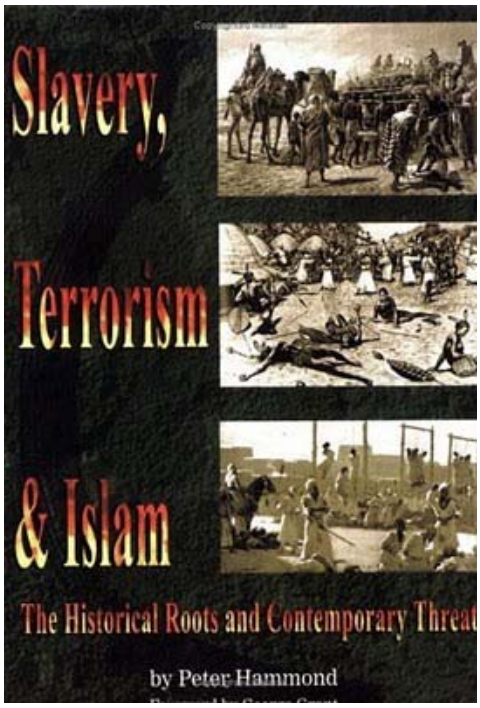
function like a team to manipulate an object, scan a room or handle improvised explosive devices. A snake-robot can be built as a large or small subsystem to a larger platform like

iRobot's rugged system Warrior, which travels over rough terrain and climbs stairs. The number of tentacles determines the scope of its search capabilities as well as its ability to crawl, swim, climb or shimmy through narrow spaces while transmitting images to the operator. The amphibious snake will be equipped with a large-screen laptop as a simple user interface and sophisticated electronic sensors including laser detection and ranging to provide 3D representations and physical properties like faces, mass and centre of mass. ARL scientist Derek Scherer said the technology is leading to more than just the very tip of the snake being used in the object manipulation effect. "Touch sensitivity allows the platform to lift and reposition objects, including IEDs, for examination, and do so in a controlled fashion that is unlikely to detonate any ordnance," he said. Hardware of the snake robot includes a master controller system to direct each 24cm tentacle and communicate with the embedded motors in the tentacles.

What Islam is NOT

By Dr. Peter Hammond

FrontPageMagazine.com | Monday, April 21, 2008



The following is adapted from Dr. Peter Hammond's book: Slavery, Terrorism and Islam: The Historical Roots and Contemporary Threat:

Islam is not a religion nor is it a cult. It is a complete system.

Islam has religious, legal, political, economic and military components. The religious component is a beard for all the other components.

Islamization occurs when there are sufficient Muslims in a country to agitate for their so-called 'religious rights.'

When politically correct and culturally diverse societies agree to 'the reasonable' Muslim demands for their 'religious rights,' they also get the other components under the table. Here's how it works (percentages source CIA: The World Fact Book (2007)).

As long as the Muslim population remains around 1% of any given country they will be regarded as a peace-loving minority and not as a threat to anyone. In fact, they may be featured in articles and films, stereotyped for their colorful uniqueness:

- United States — Muslim 1.0%
- Australia — Muslim 1.5%
- Canada — Muslim 1.9%
- China — Muslim 1%-2%
- Italy — Muslim 1.5%
- Norway — Muslim 1.8%

At 2% and 3% they begin to proselytize from other ethnic minorities and disaffected groups with major recruiting from the jails and among street gangs:

- Denmark — Muslim 2%
- Germany — Muslim 3.7%

- United Kingdom — Muslim 2.7%
- Spain — Muslim 4%
- Thailand — Muslim 4.6%

From 5% on they exercise an inordinate influence in proportion to their percentage of the population. They will push for the introduction of halal (clean by Islamic standards) food, thereby securing food preparation jobs for Muslims. They will increase pressure on supermarket chains to feature it on their shelves — along with threats for failure to comply. (United States).

- France — Muslim 8%
- Philippines — Muslim 5%
- Sweden — Muslim 5%
- Switzerland — Muslim 4.3%
- The Netherlands — Muslim 5.5%
- Trinidad &Tobago — Muslim 5.8%

At this point, they will work to get the ruling government to allow them to rule themselves under Sharia, the Islamic Law. The ultimate goal of Islam is not to convert the world but to establish Sharia law over the entire world.
When Muslims reach 10% of the population, they will increase lawlessness as a means of complaint about their conditions (Paris – car-burnings). Any non-Muslim action that offends Islam will result in uprisings and threats (Amsterdam – Mohammed cartoons).

- Guyana — Muslim 10%
- India — Muslim 13.4%
- Israel — Muslim 16%
- Kenya — Muslim 10%
- Russia — Muslim 10-15%

After reaching 20% expect hair-trigger rioting, jihad militia formations, sporadic killings and church and synagogue burning:
Ethiopia — Muslim 32.8%

At 40% you will find widespread massacres, chronic terror attacks and ongoing militia warfare:

- Bosnia — Muslim 40%
- Chad — Muslim 53.1%
- Lebanon — Muslim 59.7%

From 60% you may expect unfettered persecution of non-believers and other religions, sporadic ethnic cleansing (genocide), use of Sharia Law as a weapon and Jizya, the tax placed on infidels:

- Albania — Muslim 70%
- Malaysia — Muslim 60.4%
- Qatar — Muslim 77.5%
- Sudan — Muslim 70%

After 80% expect State run ethnic cleansing and genocide:

- Bangladesh — Muslim 83%
- Egypt — Muslim 90%
- Gaza — Muslim 98.7%
- Indonesia — Muslim 86.1%
- Iran — Muslim 98%
- Iraq — Muslim 97%

- Jordan — Muslim 92%
- Morocco — Muslim 98.7%
- Pakistan — Muslim 97%
- Palestine — Muslim 99%
- Syria — Muslim 90%
- Tajikistan — Muslim 90%
- Turkey — Muslim 99.8%
- United Arab Emirates — Muslim 96%

100% will usher in the peace of 'Dar-es-Salaam' — the Islamic House of Peace — there's supposed to be peace because everybody is a Muslim:

- Afghanistan — Muslim 100%
- Saudi Arabia — Muslim 100%
- Somalia — Muslim 100%
- Yemen — Muslim 99.9%

Of course, that's not the case. To satisfy their blood lust, Muslims then start killing each other for a variety of reasons.

'Before I was nine I had learned the basic canon of Arab life. It was me against my brother; me and my brother against our father; my family against my cousins and the clan; the clan against the tribe; and the tribe against the world and all of us against the infidel. – Leon Uris, 'The Haj'

It is good to remember that in many, many countries, such as France, the Muslim populations are centered around ghettos based on their ethnicity. Muslims do not integrate into the community at large. Therefore, they exercise more power than their national average would indicate.

Why Do Terrorists Blow Themselves Up?

Source: http://yaleglobal.yale.edu

Nine years after the September 11 attacks on the World Trade Center and the Pentagon, the world shares a perception that suicide attacks are unusual acts committed by the poor, the psychologically impaired, the morally deficient, the uneducated or the religious fanatics. Yet analysis of more than 1500 suicide attacks between 1981 and 2008 by author Riaz Hassan reveals far more complex motivations. Instead, altruism emerges as one of the major driving forces among young terrorists who previously demonstrated exemplary conduct. Sadly, evil can be ordinary, as noted by philosopher Hannah Arendt. Terrorists, shaped by their social environment, show a common tendency to abide by collective wisdom and follow orders. Daily life is difficult, unjust, even tenuous, in war zones or refugee camps – nurturing resistance and hatred among youth. Increasing numbers of youth in conflict zones, feeling helpless to shape a larger, uncaring world, view suicide attacks as a way to call attention to the plight of their community.

Surprisingly, altruism is found among the complex set of factors

Source:

Life as a weapon: In Sri Lanka, Tamil Tiger suicide bomber hits a Sinhalese procession

Nine years ago, 19 young Muslims commandeered passenger jets and killed themselves, taking with them 2973 people to the inferno of fire. Since the 9/11 attacks suicide bombings have become a staple of daily news, although the practice dates back at least two decades. A commonly accepted narrative frames such acts of self-destruction as the action of psychologically impaired, morally deficient, uneducated, impoverished individuals and, most of all, religious fanatics. But the analysis of information based on 1597 suicide attacks between 1981 and 2008, which killed more than 21,000 in 34 countries, suggests a more complex set of reasons, an understanding of which is essential if the world is to see an end of such slaughter. My book, "Life as a Weapon," analyzes suicide bombings as a method of choice among terrorist groups around the world and the motivations. Surprisingly, altruism emerges as a major factor in the complex set of causes behind the suicide attacks. In its most fundamental character, following the seminal studies of economist Ernest Fehr and colleagues, altruism can be defined as the costly actions that confer benefits on other individuals. Altruism is a fundamental condition accounting for human cooperation for organization of society and its cohesiveness. In the conceptual map of French sociologist Emile Durkheim, suicide bombings would fall in the category of altruistic suicidal actions – distinct from other types of suicidal actions caused by personal catastrophes, hopelessness and psychopathologies that lead people to believe life is not worth living. Altruistic suicides, on the other hand, involve valuing one's life as less worthy than the group's honor, religion or other collective interests. The genesis of suicide bombings is rooted in intractable asymmetrical conflicts pitching the state against non-state actors over political entitlements, territorial occupation and dispossession. Invariably such conflicts instigate state-sanctioned violence and repressive policies against weaker non-state parties causing widespread outrage and large-scale dislocation of people, many of whom become refugees in makeshift camps, in or outside so-called war zones. Carolyn Nordstrom captures the mood in Sri Lanka during the recently ended civil war: "In the war zones, violence and war permeated all aspect of daily life. It was not certain a person going for work would return in the evening. A home could be suddenly searched, someone brutally killed, a mother raped or father taken away. A shell could land anywhere destroying everything around.…This kind of pervasive atmosphere of violence, rather than breaking down the resistance and spirit of population, in times creates resistance and defiance, particularly in the youth." Other contributing factors include incarceration and dehumanizing treatments of insurgents in state custody and mutual dehumanization of the "other." Suicide bombing, rarely the strategy of first choice, is selected by terrorist organizations after collective assessments, based on observations and experience, of strategies' relative effectiveness to achieve political goals. The decision to participate is

Surprisingly, altruism emerges as a major factor in the complex set of causes behind suicide attacks.

Life as weapon: Reem Salih al-Rayasha, a Hamas suicide bomber, mother of two, killed four Israeli soldiers in 2004

facilitated by suicide bombers' internalized social identities, their exposure to asymmetric conflict and its costs, their exposure to organizations that sponsor such attacks as well as membership in a larger community where sacrifice and martyrdom carry high symbolic significance. In Sri Lanka, the Black Tigers attached importance to how the community would view their actions: They were glorified in their burial rituals, and an eternal lamp adorned the tombstone of every Black Tiger grave to commemorate the sacrifice. From sociological and economic perspectives, suicide bombings can be linked to altruism as a form of intergenerational investment or an extreme form of saving in which the agent gives up current consumption for the sake of enhancing probability of descendants enjoying benefit of some future public good. Analysis of Hezbollah suicide bombers in Lebanon shows that incidents of suicide bombing attacks increase with current income and the degree of altruism towards the next generation. Hezbollah suicide bombers come from above-average wealthy families and have above-average levels of education. The willingness of more educated people to engage in suicide missions suggests that education affects one's view of the world, enhancing sensitivity to the future. Altruism is not antithetical to aggression. In war soldiers perform altruistic actions by risking lives for comrades and country and also killing the enemy. Actions of Japanese kamikaze pilots in World War II are examples of military sacrifice. Altruism can also be socially constructed in communities that have endured massive social and economic dislocations as a result of long, violent and painful conflict with a more powerful enemy. Under such conditions people react to perceived inferiority and the failure of other efforts by valuing and supporting ideals of self-sacrifice such as suicide bombing. Religiously and nationalistically coded attitudes towards acceptance of death stemming from long periods of collective suffering, humiliation and powerlessness enable political organizations to give people suicide bombing as an outlet for feelings of desperation, deprivation, hostility and injustice. The evidence, however, also shows that such personal and collective sufferings motivating suicide bombers coexist with their inner feelings of altruism and sense of fairness. An Iraqi suicide bomber Marwan prayed that "no innocent people were killed in his mission." Shafiqa, an incarcerated failed Palestinian suicide bomber in Israel, did not detonate her device after seeing "a woman with a little baby in her carriage. And I thought, why do I have to do this to that woman and her child?... I won't be doing something good for Allah. I thought about the people who loved me and about the innocent people in the street…It was a very difficult moment for me." French filmmaker Pierre Rehov interviewed many Palestinians in Israeli jails, arrested following failed suicide-bombing missions or for aiding and abetting such missions, for his film "Suicide Killers." Every one of them tried to convince him that that the action was the right thing to do for moralistic reasons. According to Rehove, "these aren't kids who want to do evil. These are kids who want to do good…." The result – young people who had previously conducted their lives as good people believe that a suicide bombing represented doing something great. Everyday degradations of Israeli occupation had created collective hatred, making them susceptible to indoctrination to become martyrs. As Stanford University psychologist Philip Zimbardo puts it, "It is neither mindless nor senseless, only a very different mind-set and with different sensibilities than we have been used to witnessing among young adults in most countries." Suicide bombings invariably provoke a brutal response from authorities. By injecting fear and mayhem into ordinary rhythms of daily life, such bombings undermine the state's authority in providing security and maintaining social order. Under such conditions the state can legitimately impose altruistic punishments to deter future violation threatening security and social order. These include punishments meted out to perpetrators and their supporters. The state-sanctioned military actions against the Palestinians, Sri Lankan Tamil Tigers, Iraqi insurgents and the Taliban in Pakistan and Afghanistan are examples of these punishments. But altruistic punishments are only effective when they do not violate the norms of fairness. Punishments and sanctions seen

Suicide bombing is selected by terrorist organizations after collective assessments on how to achieve political goals.

Young people who had previously conducted their lives as good people believe that a suicide bombing represented doing something great.

as unfair, hostile, selfish and vindictive by targeted groups tend to have detrimental effects. Instead of promoting compliance, they reinforce recipients' resolve to non-compliance. Counter-insurgency operations are aimed at increasing the cost of insurgency to the insurgents, and invariably involve eliminating leaders and supporters who plan suicide bombings, destroying insurgents' capabilities for mounting future attacks, and restrictions on mobility and other violations of civil liberties. But there is mounting evidence that such harsh measures reinforce radical opposition and even intensify it. This is now happening in Pakistan, Afghanistan and the Palestinian territories and has also been the case in Sri Lanka and Iraq and other conflict sites.

Riaz Hassan is emeritus professor at Flinders University, Adelaide, Australia, and global professor of social research and public policy at New York University Abu Dhabi. His book, Life as a Weapon: The Global Rise of Suicide Bombings, was published last month by Routledge.

Beslan: A school named after the heroic Greek teacher Ioannis Kanidis

Source: http://en.sae.gr/?id=20276&o=15&tag=School+in+Beslan+named+after+teacher+Yiannis+Kanidis

A newly- built school in the North Ossetia town of Beslan in Russia, a region that made headlines in September 2004 when it became the target of a bloody terrorist attack, will be named after the 74- year- old teacher Yiannis Kanidis, the oldest of the hostages kept by the terrorists. A total of 350 people were killed in the Beslan school massacre, among them 155 small children. Kanidis, an ethnic Greek, died during the Sept. 4, 2004 while trying to protect the children, and the inauguration of the school named after him will take place on Sept. 6, 2010. The project was co-financed by the governments of Greece and Norway. The school is designed to receive 200 pupils, 72 of them boarding pupils.

Concern That Terror Teams Have Selected Targets, Ready to Strike

Source: http://abcnews.go.com/print?id=11784233

Strong concerns that terrorist teams in Europe have selected their targets, completed their surveillance, eluded capture and are now ready to strike at airports and tourist attractions have prompted the State Department to ready a highly unusual travel advisory for Europe, multiple law enforcement and intelligence sources tell ABC News. Intelligence and law enforcement officials have information that the teams could at any time launch a "Mumbai style" terror attack that targets civilians for death or hostage taking. The 2008 Mumbai attack used small arms and explosives to kill 175 people and paralyze the Indian city for days. The current concerns are for scenarios that include opening fire at airports in Europe as well as executing similar attacks at "soft" targets like tourist attractions or hotels. According to ABC News sources, the terror plotters have moved through the surveillance stage, checked back in with al Qaeda in Pakistan, and have received the go-ahead to strike. Officials said earlier that Osama bin Laden had approved or blessed the attack plan. The suspects reportedly include British and German citizens, who may be of Pakistani or Afghan ethnicity. ABC first reported the threat of Mumbai-style attacks last week. Since then senior intelligence and law enforcement officials have continued high-level meetings to assess the intelligence and weigh the appropriate additional responses. By Thursday afternoon the unusual travel alert became a topic for discussion. Officials say that when it comes, the alert is expected to be carefully and vaguely worded. European and U.S. authorities first learned of the plot over the summer following the capture of a suspected German terrorist who had been training in Pakistan. Intensified drone strikes in Pakistan have been confirmed as in part aimed at paralyzing the attackers. Recent law enforcement operations within the United States have helped to flush out chatter that added to earlier concerns about the U.S. homeland as a possible additional target of the attacks. Known targets are believed to include England, France and Germany. Additional European countries, including Italy and Belgium, are also targets, multiple sources say. As the threat picture continues to unfold it appears to include the possibility of multiple coordinated attacks in multiple countries. As such, it would be the most significant al Qaeda plot to have reached the operational stage in recent years. The Department of Homeland Security (DHS) had no official comment, but sources say no change in the U.S. threat level is expected unless specific information regarding a U.S. threat develops.

Collection

CBRNE-TERRORISM Newsletter

Δελτίο ΧΒΡΠΕ-ΤΡΟΜΟΚΡΑΤΙΑΣ

Volume 4 - 2010

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CHEMICAL AND BIOLOGICAL DEFENSE
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Counter Terrorism
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10th & 11th November 2010

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Event date: **02 November 2010**
Event end date: **04 November 2010**

Location: **Defence Academy of the United Kingdom**, Shrivenham

THEME

Training and Simulation; The Forgotten Element of CBRN? How to Incorporate it into Doctrine Equipment, Programmes and Projects.

Berlin: Berliner Congress Center – Nov 30 to Dec 1, 2010

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CBRNE-TERRORISM Newsletter

Δελτίο ΧΒΡΠΕ-ΤΡΟΜΟΚΡΑΤΙΑΣ

Volume 4 - 2010

IN MEMORY

ΔΕΝ ΞΕΧΝΩ ΤΟΝ ΗΡΩΑ ΝΙΚΟ ΣΙΑΛΜΑ!
ΑΘΑΝΑΤΟΣ!

Την 18η Ιουνίου 1992, ο Υποσμηναγός (Ι) Νικόλαος Σιαλμάς κατέπεσε στο Αιγαίο Πέλαγος χειριζόμενος αεροσκάφος F-1CG, της 114 Πτέρυγας Μάχης κατά τη διάρκεια εμπλοκής του σχηματισμού του με τουρκικά F-16 Fighting Falcon.(ο Υποσμηναγός Νικόλαος Σιαλμάς είχε εμπλακεί σε αερομαχία με το F-16 του χειριστή Ilhan Filiz).Η αιτία της πτώσης ήταν ελεγχόμενη πτήση στο έδαφος, ενώ ο χειριστής ο Υποσμηναγός (Ι) Νικόλαος Σιαλμάς σκοτώθηκε κατά την πρόσκρουση. Τι έχει καταθέσει ο πατέρας του ήρωα Σιαλμά στο βιβλίο του μνημείου; «...Θυμάμαι που από πιτσιρικάς μου έλεγε: "Θα με γράψουν με μεγάλα γράμματα! Θα φτάσω ψηλά!" Όμως, δεν μπορούσαμε να καταλάβουμε τι εννοούσε. Πιστεύαμε ότι το έλεγε επειδή θα έμπαινε στη Σχολή Ικάρων. Πού να καταλάβουμε τι ήθελε να μας πει τότε, μιλώντας γι' αυτά τα μεγάλα γράμματα...»

«May Day: 10 μοιραίες πτήσεις», δημοσιογράφου Γεωργίας Λινάρδου

Πηγή: http://tolimeri.blogspot.com/

«Σε λίγο φτάνουμε στον Αϊ-Στράτη. Θα δεις το μνημείο του Σιαλμά». Μια τεράστια μεταλλική ασπίδα απλώνεται στο νησάκι. Το φως του ήλιου αντανακλά. Δυο λέξεις χαραγμένες. «Μολών Λαβέ».Αυτό το μνημείο που έχει στηθεί στον Αϊ-Στράτη προς τιμήν του πεσόντος υποσμηναγού Νίκου Σιαλμά συμβολίζει παράλληλα και τις προσπάθειες όλων των Ελλήνων χειριστών στις δεκαετίες του ακήρυκτου πολέμου στο Αιγαίο.

Ο ερημίτης μοναχός Ιωσήφ

Πηγή: http://tolimeri.blogspot.com/

Ο μοναχός Ιωσήφ (κατά κόσμο Χρήστος Μπαίρακτάρης) είναι μόλις 48 ετών. Κατάγεται από το χωριό Άγιος Βασίλειος της Κορινθίας και θεωρείται από την οικογένεια της Πολεμικής μας Αεροπορίας ο “δικός της άνθρωπος”. Τον γνωρίζουν όλοι οι πιλότοι των αεροπλάνων Phantom, Corsair και F-16, οι χειριστές δηλαδή που κάθε μέρα δίνουν τον δικό τους επικίνδυνο αγώνα για την αξιοπρέπεια της Ελλάδας και την ελληνικότητα του Αιγαίου. Ο πατέρας Ιωσήφ μονάζει από την αρχή της δεκαετίας 1980 στο Άγιον Όρος. Από το 1989 έχει αποσυρθεί στο ησυχαστήριό του, στην άκρη... του πουθενά πάνω στα βράχια του Ακρωτηρίου Άκραθως, πάνω από ένα γκρεμό βάθους 300 μέτρων. Μόνος με το Θεό... Διαβάζει, κάνει χειρωνακτικές εργασίες και σώζει την ψυχή του. "Είναι ένας Άγιος άνθρωπος, μια βιβλική μορφή, που όποιος τον γνωρίσει έχει ανοίξει ένα παράθυρο στον κόσμο της καλοσύνης και της αγάπης" είπε στον "Press Time" ο πιλότος Γιώργος Βαζούρας που τον επισκέπτεται συχνά. Ο πατέρας

Ιωσήφ, ερημίτης του Αγίου Όρους, παρακολουθεί τις αερομαχίες στο Αιγαίο και ευλογεί τους πιλότους των μαχητικών μας. Από το 1990 περίπου όλοι οι Έλληνες πιλότοι ύστερα από κάθε εμπλοκή με τους Τούρκους πετάνε πάνω από το Άγιο Όρος για να πάρουν την ευχή του σεβάσμιου γέροντα. "Κάθε μέρα, όταν ακούω τον θόρυβο των αεροπλάνων, πετιέμαι από το κελί μου. Βγαίνω έξω και κυματίζω την Ελληνική σημαία. Δακρύζω από συγκίνηση, καθώς αυτά τα νέα παιδιά έρχονται πάντα ύστερα από οποιαδήποτε αποστολή στο Αιγαίο να με χαιρετίσουν και να τους

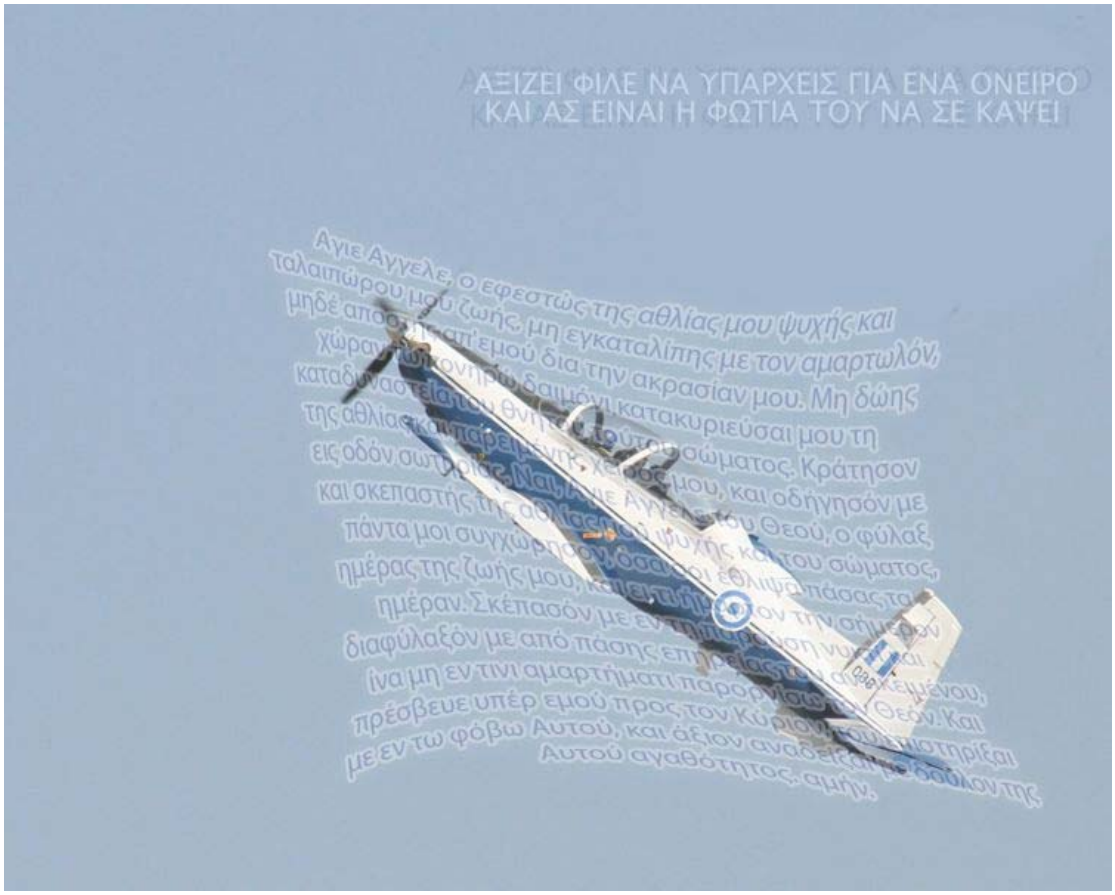
δώσω την ευχή μου".

Τα τέσσερα τουρκικά F-16 τρύπησαν σαν βέλη τα πυκνά σύννεφα και ξεχύθηκαν στον ουρανό του Αιγαίου. Μόλις πέρασαν στον Ελληνικό εναέριο χώρο, χωρίστηκαν σε ζευγάρια. Το πρώτο έστριψε δεξιά και κατευθύνθηκε προς τη Θάσο και τη Σαμοθράκη. Το δεύτερο συνέχισε σε ευθεία οριζόντια για τις Βόρειες Κυκλάδες (Άνδρο-Τήνο-Μύκονο). Στο Αρχηγείο Τακτικής Αεροπορίας στη Λάρισα είχε σημάνει ήδη συναγερμός. Από την Αγχίαλο σηκώθηκαν τέσσερα Ελληνικά μαχητικά με κυβερνήτες έμπειρους σμηναγούς και υποσμηναγούς. Το καθημερινό... πανηγύρι μόλις άρχιζε. Οι Τούρκοι αεροπόροι όταν αντιλήφθηκαν ότι οι διώκτες τους πλησίαζαν, ενώθηκαν στο βόρειο Αιγαίο μεταξύ της Λήμνου, του Αγίου Όρους και της Μυτιλήνης. Δεν ήθελαν απλώς να «παίξουν» αλλά να προκαλέσουν, αφού τα μαχητικά με την ημισέληνο στον ουρά ήταν οπλισμένα. Λίγα λεπτά αργότερα, στο θαλάσσιο χώρο νότια του Αγίου Όρους άρχιζε μια εικονική αερομαχία. Οι Έλληνες χειριστές, με αριστοτεχνικό τρόπο, «πήρε» ο καθένας από έναν Τούρκο και πολύ σύντομα απέκτησαν επιχειρησιακό πλεονέκτημα. Δηλαδή, κατάφεραν να βρίσκονται πίσω τους σπρώχνοντάς τους ταυτόχρονα προς τα παράλια της Τουρκίας. Σε χαμηλό ύψος πάνω από τη θάλασσα, με επικίνδυνους ελιγμούς και με τις μηχανές σε μέγιστη ισχύ, εξελίχθηκαν εντυπωσιακές «αερομαχίες», κλειστές στροφές και σφιξίματα που έμοιαζαν με τανάλιες. Τα VHF με τη Λάρισα είχαν ανάψει. Εντολές και οδηγίες έδιναν κι έπαιρναν, και από το ραντάρ του Χορτιάτη και της Λήμνου οι επιτελικοί αξιωματικοί της Πολεμικής Αεροπορίας χαμογελούσαν με ικανοποίηση, καθώς έβλεπαν τους Τούρκους να χάνουν σιγά-σιγά τη μάχη και να παίρνουν το δρόμο προς τις ακτές της Τουρκίας. Τα τέσσερα Ελληνικά F-16, πριν επιστρέψουν

στη βάση τους, έκαναν ότι κάνουν τα τελευταία 13 χρόνια όλοι οι Έλληνες αεροπόροι... Πήγαν να πάρουν την ευχή από τον προστάτη τους! Τον γέροντα Ιωσήφ, που από το ησυχαστήριό του, στους γκρεμούς του Αγίου Όρους, παρακολουθούσε την αερομαχία με δάκρυα στα μάτια. Επικεφαλής του σχηματισμού ο αρχαιότερος σμηναγός και από πίσω του τα υπόλοιπα 3 μαχητικά.

Ο μοναχός Ιωσήφ, σκαρφαλωμένος στα βράχια του ακρωτηρίου Άκραθος, με τον επικίνδυνο γκρεμό να χάσκει κάτω από τα πόδια του, τους περίμενε. Στα χέρια του κρατούσε δύο τεράστιες σημαίες, τη γαλανόλευκη κι εκείνη του Βυζαντίου. Σε πολύ χαμηλό ύψος, τα Ελληνικά αεροπλάνα πέρασαν πάνω από τον γκρεμό κουνώντας τα φτερά τους. Η φωνή του μοναχού χάθηκε από το μουγκρητό των κινητήρων: "Να έχετε την ευχή μου! Γυρίστε πίσω υγιείς και πάντα νικητές...". Οι σημαίες ανέμιζαν στον παγωμένο αέρα του Αιγαίου κι ο ερημίτης μοναχός έμεινε πάνω στα βράχια μέχρις ότου τα αεροπλάνα έγιναν κουκίδες και χάθηκαν στον ορίζοντα. "Τους αγαπώ όλους σαν παιδιά μου. Κάποιους τους έχω γνωρίσει κι από κοντά", μας είπε ο ερημίτης Ιωσήφ σε συνομιλία που είχαμε μαζί του. «Κάθε μέρα, όταν ακούσω το θόρυβο των αεροπλάνων πετιέμαι από το κελί μου. Εδώ, στην ερημιά και την ησυχία του Άθω, οι θόρυβοι έρχονται από πολύ μακριά. Βγαίνω έξω και κυματίζω

την ελληνική σημαία. Δακρύζω από συγκίνηση, καθώς αυτά τα νέα παιδιά έρχονται πάντα ύστερα από οποιαδήποτε αποστολή στο Αιγαίο να με χαιρετίσουν και να τους δώσω την ευχή μου. Έχω παρακολουθήσει πάρα πολλές αερομαχίες. Έχω νιώσει φόβο και υπερηφάνεια. Αλλά το συναίσθημα, έπειτα από κάθε εμπλοκή να περνάνε πάνω από το ησυχαστήριο μου για να με χαιρετίσουν, δεν περιγράφεται... Κάποιοι από τους πιλότους ήρθαν ως εδώ και με βρήκαν. Αγκαλιαστήκαμε, μιλήσαμε, μου άνοιξαν την καρδιά τους. Μου αποκάλυψαν τα προβλήματα τους. Νιώθω ότι με τα λόγια μου, που είναι λόγια του Θεού, θα γίνουν ακόμα πιο γενναίοι για να υπερασπίζονται πάντα την Ελλάδα μας». Οι πιλότοι από όλες τις πολεμικές μοίρες έχουν στείλει στο ησυχαστήριο του ερημίτη ευχές, αναμνηστικά δώρα, αλλά πάνω από όλα την αγάπη τους, γιατί ξέρουν ότι έπειτα από μια δύσκολη πτήση με οποιονδήποτε καιρό πάνω από το Αρχιπέλαγος, ο σύγχρονος «προστάτης» τους θα βρίσκεται εκεί, πάνω στα βράχια, για να τους ευλογήσει και να τους εμψυχώσει.



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