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Editorial

Brig Gen (ret'd) Ioannis Galatas, MD, MA, MC

Editor-in-Chief

CBRNE-Terrorism Newsletter

Dear Colleagues,

March 2017 was characterized by a unique incident – that is the assassination of the brother of the President of North Korea with VX nerve gas. It was the first time that a chemical warfare agent was used for a focal attack the same way that ricin was used in the past. It was a carefully planned attack in a public place (airport) and those behind it were very well aware of how to design it in order to be successful. It was a loud message to those opposing the Korean regime but could be an inspiration for future copycat terrorist attacks in the West by returning jihadis.

The second important happening is the verbal political conflict between Turkey, Germany and The Netherlands and to a lesser degree with other EU nations. For the first time European countries were united against transferring internal Turkish problems related to the coming Turkish referendum into their own grounds. Following denial of Turkish politicians to deliver speeches to fellow voter living into EU countries, Turkish authorities released open threats against EU (the same EU that they want to join). "Your army is 48,000 strong but there are 400,000 Turks living in The Netherlands"! In a rally in Istanbul: "You are right now employing Nazi measures," Erdogan declared. "Against who? My Turkish brother citizens in Germany and brother ministers." And few days ago: Turkish Interior Minister Süleyman Soylu has said Turkey could send 15,000 refugees to Europe to shock the Europeans following a recent diplomatic crisis between Ankara and Germany and the Netherlands that stemmed from the latter's decision to bar Turkish ministers from staging rallies there.



The latter raises a BIG question: **What you would do if your country was Greece and you had to manage 15,000 illegal immigrants on daily or monthly base? Please email your peaceful solutions and proposal to Editor's email. Please consider the fact that Greek coastline is approximately 13,676 km; no border fences are applicable except in the small part in the north of the country neighboring with Turkey and the borders**



with FYROM (the Balkan route) are closed and EU secured. And all that the very same time that Dutch minister Dijsselbloem (also the current Eurogroup chief) says southern Europe countries wasted cash on BOOZE and WOMEN...

In Europe we also experienced a terrorist attack at Orly Airport in Paris that ended successfully (this time). But the incident raises a new problem: If you do not have access to weapons then you attack those who have them – special care should be given to similar scenarios and to women officers patrolling in public places. I have nothing against serving women but I am traveling a lot and I observe a lot (I do not text SMSs 24/7) and in many airports I am not sure if they are capable to respond to a close contact encounter (very long hair; loosely fit arms etc). I also take the opportunity to comment on the “baby” bullet proof vest



used almost anywhere. Study the picture I made to understand why. Is comfort and cost more important than safety and protection?

March ended with a terrorist attack outside Westminster Palace in London: a knifeman attacked pedestrians at Westminster Bridge with his car; then stabbed a police officer and finally got shot by other policemen. An attack with a Nice and Belrin flavor plus kitchen knife and suicide mentality. What if he had an assault rifle or a suicide vest?

The new collaboration of the Editor with the International CBRNE Institute (ICI) in Belgium was quite productive and during the Jan-March period we organized two very successful events: (1) a two days “Decontamination Course” and (2) a one day Introduction Day on “Medical CBRN”. The latter was a very good opportunity to introduce the peculiarities of the effects of CBRN agents on human body to colleagues representing the Belgian and international medical community and will soon be followed by a two days course on the same topic in an effort to incorporate “CBRN Medicine” into the curricula of university medical schools across Europe. It is the best way to provide basic



information and knowledge to the front-line health professionals of tomorrow that might face a real asymmetric terrorist incident. For this reason, the Editor will soon present an ICI publication entitled "Hospital CBRN Preparedness" in an effort to put his knowledge and experience into paper in support of hospital who are willing to be prepared for the unexpected (that sooner or later always happens).

Take care First Responders – we are all depending on you!!!

The Editor-in-Chief



Turkey completes half of its Syrian border wall

Source: <http://www.homelandsecuritynewswire.com/dr20170227-turkey-completes-half-of-its-syrian-border-wall>



A wall along the border between Turkey and Syria is pictured near the southeastern town of Deliosman in Kilis province, Turkey, August 29, 2016 [Umit Bektas / Reuters]

Feb 27 – Turkey has completed building 180 miles of the planned 317 miles security wall along its border with Syria.



The wall is not built as a regular wall would: It consists of portable concrete blocks, each weighing seven tons, placed next to each other. The concrete blocks are 6.5-foot thick at the base and 10-foot high. Each block is topped with three feet of razor wire.

Middle East Monitor reports that the Turkish army is in the process of erecting watch towers along the border, and also building dirt roads along the wall to allow for mechanized and foot patrols.

The wall is being built by TOKI, the large state-owned housing developer. TOKI's director, Ergun Turan, said that the

portability of the concrete blocks would allow Turkey to move them in the future when the security situation along the border improves.

The Turkish-Syrian border stretches 566 miles, and Ankara is especially concerned with growing role of the Syrian Kurds in the fight against ISIS. The Syrian Kurds are led by the YPG militia, which is a sister organization of the PKK. The PKK is a Turkish Kurdish militia





which, since 1982, has killed 42,000 Turks in its fight for Kurdish autonomy. Turkey, the United States, and the EU have designated the PKK as a terrorist organization, and Turkey is worried that a YPG-controlled autonomous Kurdish region in Syria would embolden the PKK in its fight against the Turkish state.

Human rights groups have expressed their concern that the wall, unless it is accompanied by a no-fly zone along the Turkey-Syria border, will trap Syrian civilians fleeing the bloody conflict in Syria, leaving them exposed to the Assad regime's air attacks.

Nearly 10 anti-migrant attacks a day in Germany, over 3500 last year: Data

Source: <http://www.hindustantimes.com/world-news/nearly-10-anti-migrant-attacks-a-day-in-germany-over-3500-last-year-data/story-4tlpnZqf378YirC8aa8EgP.html>



Feb 28 – Germany saw more than 3,500 attacks against refugees and asylum shelters last year, interior ministry data showed, amounting to nearly 10 acts of anti-migrant violence a day as the country grapples with a record influx of newcomers.



The assaults left 560 people injured, including 43 children, the ministry said in a written response to a parliamentary question seen by AFP Sunday.

The government “strongly condemns” the violence, the letter said.

“People who have fled their home country and seek protection in Germany have the right to expect safe shelter,” it read.

A total of 2,545 attacks against individual refugees were reported last year, the ministry wrote, citing police statistics.

There was no immediate comparison with previous years as it was only introduced as a separate category under politically motivated crimes in 2016.

Additionally, there were 988 instances of housing for refugees and asylum seekers being targeted last year, the ministry said, including arson attacks.

That was slightly down on 2015 when there were just over 1,000 criminal acts against refugee shelters. In 2014, there were only 199 such cases.

The sharp rise in hate crimes came after Germany took in some 890,000 asylum seekers in 2015 at the height of Europe’s refugee crisis.

Chancellor Angela Merkel’s decision to open the doors to those fleeing conflict and persecution polarised the country and fuelled support for the rightwing populist Alternative for Germany (AfD) party.

The number of arrivals fell sharply in 2016 to 280,000, mainly thanks to border closures on the Balkan overland route and an EU deal with Turkey to stem the inflow.

A lawmaker for Germany’s far-left Die Linke party, Ulla Jelpke, blamed the anti-migrant violence on far-right extremists and urged the government to take stronger action.

“We’re seeing nearly 10 (criminal) acts a day,” she told the Funke Mediengruppe, a German regional newspaper group.

“Do people have to die before the rightwing violence is considered a central domestic security problem and makes it to the top of the national policy agenda?” she asked.

A German neo-Nazi was sentenced to eight years in jail this month for burning down a sports hall set to house refugees, causing damage worth 3.5 million euros (\$3.7 million).

In another case that shocked Germany, a crowd of onlookers cheered and applauded as an asylum shelter went up in flames in the country’s former communist east last February

Refugees as Weapons of Mass Destruction

By Ricardo Hausmann

Source: <https://www.project-syndicate.org/commentary/trump-refugee-travel-ban-psychology-by-ricardo-hausmann-2017-02>



Feb 27 – In the summer of 2015, former Canadian Prime Minister Stephen Harper looked set to win his fourth consecutive election,

scheduled for that October. Instead, his Conservative Party won just 99 of the House of



Commons' 338 seats. The party did not win a single constituency in Toronto or the entire Atlantic seaboard. Instead, the Liberal Party, led by Justin Trudeau, ended up obtaining the second-largest parliamentary majority in its history – 184 seats – despite having started the electoral campaign in third place.

That rapid reversal of fortunes was triggered by events thousands of miles away. In the early hours of September 2, 2015, in Bodrum, Turkey, a Syrian Kurdish family boarded a dinghy to try to reach Greece. A few minutes later, the dinghy capsized, and Rihanna Kurdi, together with her two children, Ghalib and Aylan, drowned. A Turkish photographer, Nilüfer Demir, posted on Twitter an [image](#) of three-year-old Aylan Kurdi's body lying on the beach. The picture shocked the world – and ended Harper's political career. The previous spring, Harper had [ordered](#) Citizenship and Immigration Minister Chris Alexander to review Canada's refugee policy, in order to ensure that terrorists were not being admitted – a move that brought the system almost to a halt. A month earlier, he had considered prohibiting the use of the niqab in public services, [raising suspicion](#) about the true motive behind the decision on refugees.

Aylan Kurdi's aunt – [Tima Kurdi](#), a resident of Vancouver – had been trying to get him and his family into Canada, but Harper's refugee decisions had prevented it. Suddenly, a policy purportedly intended to protect Canadians from Islamist terrorism became a policy that offended Canadians' sense of who they were: an open, compassionate society. Harper paid dearly for it. Things could not be more different south of the border. There, Donald Trump won last November's presidential election, having promised voters a travel ban on Muslims, a wall on the Mexican border, and a "deportation force." Trump's first attempt to implement his travel ban was struck down by the courts, but only after creating havoc at airports, confusion within universities, and disruption of families. And now the Trump administration is preparing a new travel ban.

Two possible reasons, based on recent advances in psychology and neuroscience, may explain why Americans and Canadians are reacting so differently. The **first** is based on insights into decision-making under uncertainty offered by so-called [prospect theory](#),

developed in the 1980s and 1990s by Daniel Kahneman and Amos Tversky.

Any immigration restriction, Kahneman and Tversky would say, implies a trade-off between two errors. A Type I error involves admitting a potential terrorist. A Type II error involves stopping innocent foreigners. To formulate an appropriate policy requires balancing these two risks, given their relative likelihoods and how much you care about the saved lives of residents and the disrupted lives of potential immigrants. How many innocent lives are you willing to disrupt or endanger to avoid a terrorist attack?

Kahneman and Tversky argued that when calculating probabilities, people make systematic mistakes. They do this by searching their memory for examples. If they are reminded of the attacks in Paris and Nice, they will overestimate the probability of terror. If they are exposed to the photograph of Aylan Kurdi, they might think otherwise.

By manipulating the salience of a memory, you affect the perception of risk and the calculus of the decision. This may be why the Trump camp has been exaggerating the risks of terrorist attacks by inventing new ones, such as the "Bowling Green Massacre" and, more recently, an unspecified non-event "last night in Sweden."

Trump may argue that any risk to an American is unacceptable, regardless of how many Aylan Kurdis die and how many lives are disrupted. But, in that case, how can he ask US soldiers to put their lives in danger in Mosul or Kandahar? Is the demand for such a sacrifice not justified – at least in part – by a concern for the wellbeing of others? Is it really an American tradition not to care about what happens to others?

The **second** insight from psychological research, summarized by Bruce Hood in his recent book [The Self Illusion](#), relates to the role of consciousness in decision-making. Recent laboratory research shows that our conscious thoughts devise, *ex post*, compelling rationales for many decisions that our brains tend to make unconsciously.

For example, former US President George W. Bush might have decided to invade Iraq and topple Saddam Hussein for many reasons: strategic advantage,



humanitarian concern, and even competition with his father. Most of them did not involve weapons of mass destruction. But the WMD argument was used, because it was the most easily justifiable, given the context.

Is the travel ban really about protecting Americans, or might there be other motives? Consider the fact that the travel ban was applied to seven countries. Why is country of origin viewed as a useful predictor of who is likely to be a terrorist? After all, [no Muslim refugee](#) has ever committed a terrorist act in the US, and no terrorist acts have been committed in the US by nationals of the seven countries Trump has targeted.

Is a Syrian cancer patient or a distinguished Iranian academic any riskier just because of his or her country of origin? Can we not trust the

State Department and the intelligence services to make these judgments, without exclusive recourse to the information on country of origin? The point is that a travel ban on Muslims – or the Mexican border wall, for that matter – may be less related to their expressed justifications than to other, even unconscious considerations. After all, the policy was designed not by the domestic security establishment, but by Trump's chief strategist, the avowed culture warrior Stephen Bannon.

People may well support such measures because they worry that if people who are not really like “us” are allowed to become part of “us,” we will no longer really be “us” anymore. But would we really be “us” if we renounced our openness and compassion?

Ricardo Hausmann, a former minister of planning of Venezuela and former Chief Economist of the Inter-American Development Bank, is Director of the Center for International Development at Harvard University and a professor of economics at the Harvard Kennedy School.

EDITOR'S COMMENT: The last paragraph' question aims to guide via feeling guild to a big “NO”. Equally it could be a big “YES”! Minister could also add “... people who are not like “us” are allowed to become part of “us” provided that they are not willing to change “us” and become like “them”.

An updated Tale of Two Cities: A recent visit to Paris

By Peter Tarlow

Source: <http://etn.travel/updated-tale-two-cities-recent-visit-paris-14380/>

Feb 28 – In the middle of the nineteenth century, Dickens wrote his famous “Tale of Two Cities” about life in Paris during the French Revolution. Dickens contrasts the life of “les misérables” (the poor) with the life of “ceux de bonheur” (those living happy lives). In 2017, Paris once again presents to those who come to it a tale of two cities.



Paris. Besides being there to lecture on tourism security and safety, I was curious to assess the accuracy of some notions about Paris that so many foreigner visitors have about the city. For example, are the Parisians as rude as they are made out to be? Is the city

In February 2017, I was the guest of the CNI-SYNHORCAT, the largest French tourism trade association. The CNI-SYNHORCAT invited me to address an elite group of concerned French tourism leaders who, after recent terrorism and the resulting drop in tourism, desired to expand their knowledge on tourism security. Many years have passed since I last visited



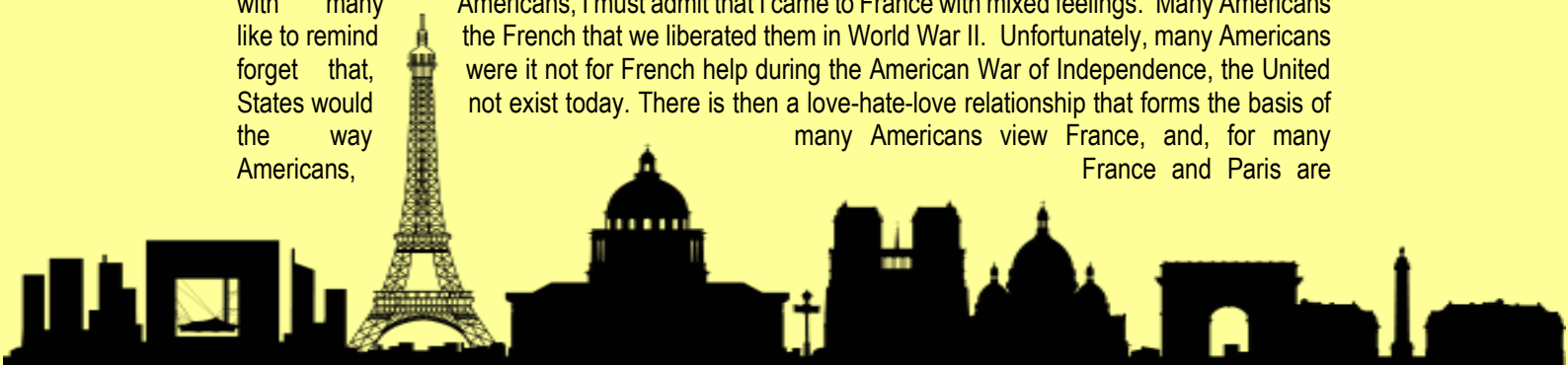
dirty? How dangerous is for tourists to visit Paris? Are Americans abandoning Paris due to fear, high prices or hostility on the part of the French?

What I learned is contained in this short article. It is both an analysis of Paris the city, and of Paris the symbol. In reality, Paris is not merely a place; it is also a state of mind, and as such symbolizes much of what makes tourism the special industry that it is.

Paris is a Mecca of tourism. It is not only one of the world's great cities but also one of the Earth's most visited cities. For many, Paris is the world's symbol of elegance and lightheartedness, of chic, liberty and culture. This view of Paris is one side of the city, but, as it is true of much of today's world, there is another side to Paris. The city also suffers from negative media, and from those in poverty. Walking the streets of Paris, you feel the struggle to preserve the past and the struggle to assure the safety of both its citizens and visitors. Being not only an international tourism capital but also the political center of France, the city has had to find a way to mix the frivolous with the serious, and the intrigues of politics with the joie de vivre of tourism.

In reality, as is the case in many of the world's cities, there is not one Paris, but many. There is the classic and elegant city. This Paris is the one that tourists tend to see. The city's elegant neighborhoods are settings for centers of high culture and fashion; even some of its new buildings have a special élan, although others are pedestrian if not simply ugly. Paris also is a city steeped in the ideals of liberty. For example, the city is home to a quarter-sized replica of the Statue of Liberty on the Ile aux Cygnes (Isle of Swans). There is, however, even in the heart of tourist Paris, another city – one of bureaucratic regulations, stores for rent, homeless beggars and street merchants. Both faces of the city are ever present and both remind the visitor that Paris' poverty exists in the midst of elegance, and that regulations often strangle liberty.

On some level, Paris reminds me of a beautiful, older woman. The city feels tired and lives in the past tense. Walking around the city, you get the feeling that you are part of a living museum and its exhibits and sites full of distinction and elegance are the very breath of this metropolitan dowager. As is the case with many Americans, I must admit that I came to France with mixed feelings. Many Americans like to remind the French that we liberated them in World War II. Unfortunately, many Americans forget that, were it not for French help during the American War of Independence, the United States would not exist today. There is then a love-hate-love relationship that forms the basis of the way many Americans view France, and, for many Americans, France and Paris are



synonymous. Perhaps these misunderstandings form the basis for why it is important for people to get to know each other, on their home turf and in a way that realities can overcome prejudgments. Tourism is all about trying to understand the other, the unknown. It behooves the tourist to see the other, not through his or her eyes, but rather through the lens of the local reality.

A city of lights and elegance

No matter what the French do, somehow it seems to be more elegant than in other places; even the weather on a cold or rainy winter's day turns into moments of elegance. Paris is a city of style; from the simplest meal to a walk in a park, the city has a special flair, a je-ne-sais-quoi that transforms the "ordinaire" into something special.

Even the French language reflects this elegance. Though there are a great many English-French cognate words, French is not an easy language to spell, pronounce, or read. The French gave the English language many of our words for both food and culture. In our daily speech, we use such French words as: table, à la carte, restaurant and ballet. English returned the favor by giving the French such words as: le week-end, le "happy hour", le



brainstorming, and le job. To make matters fun, many French words resemble English words but are “false friends” with meanings that are completely different to the French mind than to the Anglo mind. (“Football” known in French as le football refers to soccer and not American football.) The French have a reputation for being ruthless when it comes to the protection of their language. Many foreigners come to Paris with the mistaken belief that a grammatical error or a mispronounced word will cause epithets to fly from a Parisian’s mouth. In reality, I discovered that the French people with whom I interacted were quite pleased that I was trying to learn their language and went out of their way to be helpful and linguistically kind. Much to my delight, I heard over and over again phrases such as: “Je suis enchanté(e) que vous essayiez parler le français avec moi, bravo et bonne chance!” (I am delighted that you are trying to speak French with me; good job and good luck!).

At least in the winter Parisians start their day late, with most shops not opening until at least 10:00 a.m. Perhaps it’s because it stays dark until 8:00 am, or because French bedrooms tend to be colder than American bedrooms, or the heat doesn’t come on until morning, or maybe just because the French like to stay up late to party, eat, or debate. Perhaps the French need their beauty sleep because the city is “on stage” as the heart of France’s national past times – sports and politics. Paris is not only a world center for the plastic and performing arts but also for the art of diplomacy. Perhaps here, more than other places, politics is the art of the possible. During my brief visit this past February, I could feel the political winds blow as France prepares for its most divisive national election in recent history.

Politics is never very far below the surface and, contrary to what tourists are often told – that the three things you should not discuss with a Frenchman are God, money and politics – many French citizens were more than willing to share their opinions with me on almost any topic. From their opinions regarding President Donald Trump to French presidential candidate Marine Le Pen, it seems everyone has something to say. There is much to talk about. Many French citizens believe their economy is in shambles. The nation has suffered several major terrorism attacks, and its foreign policy initiatives have been anything but successful. Issues, such as immigration, both legal and illegal, are now ubiquitous and, while France struggles to absorb its quota of refugees, some of its best young minds seek ways to exit the country. France, then, is caught in a Catch-22 in which many of its immigrants do not wish to assimilate into French culture and many of its well-educated young people want to exit the country. The result is that even the visitor sees Paris as a city of contradictions. Perhaps the most symbolic of these contradictions is that the rich invest in expensive apartments in the center city, but then they do not occupy them, creating luxurious ghost towns. Yet while pushing the poor ever farther from the city, they demonstrate for the “rights of man” This forced “gentrification” means that the less affluent, those who actually want or need to live in Paris, must commute from far away. Old neighborhoods are simply no longer affordable.

During my stay in Paris I also observed the value of understanding what is often called “weak power”. Words are chosen carefully and in a land dedicated to personal liberty, it is best not to be too different. This is the land of inferences and of the art of the indirect question. (Tirez les vers du nez or pull the worms from one’s nose, is the graphic French expression for this attitude.) It is a place of cultural boundaries, where the smart person knows how to makes him or herself incapable and dependent, without ever being a victim! Thus, even in poverty there is a sense of dignité personnelle, or personal dignity, expressed in the subtlest of ways. To be too direct, to ask too many questions, is to be arrogant and to show a sense of the gauche. In France, the land of diplomacy, one learns never to interrogate but rather to intimate; the “art of the sublime” overpowers the “art of the direct”.

Once the method is understood, and implemented, then frowns turn to smiles, impatience becomes genteel patience, and disgust turns to an elegant savior-faire. Once having, at least somewhat, learned to internalize this cultural system, I found the French to be magnifique. Upon understanding the wisdom of what the French call “the magic sentence” – “excusez-moi de vous déranger mais j’ai un problem” (sorry to bother you but I need help) – Parisian indifference tends to transform itself into caring. Nevertheless, these words must be spoken respectfully, implying that the other is “smarter” than you. By using an inferior positioning a visitor can obtain exactly what he or she desires. As the French are wont to say: Voilà, “le weak-power”! To visit Paris then is



more than seeing a foreign city, it is also a lesson in diplomacy. Here one comes to realize that it is not the “what” of what you say, but rather the “how” of how you say it.

Despite the cultural differences, the poverty, crime and too much garbage on its streets, Paris is Paris. The avenues are majestic, the monuments are beautiful, and as one would expect of France’s capital, elegance and fine dining, with a special flare, seem to permeate the air. For all its problems, this is a city of never ending charms. For the visitor – and despite the negative media – Paris is a city of charming people and streets that are no less safe than those of any large city. Perhaps America’s third president, Thomas Jefferson said it best when he first visited Paris. He stated: “A walk around Paris will provide lessons in history, beauty and the point of life”. Despite the city’s many challenges, Jefferson’s words still hold true, Bon voyage!

Peter Tarlow, PhD, is the president of Tourism & More Inc located in College Station, Texas. Peter is also a member of the Editorial Team of the “CBRNE-Terrorism Newsletter”.

Russia Tested New Weapons in Syria While West Observed

Source: <http://i-hls.com/2017/02/russia-tested-new-weapons-syria-west-observed/>

Video: <https://www.youtube.com/watch?v=3jUL3BNECB0>

Feb 26 – “Syria has been used as a huge test site for Russian new weapons, and the West, mainly the US, was keeping an eye,” an Israeli expert told i-HLS.

Last week, the Russian Defense Minister Sergei Shoigu expressed his satisfaction with the Russian military campaign in Syria and said that it was a good test of new weapons and special-forces units.

In a speech to the lower house of parliament on February 22, Shoigu said **that 162 new Russian weapons systems had been tested in Syria and that “only 10” failed to perform up to expectations.** Shoigu told the State Duma that **1,760 combat missions** had been flown in Syria since Russia launched a campaign of airstrikes in support of President Bashar al-Assad’s government in September 2015.



He said that **“nearly 90 percent” of Russia’s military pilots had gained combat experience in Syria.**

Shoigu also said the mission by Russia’s only aircraft carrier, the Admiral Kuznetsov, to the eastern Mediterranean was a success despite the loss of two fighter jets. He said the experience would help avoid “mistakes” in the future.



He added Russia's special forces "have demonstrated their considerable efficiency" in the conflict and "played a key role in liquidating terrorists, destroying important enemy facilities, and directing air strikes." The exact number of Russian troops in Syria has not been made public, but experts put the figure at around 4,000.

Shoigu did not discuss casualties in Syria, which represents Moscow's biggest military campaign abroad since the Soviet war in Afghanistan in 1979-88.

US intelligence agencies have been following closely the use of the new weapon systems in Syria. It gave the Americans indications about the new directions in which the Russian defense industry is going as part of the great effort to modernize the Russian defense forces.

EDITOR'S COMMENT: Russia ONLY???

Brazil Shows Interest in Israeli Homeland Security Accelerator

Source: <http://i-hls.com/2017/02/brazil-shows-interest-israeli-homeland-security-accelerator-2/>



Feb 25 – iHLS presented its unique security accelerator to a senior delegation from Brazil on a visit to the Israeli Export Institute. The senators delegation from Brazil has been visiting Israel in order to get a closer look at the country and learn more about Israel's complex reality vis a vis its neighbours.



The delegation, which included leading figures invited by the American Jewish Committee (AJC), attended the presentation by Keren Kalderon, iHLS Marketing and Sales Manager, about the various activities of the company, mainly about the iHLS security accelerator. The accelerator participants have developed revolutionary technologies in various aspects of homeland security, including the calibration of weapons with only one bullet, an innovative simulation technology, advanced UAV technologies, a secure platform for smartphones, a face

recognition technology, and more.

The presentation, which was accepted with enthusiasm by the delegation, emphasized the special role of the security startups within the high-tech ecosystem in Israel, "the startup nation".



Following the presentation, Keren Kalderon was invited to present iHLS also to senators in Brasilia, the Brazilian capital, by Senator Bruna Furlan, who served, among her other roles, as the Vice President of the International Relations and Homeland Security Committee CREDN in Brazil.

Other delegation members included Ricardo Berkienstz, the Head of the Sao Paulo Jewish Community, and Fernando Lottenberg, who was Head of the Legal Department of the Federation and Industries Center of the State of Sao Paulo.

The meeting with the delegation from Brazil has been part of the widening international activities of iHLS at the global homeland security entrepreneurship ecosystem.

UK universities told to 'manage' Palestine activism

Source: <http://www.middleeasteye.net/news/revealed-uk-universities-told-manage-palestinian-activism-1189229788>

Mar 01 – Prevent training package advises that events involving 'vocal support for Palestine' should be 'risk-assessed and managed'

British university staff are being advised to "risk-assess and manage" events on campus relating to "contentious" issues including Palestine and criticism of Western foreign policy in the Middle East in order to demonstrate their compliance with the government's Prevent counter-extremism strategy.

Critics fear that the guidance, which is contained in an online training presentation, is already stifling free speech and political expression, with one institution, the University of Central Lancashire (UCLan), on Tuesday cancelling an event organised by a Friends of Palestine society because of concerns that it would not be "balanced".

Other issues for which higher education institutions are being instructed to put in place measures to ensure that "extremist views" are challenged include opposition to Prevent itself following vigorous campaigning against the strategy by the National Union of Students (NUS) and the University and College Union (UCU), which represent more than 100,000 university staff.

"Vocal support for Palestine", "Opposition to Israeli settlements in Gaza", "Criticism of wars in the Middle East" and "Opposition to Prevent" are included in a list of "contentious topics" in the presentation on a website, [Safe Campus Communities](#), created for university staff to help them fulfil their Prevent Duty obligations.

AN INTRODUCTION
TO THE PREVENT
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Extremist?

- Anti-immigration?
- Pro-Life?
- Anti-vivisection?
- Vocal support for Palestine?
- Opposition to Israeli settlements in Gaza?
- Opposition to gay marriage?
- Criticism of wars in the Middle East?
- Rise of terrorism a result of foreign policy?
- Opposition to Prevent?

Since 2015, the Prevent Duty has required public sector workers by law to "have due regard to the need to prevent people from being drawn into terrorism".

The creators of Safe Campus Communities, who include the Higher Education Funding Council for England (HEFCE) and the government's Department for Business, Innovation and Skills (BIS), told Middle East Eye the list was

intended to promote free speech by encouraging universities to ensure that "topics that may be seen as controversial" could be "debated in a safe environment".

Elsewhere in the training material, the topics are described as a "list of views that may be regarded as extremist but are not illegal". Accompanying notes state that holding such views "may be legitimate provided they are not expressed or furthered by statements, deeds or actions which result in the harassment, intimidation or threats of violence against individuals or society itself".

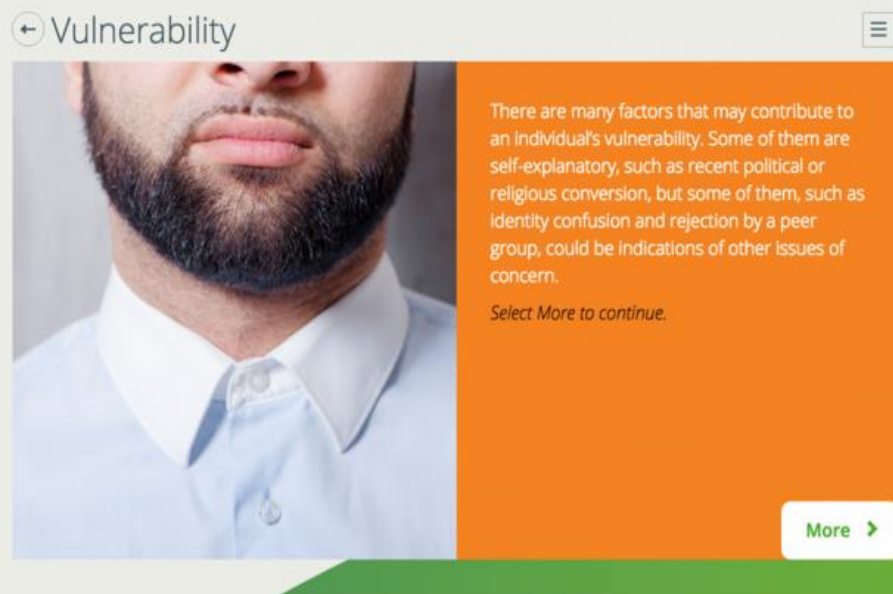


The presentation states: 'Holding these views may be legitimate provided they are not expressed or furthered by statements, deeds or actions which result in the harassment, intimidation or threats of violence against individuals or society itself'

The presentation advises institutions to take steps for events at which "extremist views are likely to be expressed" to ensure that such views are challenged by "inviting additional speakers with opposing views" and through "independent and effective chairing".

"Relevant higher education bodies also need to risk assess and manage events where these or similar views may be expressed," it says.

But critics fear that the guidance could lead to a culture of caution and censorship on campuses in which discussion of topics considered controversial is shut down.



On Tuesday, UCLan said it had [cancelled](#) a Friends of Palestine event scheduled to take place on 28 February as part of "Israel Apartheid Week" because of concerns that it would be anti-Semitic and unlawful.

A screengrab from the Safe Campus Communities Prevent training presentation

The event, titled "Debunking misconceptions on Palestine and the importance of BDS [the Boycott, Divestment and Sanctions Movement]", was due to feature Ben White, an MEE contributor.

In a statement, UCLan said it believed the event would fall foul of the

International Holocaust Remembrance Alliance's definition of anti-Semitism [adopted by the UK government](#) last year.

The IHRA defines anti-Semitism as "a certain perception of Jews, which may be expressed as hatred toward Jews" including "denying the Jewish people their right to self-determination, eg by claiming that the existence of a state of Israel is a racist endeavour".

"We believe the proposed talk contravenes the new definition and furthermore breaches university protocols for such events, where we require assurances of a balanced view or a panel of speakers representing all interests," a spokesperson for the university said.

"In this instance our procedures determined that the proposed event would not be lawful and therefore it will not proceed as planned."

White told MEE: "It is clear from social media [posts](#), as well as an [earlier statement](#) issued by the university, that officials caved to pressure from pro-Israel groups, and in so doing, threw their students - and their right to freedom of expression - under a bus.

"Israeli Apartheid Week is marked on campuses across the globe, and its importance is only underlined by the fact that the Israeli government - emboldened by the Trump administration - is so openly opposed to Palestinian self-determination."

Ben Jamal, director of the Palestine Solidarity Campaign, told MEE it was absurd to single out support for a Palestinian state or opposition to Israeli settlements as controversial or extremist.

"Given that all major political parties in the UK and the overwhelming majority of governments across the world support a Palestinian state and oppose settlements on the basis that they violate international law and are an obstacle to peace it is absurd to define these as extremist views," he said.



"There is an urgent need for the relevant bodies to review these materials and ensure that any training offered to educational establishments truly reflects the stated intention to uphold academic freedom and freedom of expression."

The Safe Campus Communities presentation is the most substantial element in a "package of HE-specific Prevent training materials" produced collaboratively by HEFCE, the Leadership Foundation for Higher Education, Universities UK and BIS, according to HEFCE's website.

Since last year, the implementation of Prevent on campuses has been overseen by HEFCE and its counterparts in Scotland and Wales.

But the training material also acknowledges concerns about the government's efforts to define extremism.

"It is the difficulty in defining what is and what isn't extremist that has led people to be concerned that the Prevent duty constitutes a threat to academic freedom/freedom of expression," it says.

"The government definition of extremism is considered by some to be somewhat vague."

In a statement to MEE, HEFCE said the material in the presentation was intended to uphold free speech and was currently being evaluated.

The training material acknowledges that the government's definition of extremism is considered "somewhat vague"

"The presentation slide makes reference to a non-exhaustive list of examples of potentially controversial topics for the person completing the module to consider. These are topics that may come up for discussion on campus, and should be allowed to be debated in a safe environment on campus as part of a commitment to freedom of speech," the statement said.

"Rather than undermining freedom of speech, it in fact does the opposite. By mitigating very specific risks associated with views being expressed that risk drawing people in to terrorism, it allows a range of events that may otherwise have been cancelled to go ahead and upholds freedom of speech within the law."

A spokesperson for Universities UK told MEE: "Universities have a duty not only to tackle violent extremism and protect the safety of students and staff, but also to secure freedom of speech within the law. This is not always easy to balance, but universities are experienced in this area, are following the statutory guidance and have their own policies and processes in place."

"External speakers play an important role in university life. It is important that universities continue to be places where controversial subjects can be discussed openly, and flawed or dangerous ideas challenged."

But Sally Hunt, the general secretary of the UCU, told MEE that the Prevent Duty "risked doing more harm than good by shutting down debate on contentious topics and creating mistrust between teachers and students".

"The government's current approach risks silencing those who are most vulnerable, leaving them no space in which to express their opinions or be challenged safely," she said.

"Universities and colleges rightly cherish academic freedom as a key principle of our civilised society, and we do not believe that draconian crackdowns on discussion of controversial issues will achieve the ends the government says it seeks."

Shelly Asquith, the NUS's vice-president for welfare, told MEE that the union had set up a helpline for student union officers and activists affected by Prevent.

"The implementation of Prevent relies on racial profiling, making Muslim students in particular a common suspect. It is stifling students' ability to organise politically, or practice their faith, for fear of referral, so it's no surprise students' unions are a target in this," said Asquith.

IMPLEMENTING THE
PREVENT DUTY AND
UPHOLDING THE
PRINCIPLES OF
ACADEMIC FREEDOM
AND FREEDOM OF
SPEECH

Views that are "extremist"?

- It is the difficulty in defining what is and what isn't extremist that has led people to be concerned that the Prevent duty constitutes a threat to academic freedom/freedom of expression.
- The government definition of extremism is considered by some to be somewhat vague.
- Concerns also arise because the Prevent duty refers to non-violent as well as violent extremism as set out in the 2011 Prevent strategy.



The UCU and the NUS last year organised a "Students Not Suspects" protest campaign calling for Prevent to be abolished and accusing the government of using the strategy to stifle political dissent and curtail civil liberties.

While the training guidance notes that opposition to Prevent is "permissible", university staff are warned that they would be breaking the law by boycotting the Prevent Duty.

"Non-cooperation by specified authorities in implementing the duty through a boycott would not be legal," it says.

PSCE Annual Report 2016

Source: http://www.psc-europe.eu/images/PSCE_Annual_Report_2016.pdf

This document is an overview of what PSCE has been doing during the year 2016. It describes who we are and what we have done during the past year to remain a key player in emergency communications in Europe.



The year 2016 has been particularly rich in challenges and opportunities. PSCE has welcomed new members, engaged in new EU projects, and further strengthened its relationships with EU actors and PPDR organizations in the course of various events, conferences and workshops. The report is not only a statement of what has been done, it also offers a glimpse of our priorities for 2017.

Public Safety Communication Europe Forum (PSCE) is a permanent autonomous organisation aiming at improving provision of public safety communications and information management systems and the safety of the citizens during crisis and emergency situations. PSCE provides a unique common platform for researchers, industry and users enabling regular exchange of ideas, information, experiences and best practices.

Why mass deportations are costly and hurt the economy

By Mark Humphery-Jenner

Source: <http://www.homelandsecuritynewswire.com/dr20170301-why-mass-deportations-are-costly-and-hurt-the-economy>

Mar 01 – President Donald Trump has pledged to deport [several million](#) undocumented immigrants and recently [set a plan in motion](#) targeting those with criminal records (of any kind).

While the ethical issues with mass deportations have received [lots of attention](#), the economics haven't been explored as comprehensively. And the costs of mass deportations will likely be significant.

These include the impact on economic growth and the labor force, which have received some [coverage](#), but there are several other factors that ought to be considered, such as the debts and dependents left behind by those deported and the costs of giving them the boot.

Undocumented immigrants and debt

To start with undocumented immigrants are able to amass debt in the U.S., and being deported makes it less likely they'll honor it. This imposes risks on the financial system and on lenders in particular.

A person need not be a citizen or a permanent resident [to obtain a mortgage](#), credit card, [car loan](#) or student loan – something covered even at Trump University, [it seems](#).

To get a mortgage, for example, an illegal immigrant need only show a history of paying taxes, have a down payment and possibly have other documentation of income. [Alterra Home Loans](#), for one, explicitly offers home loans to people with no social security card and no documents to prove legal status. Thus, loans are clearly available to undocumented immigrants. According to a 2009 Pew Hispanic Center survey, about 35 percent of "unauthorized immigrant households" own a home.



It is not clear how many mortgages have been given to undocumented immigrants. Of the 11 million estimated immigrants in the U.S. without papers, if we assume 1 million of them currently have a mortgage of US\$50,000 (a third of the [average of \\$172,806](#)), this conservative estimate would put about \$50 million at risk during a mass deportation.

Or another scenario could involve a person who enters legally under a multi-year visa, amasses debt including a mortgage, overstays that visa and then is deported as an illegal.

The credit costs of deporting undocumented immigrants could be high and avoidable. Is it really worth damaging the economy by deporting immigrants who make consistent payments as responsible borrowers?

EDITOR'S COMMENT: It is all about money stupid!!!

Recent raids drive immigrant families to passport scramble

By Mariana Alfaro

Source: <http://www.homelandsecuritynewswire.com/dr20170301-recent-raids-drive-immigrant-families-to-passport-scramble>

Mar 01 – Carlos Bernal and his wife woke up their children, gathered their documents and



drove to the Travis County passport office before dawn Monday. They were first in line at 5 a.m., three hours before the office opened.

"We're here to get our kids passports, in case they kick us out," Bernal said in his native Spanish.

His children, ages 14, 13 and 6, are U.S. citizens. He and his wife are not. Because of recent Immigration and Customs Enforcement raids, he said, they have to be ready to pack up and leave the country for Mexico.

A recent flurry of ICE apprehensions around the country has sent undocumented immigrants from various countries running to passport offices and their native countries' consulates for documentation they pray they won't need.

At the Salvadoran consulate in Dallas, Consul General Jose Mario Mejía Barrera said his office

has seen a 25 percent increase in passport applications and child registries in the past

month. Mejía Barrera's consulate serves around 150,000 Salvadorans who live in North Texas, Oklahoma and Arkansas.

"There's uncertainty and worry among the community. People are realizing they have to file the right paperwork," Mejía Barrera said. "Children who are born here, with Salvadoran moms or dads, are being registered so they have dual citizenship. Couples are registering their marriages so that they're valid in El Salvador."

At the Mexican consulate in Austin, Consul General Carlos Gonzalez

Gutiérrez said his office has seen an uptick in the number of applications for passports and birth certificates since the November presidential election. Last month's ICE activity in Austin scared immigrants more, he said, because non-criminal immigrants were detained — a change from Obama-era policies.

On Friday, Gonzalez Gutiérrez's consulate will hold its first-ever custody session to help undocumented Mexicans understand how guardianship works in case they have to leave their children with a documented family member or friend. Gonzalez Gutiérrez said immigrants also ask the consulate about property rights, wondering if the U.S. government can confiscate their homes.



“Their questions show the state of anxiety that the community is in,” said Gonzalez Gutiérrez, whose office oversees nearly 450,000 people of Mexican origin in Central Texas. “Up until a few months ago, these questions were unimaginable.”

Two weeks ago, ICE arrested dozens of undocumented immigrants across the nation in what they said was a routine action. But the immigrant community was already on edge because of rising anti-immigrant rhetoric during the presidential campaign, and the ICE actions sent many undocumented families into a panic. Behind the Bernalts at the Austin passport office, the majority of the line was made up of immigrant families clutching their children’s birth certificates; they waited several hours before being allowed inside the passport center.

For some families, this was the first of two passport lines they had to navigate to ensure their children are correctly documented.

Romina, a Mexican woman who has lived in Austin for 10 years, said she was going to get Mexican passports for her U.S.-born children after they secured their American passports. This is part of her emergency plan, she said, in case she or her husband are deported. Because she’s an undocumented immigrant, she asked to be identified only by her first name.

“Yes, there are some bad immigrants,” she said, “but there are so many more good immigrants who pay taxes. I pay taxes.”

Nancy Howell, manager of Travis County’s passport program, said her office normally serves slightly more than 100 applicants a day. In the past couple of weeks, however, they’ve been serving more than 200, with most lining up outside early in the morning. Most days, she said, her office has to tell some families to come back the next day when the office closes.

On average, she said, it takes between 15 and 30 minutes to serve each family. The office has five to six staffers, but only two are fluent Spanish speakers. Howell said it is the customer’s responsibility to bring a translator.

“We could probably do more if we had more clerks,” she said.

Outside, Anallely Aviles observed her kids, 6 and 4, running around, weary from waiting. Young children are as scared as the adults about the increased deportations, she said.

“They know already because they hear it from us or they hear it in school,” she said in Spanish.

“If ICE comes to the door, they know they don’t have to open it and should go hide in the room and try to make no noise.”

Mariana Alfaro is a reporting fellow at The Texas Tribune.

Hungary builds new high-tech border fence — with few migrants in sight

Source: <http://uk.businessinsider.com/r-hungary-builds-new-high-tech-border-fence-with-few-migrants-in-sight-2017-3>

Feb 03 – **A daunting new barrier is beginning to loom over Hungary's southern border, capable of delivering electric shocks to unwanted migrants and armed with heat sensors, cameras, and loudspeakers that blare in several languages.**



The country was a main crossing point for hundreds of thousands of people trekking into Europe at the height of the migrant crisis in 2015. A hastily-erected first razorwire fence and tough new laws have cut arrivals to a trickle, but Budapest is not taking any chances.



"Attention, attention. I'm warning you that you are at the Hungarian border," the loudspeakers say in English, Arabic and Farsi from the new barrier.



"If you damage the fence, cross illegally, or attempt to cross, it's counted to be a crime in Hungary. I'm warning you to hold back from committing this crime. You can submit your asylum application at the transit zone." The "transit zones" are two border posts where a total of just 10 migrants per day are allowed in legally. Rights groups say they are wholly inadequate and, by creating such a tight bottleneck, may be illegal.

The new floodlit fence of wire reinforced with steel will give anyone who touches it an electric shock that well-informed sources say is mild. A police roadway will run between it and the old barrier.

'Reassuring'

Only 10 km (six miles) of the new structure has been completed but officials say the remaining 140 km (85 miles) along the border with Serbia will be finished in just two months, built largely by 700 prison inmates. Hungary's populist Prime Minister Viktor Orban has called mass immigration from

the Middle East and Africa an existential threat to the European way of life.

"The first fence was a quick solution from the government, but not a perfect one as human traffickers come equipped with tools to cut it," said Laszlo Toroczka, mayor of the border village of Asotthalom, who first called for borders to be sealed in 2014.

He called the new barrier "far more serious" and "absolutely reassuring".

Border patrols prevent hundreds of crossings every day and catch migrants who make it into Hungary within the first few miles of the border, according to authorities.

The government has earmarked 38 billion forints (123 million euros) for the second fence. Orban's chief of staff Janos Lazar said on Thursday the total cost of the border effort, including patrols and transit zones, was nearing 1 billion euros.



EDITOR'S COMMENT: What a privilege to have solid ground borders! You raise a fence and most of the problem is solved. But what can be done in a country like Greece with a coastline of approximately 16,000 km and a neighbor (Turkey) that systematically promotes illegal immigration of any kind? Any Hungarian proposals would be highly appreciated!





Misery Index: Greece on 4th position worldwide, top among EU countries

Source: <http://www.keeptalkinggreece.com/2017/03/03/misery-index-greece-on-4th-position-worldwide-top-among-eu-countries/>



Mar 03 – **Greece holds the top fourth position among the countries that are getting more miserable in 2017.** According to Bloomberg's Misery Index, it is Venezuela that tops the list for one more time. Venezuela is followed by South Africa, Argentina, Greece, Turkey and Spain.

If 2016 was the year of political shocks, this year could be when we find how they'll impact the global economy. **Bloomberg's Misery Index**, which combines countries' 2017 inflation and unemployment outlooks, aims to show us just that.

For the third year in a row, Venezuela's economic and political problems make it the most miserable in the ranking. The least miserable country is once again Thailand — in large part due to its unique way of calculating employment — and the rest of the ladder features noteworthy moves by the U.K., Poland and Mexico, to name a few.

Greece tops the Misery Index among European countries and it is followed by **Spain**.

2017 Rank	Country	2017 Misery Index (projected)	2016 Misery Index (actual)	2016 Rank (actual)
1	Venezuela	499.7	-	-
2	South Africa	32.2	33.1	2
3	Argentina	30.9	50.1	1
4	Greece	23.2	22.7	4
5	Turkey	19.8	18.4	7
6	Spain	19.6	19.8	5
7	Ukraine	19	24.4	3
8	Serbia	17.9	-	-
9	Brazil	17.3	16.4	10
10	Uruguay	15.9	17.5	8
11	Colombia	14.1	16.7	9
12	Croatia	13.7	13.6	11
13	Italy	12.8	11.6	15

Sources: Bloomberg surveys, national data
 Note: Countries without inflation and/or unemployment data for 2016 were not included in the 2016 ranking

Bloomberg

The Misery Index is an economic indicator, created by economist *Arthur Okun*. The index helps determine how the average citizen is doing economically and it is calculated by adding the seasonally adjusted unemployment rate to the annual inflation rate. It is assumed that both a higher rate of unemployment and a worsening of inflation create economic and social costs for a country.



AVA Says it's Revolutionized Personal and Public Safety Using Artificial Intelligence

Source: <http://www.hstoday.us/single-article/ava-says-it-s-revolutionized-personal-and-public-safety-using-artificial-intelligence/93d98e9db017fa2dbc6a17cf916a43d1.html>

Feb 22 – Berlin-based start-up AVA announced that after more than two years of “highly secretive development,” its artificial intelligence technology is available which is



“capable of calculating the statistical, current and predictive safety and risk for any given location in real-time” by monitoring mass volumes of data from multiple sources, such as incident categories which includes crime, terrorism, fire, natural forces, industrial disasters or health-related risk.

AVA said its product “detects relevant events and incidents with unprecedented speed and accuracy, thanks to its deep learning algorithms. Partners and customers access the safety and risk scores using cloud-based operation center interfaces, dedicated mobile applications or the universal data API. That way, AVA can be integrated into all kind of solutions and systems, ranging from smart homes, connected cars, travel booking websites over underwriting processes at insurances to high-frequency trading platforms.”

“A specific innovation is the adaptive scoring,” the company said in its announcement. “That way, for example, a luxury car might warn its owner who is about to park in an area with increased risk of vandalism or theft for this specific car brand. But also individual users can leverage these capabilities by adding aspects such as gender, age, skin color or orientation to their personal profiles. This makes data protection and privacy a centerpiece within the strategy of the company.”

AVA said it is one of the first big data companies to fully comply with the world's most strict EU (GDPR) regulations on data protection and privacy to be put in force mid-2018.

“AVA is like meteorology for safety, laying the ground for new and world-changing solutions unimaginable before. We deliver actionable information to monitor, manage and improve the physical safety of individuals, things, buildings, organizations, locations, communities and cities,” said Sascha Knopp, CEO and co-founder of AVA.

“The perceived increase in crime, terrorism, natural disasters, epidemics and crisis-related migration continues to fuel public anxiety at a global level. At the same time, public authorities struggle to cope with increasing complexity, pressure and budget constraints. These trends led to unprecedented and still surging global demand for a new solution. But it is only now that the increase in data availability and decreasing cost of high-performance computing allowed for the implementation of a solution such as AVA,” said AVA Executive Chairman and Co-Founder Aleksandar Stojanovic.

“With AVA there is now a unique, both global and local solution to tame this ever increasing complexity,” Knopp added.

AVA said, “Working for more than two years in strict secrecy, AVA has only been collaborating with a few chosen partners and pilot customers: Global insurances, two of the world's leading cities and their public safety authorities as well with as a world-leading provider of integrated safety and security solutions serving public authorities, large corporations and critical infrastructures.”

AVA said in the upcoming months it will focus on “implementing some larger pilot installations before starting routine business operations, providing direct data



access through universal application programming interfaces and cloud-based turnkey interfaces for professionals, such as

corporate safety and location security professionals, public safety authorities and smart cities.”

Revised ban excludes Iraq, current visa holders; no priority to religious minorities

Source: <http://www.homelandsecuritynewswire.com/dr20170306-revised-ban-excludes-iraq-current-visa-holders-no-priority-to-religious-minorities>

Mar 06 – President Donald Trump has signed a revised travel ban which will go into effect on 16 March.

The revised executive order will halt entry to the United States for ninety days for people from six Muslim-majority nations who are seeking new visas.

Unlike the original executive order, the new order allows those with current visas to travel freely.

The new order, which Trump will sign today, was written to address legal issues with the original order, which was blocked by the courts.

Business Insider reports that the revised order is narrower not only in exempting those who already hold a visa – but also in removing Iraq from the list of countries affected.

The removal of Iraq from the list was the result of pressure from the Pentagon and State Department, which had urged the White House not to include Iraq in the ban in light of the role Iraq has played in fighting ISIS.

The Departments of State, Defense, and Homeland Security were not consulted before the original ban was issued.

A fact sheet distributed to lawmakers, and which was obtained by the AP, said that negotiations resulted in Iraq agreeing to “increase cooperation with the US government on the

vetting of its citizens applying for a visa to travel to the United States.”

Business Insider notes that Trump was not expected to hold a public signing ceremony for the new order.

Administration officials said that the new order, as was the case with the original order, aims to keep would-be terrorists out of the United States, as the government reviews the vetting system for refugees and visa applicants from regions affected by terrorism.

The fact sheet notes that DHS will conduct country reviews of the six countries targeted by the ban, and that these countries will have fifty days to comply with U.S. government requests to update or improve that information.

Trump’s order suspends the entire US refugee program for 120 days, but refugees already scheduled for travel by the State Department will be allowed entry. The United States will allow no more than 50,000 refugees into the country in fiscal year 2017.

Two other changes in the new order: Syrian refugees will be treated as other refugees, rather than be suspended indefinitely, and religious minorities – that is, non-Muslim refugees – will not be given a priority in admission to the United States.

An interesting product




Nanodiamond

Source: <http://www.nanodiamond.eoxide.eu/>

Nanotechnologies are high technologies based on control of the substance at the micro level in sizes smaller than one micrometer. The normal characteristics of matter at work at the molecular level are dramatically changed. The effect is expected to exceed that of the development of ICT (Information and Communication Technologies). This conclusion is based on their wide applicability in almost all sectors of the economy. This is most closely



related to nanomaterials, which significantly reduced the use of limited natural resources. Nanotechnology operates a billionth ($10^{-9}=0.000\ 000\ 001$) of a meter.

		
WHAT IS IT	WHAT'S IN IT	WHAT DOES IT DO
Nanodiamond is a series of high-tech products for engines, transmission and hydraulic systems, greases and lubricants. Liability Insurance covering up to €2,500,000	The main ingredient of the products is a mixture of active particles of modified nanodiamond (99,99% pure Carbon) with a high surface activity of the diamond particles	Nanodiamond provides significant fuel economy, increases the engine power, increases the working life of oil and engines and many more

The thing that makes nanotechnology really interesting for researchers and companies is that when you work with materials at molecular level their normal characteristics change causing unusual effects.



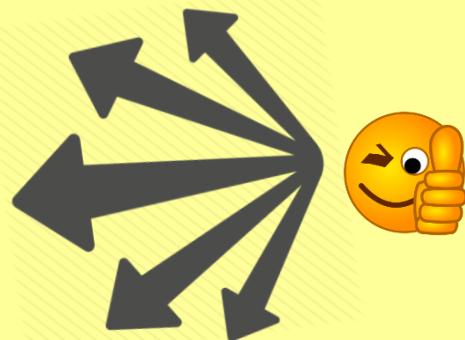
Nature also uses nanotechnology. Bright red sunrises and sunsets are caused by nanoparticles dispersed in the atmosphere, most of which occurred as a result of volcanic eruptions. Milk contains nano-proteins, dissolved in water and the nanostructure of the lotus leaf allows it to reject even strong adhesives. These are just a few examples.

Many scientists seek inspiration from nature - and now when they can see how natural processes occur, they apply them in creating new and improved products and processes.

The advantages and uniqueness of the nanodiamond comes from the fact that it is identical with the natural diamond.

What do we achieve with NANODIAMOND?

- Provides significant fuel economy - from 6 to 12%
- The engine power is increased up to 12%
- It increases the working life of oil and engines
- Protects against burns and loss of oil
- Facilitates starting when engine is cold
- Reduces wear - with 60 to 70%
- Reduces the coefficient of friction - with 40 to 80%
- Reduces operating temperature
- Ensures quiet work of the engine
- Protects against oil graphitization
- The engine is kept out of blocking when out of oil for up to 60 km



► ► Reasearch: <http://www.nanodiamond.eoxide.eu/?q=research>



Nike launches hijab for female Muslim athletes

Source: <https://www.theguardian.com/business/2017/mar/08/nike-launches-hijab-for-female-muslim-athletes>



**MONEY TALKS -
EVERYTHING
ELSE WALKS.**

Mar 08 – Nike has taken another step into the lucrative Islamic clothing market by unveiling a hijab designed for female Muslim athletes.

Muhammad and the Virgin Mary: A Match Made in Heaven?

By Raymond Ibrahim

Source: <http://www.meforum.org/6554/muhammad-and-the-virgin-mary>

Feb 10 – At a time when non-Muslims are constantly warned to speak respectfully of Muhammad, or else offended Muslims might respond with violence—to the shame and blame of those who exercise their freedom of expression—consider what Muslims regularly say about the things non-Muslims hold dear.



Recently during his televised Arabic-language program, Dr. Salem Abdul Galil—previously deputy minister of Egypt's religious endowments for preaching—gleefully [declared](#) that, among other biblical women (Moses' sister and Pharaoh's wife), "our prophet Muhammad—prayers and peace be upon him—will be married to (the Virgin) Mary in paradise."

(Note: the Arabic word for "marriage" denotes "legal sexual relations" and is devoid of Western, "romantic," or Platonic connotations.)

Where did Galil—this governmental official who also holds that [Muslims can wear the hated crucifix to deceive Christians](#)—get this idea?

As usual, from Muhammad himself. In a hadith that was deemed reliable enough to be included in the renowned Ibn Kathir's corpus, Muhammad declared that **"Allah will wed me in paradise to Mary, Daughter of Imran"**^[1] (whom Muslims identify with Jesus' mother).

If few Christians today know about this Islamic claim, medieval Christians living in Muslim-occupied nations were aware of it. There, Muslims regularly threw this fantasy in the face of Catholic and Orthodox Christians who venerated Mary as the "Eternal Virgin."

Thus, Eulogius of Cordoba, an indigenous Christian of Muslim-occupied Spain, once wrote, "I will not repeat the sacrilege which that impure dog [Muhammad] dared proffer about the Blessed Virgin, Queen of the World, holy mother of our venerable Lord and Savior. He claimed that in the next world he would deflower her."





Eulogius of Cordoba couldn't hold his peace about Muhammad's wedding plans

As usual, it was Eulogius' offensive words about Muhammad—and not the latter's offensive words about Mary—that had dire consequences: he, as well as many other Spanish Christians vociferously critical of Muhammad, were found guilty of

speaking against Islam and publicly tortured and executed in "Golden Age" Cordoba in 859.

Not only do many Western academics suppress or whitewash such historical anecdotes of Muslim persecution of Christians, but some—whether intentionally or out of ignorance—warp them in an effort to portray Christian victims of Islam as Christian persecutors of Islam.

After quoting Eulogius' aforementioned lament against Muhammad, John V. Tolan, a professor and member of Academia Europaea, writes:

This outrageous claim [that Muhammad will marry Mary], it seems, is Eulogius's invention; I know of no other Christian polemicist who makes this accusation against Muhammad. Eulogius fabricates lies designed to shock his Christian reader. This way, even those elements of Islam that resemble Christianity (such as reverence of Jesus and his virgin mother) are deformed and blackened, so as to prevent the Christian from admiring anything about the Muslim other. The goal is to inspire hatred for the "oppressors" Eulogius sets out to show that the Muslim is not a friend but a potential rapist of Christ's virgins (*Saracens: Islam in the Medieval European Imagination*, p.93).



As already seen, however, it was Muhammad himself—not any "Christian polemicist"—who "fabricates lies designed to shock," namely that Mary will be his eternal concubine. But facts apparently don't matter to academics like Tolan, who are more eager to demonize Eulogius in an effort to exonerate the "offended" Muslims who slaughtered him.

In the Quran, Mary holds onto a palm tree when giving birth to Jesus, as in this 16th century Turkish depiction

Putting real or feigned history aside,

let's return to modern day Egypt and consider why Dr. Galil—a governmental official described as a "moderate," a bridge-builder between Muslims and Christians—would openly say what he knows millions of Orthodox Christians in Egypt will find repugnant: that Christ's mother would be given to—and have sex with—what Christians deem a false prophet?

To be sure, many Egyptian Christians did express outrage, including on social media, though none responded with violence. Had a leading Christian cleric, or even a little Coptic boy, claimed that Aisha—Muhammad's favorite wife, who holds a venerated place in Sunni



tradition—will be married to and have sex with a false prophet, he would've been beaten and, if not killed in the process, imprisoned under Egypt's "anti -defamation of religions" law, which supposedly protects both Islam and Christianity.

But as every Muslim and Christian knows, Egypt's "anti-defamation of religions" law—which has been responsible for the arrest and punishment of many Copts accused of mocking Islam on social media—is in reality an anti-defamation of *Islam* law. Things held sacred by Christians are free game—including, apparently, for "moderate" governmental officials.

After all, Islam—beginning with its prophet and all throughout its scriptures—is [built on defaming non-Muslims and their religions, Judaism and Christianity in particular](#). So how can repeating what Islam holds to be true ever be deemed blasphemous by Muslims—infidel sensitivities be damned?

Raymond Ibrahim is a Judith Friedman Rosen fellow at the Middle East Forum and a Shillman fellow at the David Horowitz Freedom Center.

Recep Tayyip Erdogan: EU ruling on headscarf bans starts 'clash between Islam and Christianity'

Source: <http://www.independent.co.uk/news/world/europe/turkey-eu-headscarf-ban-court-justice-ruling-erdogan-clash-islam-christianity-cross-crescent-a7633276.html>

Mar 17 – Recep Tayyip Erdogan has accused Europe of starting a “clash” between Christianity and Islam with a [ruling allowing employers to ban headscarves](#) as part of wider restrictions on religious and political symbols.

Speaking hours after his foreign minister [warned that “holy wars will soon begin”](#), the Turkish President launched a fresh attack amid an ongoing row over the cancellation of his supporters’ rallies across Europe.

He said the European Court of Justice ruling that upheld the dismissal of two Muslim women who refused to remove their hijabs started a “clash between crescent and cross”

in terminology alluding to the Crusades.

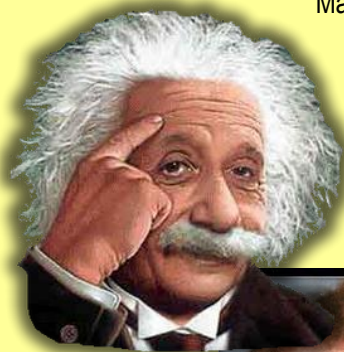
“Shame on the EU. Down with your European principles, values and justice,” Mr Erdogan told supporters in Sakarya. “They started a clash between the cross and the crescent, there is no other explanation.”

In a combative speech, Mr Erdogan hit out at European leaders in the Netherlands and Germany after Turkish ministers were prevented from holding events designed to drum up support ahead of a

constitutional referendum.

The Turkish President said the Dutch Prime Minister Mark Rutte, who the beat far-right leader Geert Wilders in Wednesday's general election, had lost Ankara's friendship by banning Turkish political campaigning in the country.

The dispute has intensified since a rally to be held by the Turkish foreign minister Mevlut Cavusoglu in Rotterdam was cancelled on Saturday.



If the Virgin Mary appears wearing a veil on all of her pictures, How can you ask me to sign on a HIJAB BAN LAW? **Roberto Maroni (Italian Minister)**



The Dutch authorities withdrew permission for the foreign minister's plane to land when he vowed to visit the country regardless, sparking a series of tit-for-tat sanctions.

BALKANS WITHOUT BORDERS: Worrying Signs Just Keep Trickling Out

Source: <http://www.rferl.org/a/balkans-without-borders-worrying-signs-conflict-knezevic/28353760.html>

Mar 09 – **Warnings that another conflict may erupt in the Balkans have been coming in from former diplomats and think tanks in recent weeks.**

Most recently, there is concern that the prolonged detention of former Kosovo Prime Minister Ramush Haradinaj in France may trigger a wave of protests in Pristina.

Neighboring FYROM is facing a potential constitutional crisis as the president continues to deny a mandate to form a government to a political leader who appears to have a parliamentary majority in hand.

Serbia would like to be seen as a rock of stability in the region, but it currently finds itself on the worst terms it has had with its neighbors since the end of the cycle of Balkan wars (1991-99). In Montenegro, October's elections were marred by a purported coup attempt that may have had Moscow's backing (although those allegations have never been proven). Meanwhile, its pro-European government faces a boycott by the pro-Russian opposition as Montenegro stands on the brink of NATO membership.

In Bosnia-Herzegovina, wartime objectives from the 1990s have become peacetime political projects. The country is bitterly divided, not least over the desire of some -- mainly among the Bosniak majority -- to revisit a 2007 international court ruling that cleared Serbia of genocide charges related to the 1992-95 war. Bosnian authorities have been unable to find a unified voice on the issue, and members of the country's three-member presidency are sending conflicting messages to the International Court of Justice (ICJ).

'A Frying Pan Full Of Oil'

All these brewing disputes led one outsider to predict that the first international crisis to face the new U.S. administration of President Donald Trump would crystallize in the "rumbling Balkans."

Such a warning is more extraordinary when it comes from an EU official.

In an interview with Zeit Online, the EU commissioner for neighborhood police and enlargement talks, Johannes Hahn, said



that stabilizing the Balkans is in Europe's interest. He added: **"We will either export stability or we will import instability."** This applies especially to the Western Balkans, which is like a frying pan full of oil. All it needs is a match to light the fire. However, an enduring peace in that region is possible that would provide these countries with an EU future."

Jelica Minic of the Belgrade-based NGO European Movement In Serbia expressed agreement with Hahn's observation. Minic told the RFE/RL Balkan Service's Belgrade bureau that four risk factors could produce a spark to light the fuse in the Balkans. In her view, the tipping point could be ethnic tensions, social unrest, the migrant crisis, or meddling by foreign powers in the region.

Minic also pointed to an article by former U.K. diplomat Timothy Less in Foreign Affairs calling for a redrawing of national borders in the Balkans, lending support to longstanding nationalist projects. The projected new "map" of the region would include a Greater Croatia, Greater Serbia, and Greater Albania. The article proved popular among nationalists of all stripes.

The British Foreign Office made it clear that Less does not represent the views of the British government. Nevertheless,

Russian Sputnik radio's Belgrade



outlet has quoted an analyst arguing that Less's opinion piece is proof that "the West is undermining the Balkans." In the same article, Bosnia is referred to as a "quasi-state."

Foundations 'Not Secure'

Speaking to RFE/RL's Balkan Service, Ukrainian Ambassador to Bosnia Aleksandr Levchenko highlighted Russian influence in the region.

"It appears that the destabilization of this region [Bosnia and the Western Balkans] is in the interest of [Russian President] Vladimir Putin," Levchenko said. "It would create an opportunity for him to present himself as the peacemaker. This is the usual script -- he manufactures a conflict and then offers to negotiate with the West on conflict resolution." Minic sees tensions on all sides -- between Serbia and neighbors Croatia, Bosnia, Kosovo, and FYROM, between Croatia and Bosnia, and so on.

Johannes Han has expressed concern in particular over ongoing tensions between Kosovo and Serbia. Responding to a question from Zeit Online on whether European-integration processes have been stuck in reverse lately, given that the specter of war was explicitly invoked during the most recent dispute between Serbia and Kosovo, Han replied: "That only proves my assertion that even though each country in the region has made progress, the foundations are not secure yet by any means. One wrong word can lead to conflict."

Han nevertheless said he remained convinced that responsible parties in Serbia, including Prime Minister Aleksandar Vucic, "are well aware that there is no alternative to a European orientation if they desire peace and prosperity." However, the prospect of EU restructuring based on a proposed two-tier model -- with one tier pursuing closer integration and the other remaining in a looser union -- raises questions about the place of Western Balkan countries in any new order. Specifically, whether that new model for the EU would speed up or slow down the integration of those countries -- a question that is currently impossible to answer, according to Minic.

The warnings of regional fragility might ensure that the Western Balkans remain a focus of attention in Brussels. Federica Mogherini, the EU foreign affairs and security chief, is currently on a tour of regional capitals spreading a message about the importance and value of an EU future. It is a sign that Brussels recognizes the danger of leaving the Balkan region to its own devices, with tensions on a knife-edge.

And yet the worrying signs persist.

As Mogherini addressed the Serbian parliament on March 3, her words were met with chants from back-bench lawmakers: "Serbia, Russia, we don't need the [European] Union!" Throughout, the Serbian Radical Party deputies were pounding the tables, and their leader, Vojislav Seselj, declared it the beginning of his presidential campaign. Presidential elections in Serbia are scheduled for April 2.

The Coming Islamic Culture War

What the Middle East's Internet Boom Means for Gay Rights, and More

By Daveed Gartenstein-Ross and Nathaniel Barr

Source: <https://www.foreignaffairs.com/articles/middle-east/2017-03-04/coming-islamic-culture-war>

Mar 04 – Western observers are often blind to social currents within the Muslim world. During the Arab Spring revolutions of 2011, outside analysts confidently predicted that the uprisings would marginalize the jihadist movement in favor of more moderate and democratic reformers. In fact, the opposite happened—an unprecedented jihadist mobilization that has inspired legions of fighters from around the world and fragmented or threatened more than half a dozen countries. In large part, this was because the collapse of the old regimes, which

had suppressed Islamism domestically, created new spaces for jihadists. These spaces included both literal ungoverned territory and discursive spaces, where radicals were newly able to engage in dawa, or proselytism.

Today, a new type of discursive space—one that will foster a very different set of ideas—is opening up in the Muslim world. In April 2011, Bahraini human rights activists created one such space when they launched the website Ahwaa, the first online forum for



the [LGBT community in the Middle East and North Africa](#) (MENA) region. Esra'a al-Shafei, one of the website's founders, was [modest about the site's ambitions](#), explaining that *Ahwaa* was intended "as a support network" for the "LGBTQ community" as well as a resource for those "who want to learn more by interacting with [LGBT] people." Although little-noticed at the time, *Ahwaa*'s seemingly innocuous project was in fact

revolutionary. Homosexuality in the MENA region is not only stigmatized but generally criminalized and [banished from the public sphere](#). The creation of an online platform where LGBT people could candidly discuss the issues affecting their lives, such as romantic relationships or the tensions between Islam and gay rights, was thus a direct challenge to deeply inscribed cultural and religious norms.

► ► Read the rest of this article at source's URL.

Daveed Gartenstein-Ross is Senior Fellow at the Foundation for Defense of Democracies and CEO of Valens Global.

Nathanael Barr is the research manager at Valens Global.

EDITOR'S COMMENT: To be honest I was not aware that sexual preferences is a culture and a pylon to our Western democracy!

Homeland Security notes sharp drop in illegal crossings in February

By Julián Aguilar

Source: <http://www.homelandsecuritynewswire.com/dr20170310-homeland-security-notes-sharp-drop-in-illegal-crossings-in-february>

Mar 10 – The Trump administration on Wednesday celebrated what the Department of Homeland Security said was an unprecedented drop in illegal crossings at the country's Southwest border since the president took office Jan. 20.

The number of apprehensions fell about 40 percent from January to February, according to the statistics released Wednesday evening. "This change in the trend line is especially significant because CBP historically sees a 10-20 percent increase in apprehensions of illegal immigrants from January to February," the agency said in a statement. "Instead, this year we saw a drop **from 31,578 to 18,762 persons** — a 40 percent decline."

The agency credited the decline to the president's executive order on immigration announced Jan. 25, which includes plans to increase detention space for unauthorized crossers, the fast-tracking of the border wall and order for Customs and Border Protection to immediately hire thousands more Border Patrol and customs agents.

"This trend is encouraging because it means many fewer people are putting themselves and their families at risk of exploitation, assault and injury by human traffickers and the physical dangers of the treacherous journey north," the statement continued.

If the trend continues, it could result in a dent this fiscal year in the number of immigrant children and family units from Central America crossing into Texas illegally.

Agents in the Rio Grande Valley sector of the U.S. Border Patrol came across about 52,000 families and about 36,700 unaccompanied minors during the 2016 fiscal year, compared to 27,400 and 23,864, respectively, in 2015.

From October of 2016, when the federal government's current fiscal year began, through the end of February, the Rio Grande sector has already seen more than 17,300 minors and 38,600 family units. But the numbers fell off significantly from January to February, from about 6,300 family units to 2,000 and from about 2,700 minors to about 1,085.



The statistics were released the same week the Trump administration announced it was considering a policy where mothers who were apprehended or turned themselves in at the border would be separated from their sons and daughters after being processed by federal authorities.

During a visit to Homeland Security offices in Dallas Tuesday, Homeland Security Secretary John Kelly said the policy would discourage families from making the dangerous trek from Central America through Mexico, the Dallas Morning News reported.

The department also reported on Wednesday that due to the administration's recent actions, smugglers, known as *coyotes*, have increased their fees for smuggling undocumented immigrants through some of the routes they commonly use.

"Since Nov. 2016, 'coyotes' have hiked their fees in some areas by roughly 130 percent — from \$3,500 to \$8,000 in certain mountainous regions," the statement said. "Changes in U.S. policy, including the detention of apprehended aliens, drive up the smuggling fees."

Julián Aguilar reports on politics and border affairs from the Texas-Mexico border.

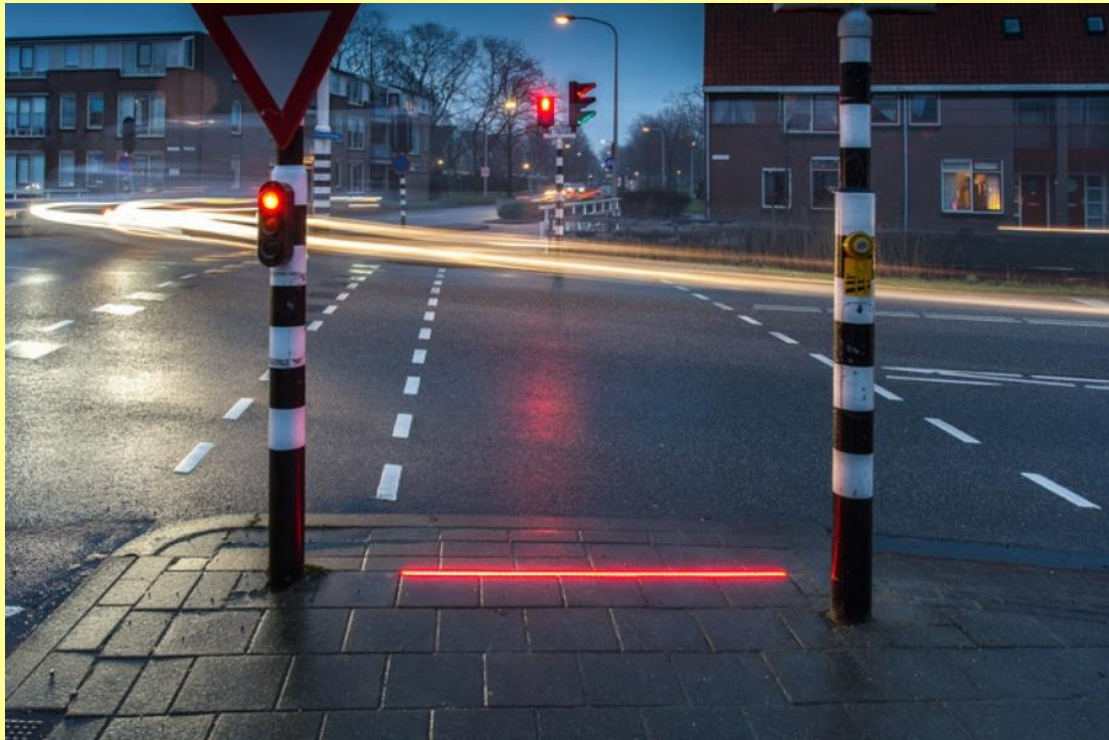
What is wrong with this picture?



EDITOR'S COMMENT: On March 12, 2017 Turkish protesters outside the consulate general of the Netherlands in Istanbul pulled down the Dutch flag and replaced it with Turkey's as a diplomatic row escalates between the two countries. In Greece, Embassy grounds are considered as national territory of a specific nation. In that respect it was Turkey's invasion to The Netherlands! Kind of a war victory! It seems that the two lions decorating the gate of the Consulate are just this – decorative...



See something; say something!



Bodegraven – The Netherlands: Traffic lights for those texting SMS in their smartphones!



Predicting crime knowledge states in the human brain

Source: <http://www.homelandsecuritynewswire.com/dr20170314-predicting-crime-knowledge-states-in-the-human-brain>

Mar 14 – **Judges and juries always ponder whether people act “knowingly” or “recklessly” during criminal activity — and neuroscience has had little to add to the conversation.**

But now, researchers, including computational neuroscientist Read Montague of the Virginia Tech Carilion Research Institute, have discovered that brain imaging can



determine whether someone is acting in a state of knowledge about a crime — which brings about stiffer penalties — or a state of recklessness, which even in capital crimes such as homicide, calls for less severe sentences.

Virginia Tech notes that the discovery, scheduled for publication this week in the online Early Edition of the Proceedings of the National Academy of Sciences, will not have a bearing on court proceedings, but it is an inroad in the emerging field of “neurolaw,” which connects neuroscience to legal rules and standards.

In a brain imaging study of 40 people, researchers identified brain responses that indicated whether people knew they were committing crimes or if they were instead acting recklessly with the risk that they might be committing a crime.

The researchers provided the first neurobiological evidence of a detectable difference between the [mental states](#) of knowledge and recklessness, an exploration that historically has been confined to the courtroom.

“People can commit exactly the same crime in all of its elements and circumstances, and depending on their mental states, the difference could be one would go to jail for 14 years and the other would get probation,” said Montague, who is the Virginia Tech Carilion Vernon Mountcastle Research Professor and director of the research institute’s Human Neuroimaging Laboratory. “Predicated on which side of the boundary you are on between acting knowingly and recklessly, you can differentially be deprived of your freedom.”

The research was conceived under the direction of the MacArthur Foundation Research Network on Law and Neuroscience at Vanderbilt University and carried out by researchers at Virginia Tech Carilion Research Institute and Yale University.

Scientists scanned the brains of forty subjects and asked them to decide whether to carry a suitcase across the border, varying the probability that the suitcase contained drugs.

— Read more in Read Montague et al., “Predicting the knowledge–recklessness distinction in the human brain,” [PNAS](#) (forthcoming) (doi: 10.1073/pnas.1619385114).

Using noninvasive functional brain imaging and machine-learning techniques, in which a computer learns to find patterns in data, the scientists accurately determined whether the research subjects knew drugs were in the case, which would make them guilty of knowingly importing drugs, or whether they were uncertain about it, which would make them innocent.

The researchers showed that knowing and reckless mental states corresponded to detectable neurological states, and that those mental states can be predicted based on [brain imaging data](#) alone. However, the researchers cautioned that the assessment of the mental state of a defendant should not be reduced to the classification of brain data.

“In principle, we are showing these brain states can be detected when the activity is taking place,” Montague said. “Given that, we can start asking questions like, which neural circuits are engaged by this? What does the distribution look like across 4,000 people instead of 40 people? Are there conditions of either development, states of mind, use of pharmacological substances, or incurred injuries that impinge on these networks in ways that would inform the punishment?”

The study was informed by a judge and researchers at Vanderbilt University, the University of Pennsylvania, the University of Virginia, the University of Kentucky, and the Ohio State University.

“Scientists and lawyers speak different languages,” Montague said. “A translation goes on when you bring these groups together that gives new meaning to interdisciplinary. Lawyers think of people as being conscious and deliberative, and the law sees [people](#) that way — you are an independent agent and you make choices for yourself. That picture ignores the scientific fact that 99 percent of the decisions made in your nervous system never make their way to consciousness. You are being driven by things to which you don’t even have conscious access—that difference was something we had to work through to design the experiment.”





How Should Parents Teach Their Children About Race and Racism?

Source: https://www.nytimes.com/2017/03/16/learning/how-should-parents-teach-their-children-about-race-and-racism.html?_r=0

How did you learn about racism? Did you have any conversations with parents or family members at home? What was talked about, and how did the conversation start? Describe what you can remember.

In “Are We Raising Racists?,” Jennifer Harvey writes:

Jennifer Harvey, a professor of religion at Drake University, is the author of “Dear White Christians: For Those Still Longing for Racial Reconciliation.”

Last year at this time, my 7-year-old was running around singing the praises of George Washington. I was happy to see her so engaged with what she’d learned at school. But I was dismayed that the peace- and diversity-centered curriculum she gets at her public school had left her with such a one-dimensional view of history.

I struggled with how best to respond. Then one morning, she overheard the news on our kitchen radio about a politician charged with ethics violations. “What’s that about?” she asked.

I told her someone in the government had done something wrong, and she asked how an adult who was a leader could possibly do something bad.

“Unfortunately,” I responded, “a lot of our country’s leaders have done bad things.”

When her eyes grew big and she said, “Like who and what did they do?” I knew I had my opportunity.

“Well,” I said, “you know how you’ve been running around here celebrating George Washington? We always talk about George Washington fighting for freedom. But George Washington also owned black people as slaves.”

Her intrigue turned to horror.

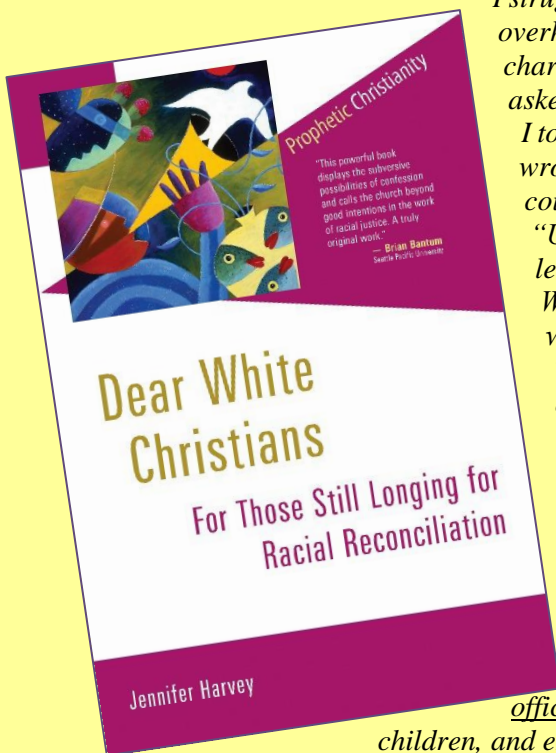
Fast forward, one year. For those of us raising children, the future couldn’t be more on our minds.

With the news full of reports about vandalized Jewish cemeteries and mosques on fire, police officers who terrorize and endanger black and Latino

children, and engineers from India being shot while enjoying a meal after work, it’s tempting to shut off the radio, turn off the TV and cancel those news alerts on our cellphones. But it’s more critical than ever that we talk about difficult and morally complex issues with our children.

Students: Read the entire article, then tell us:

- Did you ever have any realizations about racism or sexism as a child, the way the 7-year-old in the article did when she learned about George Washington owning slaves? How did those moments change or shape you?
- Do you agree that white children need to be taught about racism early on, around age 5, to recognize differential treatment and understand about the social status of different racial groups, their own group and others? Why or why not?
- In your opinion, how and when should parents discuss this topic with their children?
- What are the consequences of children *not* being taught about racism in a thoughtful way?



EDITOR'S COMMENT: No doubt, it is good and vital to educate children in parallel with schools, But is equally important to educate them on the fact that people from other nations that choose to come and live in our country, should adapt and follow our way of life instead of trying to change it! They can follow their traditions and culture at home but not in public. And if after a while they decide that our civilization is not good for them, they can always go back and stay there!

Europe's Turkish Awakening

By Burak Bekdil

Source: <http://www.meforum.org/6594/europe-turkish-awakening>

Mar 14 – Turkey, officially, is a candidate for full membership in the European Union. It is also negotiating with Brussels a deal that would allow millions of Turks to travel to Europe without visa. But Turkey is not like any other European country that joined or will join the EU: The Turks' choice of a leader, in office since 2002, too visibly makes this country the odd one out.



Turkish President Recep Tayyip Erdogan, who is now campaigning to broaden his constitutional powers, which would make him head of state, head of government and head of the ruling party - all at the same time -- is inherently autocratic and anti-Western. He seems to view himself as a great Muslim leader fighting armies of infidel crusaders. This image with which he portrays himself finds powerful echoes among millions of conservative Turks and [Sunni] Islamists across the Middle East. That, among other excesses in the Turkish

style, makes Turkey totally incompatible with Europe in political culture.

Yet, there is always the lighter side of things. Take, for example, Melih Gokcek, the mayor of Ankara and a bigwig in Erdogan's Justice and Development Party (AKP). In February [Gokcek claimed](#) that earthquakes in a western Turkish province could have been organized by dark external powers (read: Western infidels) aiming to destroy Turkey's economy with an "artificial earthquake" near Istanbul. According to this conspiracy theory, the mayor not only claims that the earthquake in western Turkey was the work of the U.S. and Israel, but also that the U.S. created the radical Islamic State (ISIS). In fact, [according to him](#), the U.S. and Israel colluded to trigger an earthquake in Turkey so they could capture energy from the Turkish fault line.

Matters between Turkey and Europe are far more tense today than ridiculous statements from politicians who want to look pretty to Erdogan. The president, willingly ignoring his own strong anti-Semitic views, recently [accused Germany](#) of "fascist actions" reminiscent of Nazi times, in a growing row over the cancellation of political rallies aimed at drumming up support for him among 1.5 million Turkish citizens in Germany.

The Dutch, Erdogan apparently thinks, are no different. In a similar diplomatic row over Turkish political rallies in the Netherlands, [Erdogan described](#) the Dutch government as "Nazi remnants and fascists." After barring Turkish Foreign Minister Mevlut Cavusoglu from entering the country by airplane, the Dutch authorities also escorted another Turkish minister out of the country. Quite a humiliation, no doubt. An angry Erdogan [promised](#) the Netherlands would pay a price for that.

Europe, not just Germany and the Netherlands, looks united in not allowing Erdogan to export Turkey's highly tense and sometimes even violent political polarization into the Old Continent. There are media [reports](#) that the owner of a venue in the Swedish capital, Stockholm, has now cancelled a pro-Erdogan rally, although Sweden's foreign ministry said it was not involved in the decision.

Europe's anti-Erdogan sentiment is going viral. Denmark's prime minister, Lars Loekke Rasmussen, said that he asked his Turkish counterpart, Binali Yildirim, to postpone a planned visit because of tensions between Turkey and the Netherlands.



Although Turkey thanked France for allowing Foreign Minister Cavusoglu to address a gathering of Turkish "expats" in the city of Metz, French Foreign Minister Jean-Marc Ayrault [called](#) on Turkish authorities to "avoid excesses and provocations."

None of the incidents that forcefully point to Europe's "Turkish awakening" happened out of the blue. At the beginning of February, German Chancellor Angela Merkel and Erdogan held a tense meeting in Ankara. Erdogan clearly [rejected](#) Merkel's mention of "Islamist terror" on grounds that "the expression saddens Muslims because Islam and terror cannot coexist."

The row came at a time when a German investigation into Turkish imams in Germany spying on Erdogan's foes made signs of reaching out to other parts of Europe. Peter Pilz, an Austrian lawmaker, said that he was in possession of documents from 30 countries that revealed a "[global spying network](#)" at Turkish diplomatic missions.

At the beginning of March, after Turkey said it would defy opposition from German and Dutch authorities and continue holding rallies in both countries, Austrian Chancellor Christian Kern [called](#) for an EU-wide ban on campaign appearances by Turkish politicians.

In response, further challenging Europe, Turkey arrested Deniz Yucel, a Turkish-German reporter for a prominent German newspaper, *Die Welt*, on charges of "propaganda in support of a terrorist organization and inciting the public to violence." Yucel had been detained after he [reported](#) on emails that a leftist hacker collective had purportedly obtained from the private account of Berat Albayrak, Turkey's energy minister and Erdogan's son-in-law.

Erdogan's propaganda war on "infidel" Europe has the potential to further poison both bilateral relations with individual countries and with Europe as a bloc. Not even the Turkish "expats" are happy. The leader of Germany's Turkish community accused Erdogan of damaging ties between the two NATO allies. Gokay Sofuoglu, chairman of the Turkish Community in Germany, which is an umbrella for 270 member organizations, [said](#): "Erdogan went a step too far. Germany should not sink to his level."

The most recent wave of tensions between Erdogan's Turkey and Europe, which it theoretically aspires to join, have once again unveiled the long-tolerated incompatibility between Turkey's predominantly conservative, Islamist and often anti-Western political culture and Europe's liberal values.

Turkey increasingly looks like Saddam Hussein's Iraq. During my 1989 visit to Iraq a Turkish-speaking government guide refused to discuss Iraqi politics, justifying his reluctance as: "In Iraq half the population are spies... spying on the other half." Erdogan's Turkey has officially embarked on a journey toward Western democracy. Instead, its Islamist mindset is at war with Western democracy.

Burak Bekdil is an Ankara-based political analyst and a fellow at the Middle East Forum.

10 countries where child soldiers are still recruited in armed conflicts

Source: <http://reliefweb.int/report/central-african-republic/10-countries-where-child-soldiers-are-still-recruited-armed>

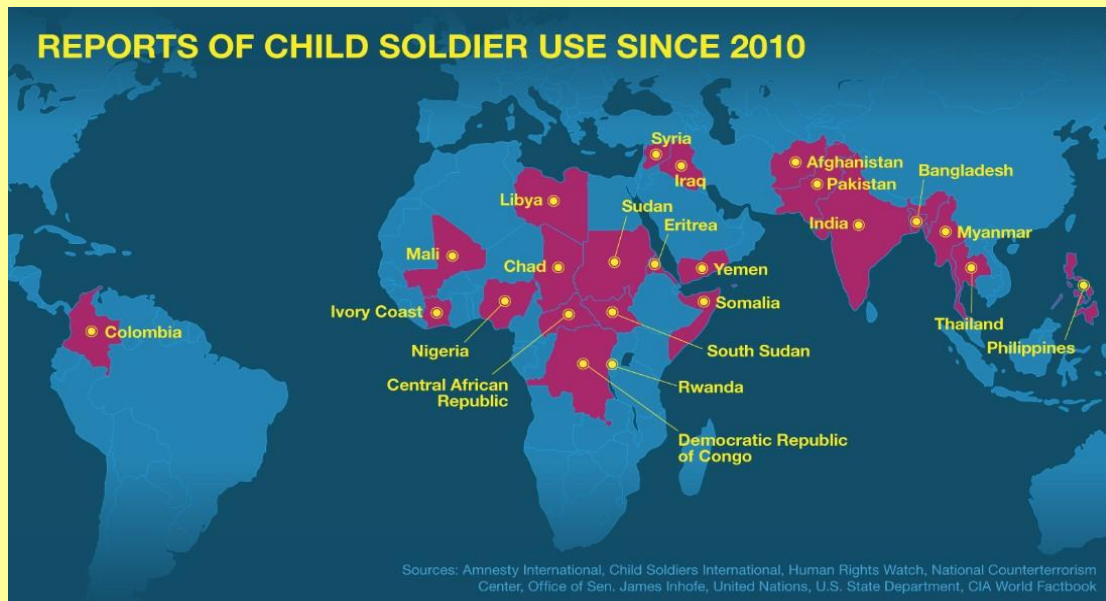
Ten years ago world leaders agreed to work together to stop the use of child soldiers - progress has been made but there are still child recruits in countries around the world. As many as 300,000 children are believed to be serving as soldiers in armed conflicts around the world - depriving them of a normal childhood and education.

These boys and girls, some as young as seven, serve in government forces and armed opposition groups. They fight on front lines, participate in suicide missions and act as spies, messengers or lookouts.

Girls are often forced into sexual slavery. Many are abducted or recruited by force, while others join out of desperation, believing that these armed groups offer their best chance for survival.

Last week, leaders gathered in France to mark the 10th anniversary of the Paris Commitments to end the use of children in conflict.





At least 65,000 children have been released from armed forces and armed groups in that decade, according to the United Nations children's agency UNICEF.



"Ten years ago the world made a commitment to the children of war and matched it with action - action that has helped give 65,000 children a new chance for a better life," said UNICEF Executive Director Anthony Lake said at the Paris anniversary talks.

"But today's meeting is not only about looking back at what has been accomplished - but looking forward to the work that remains to be done to support the children of war."

Here's a look at 10 of the countries where child soldiers are still be recruited and used in conflicts.

AFGHANISTAN

The Afghan National Police, the Afghan Local Police and three armed groups including Taliban forces, were listed as perpetrators by the UN in 2015. Also in that year Child Soldiers International interviewed a 17-year-old boy from Kunar province who had signed up when he was 15 or 16 using a fake ID card. During his recruitment, only the doctor who completed his medical examination asked his age. He went on to join a group of approximately 60 other new recruits for training in Kabul. He thought that around a quarter of them were younger than him.

CENTRAL AFRICAN REPUBLIC

As many as 10,000 children were used by armed groups involved in the latest conflict in CAR, according to Child Soldiers International. Armed groups in the mainly Muslim Séléka coalition and predominantly Christian militias called Anti-Balaka both used children as young

as eight. The children are used as combatants, guards, human shields, porters, messengers, spies, cooks and/or for sexual purposes.

DEMOCRATIC REPUBLIC OF CONGO

In 2011 it was estimated there were 30,000 child soldiers in DRC. In January-February 2016, Child Soldiers International spent six weeks in eastern DRC and interviewed more than 150 former girl soldiers. Children continue to be recruited and used by numerous armed groups. Girls are often used as "wives" and sexually abused by their commanders and other soldiers. Although a third of all children associated with armed groups in DRC are thought to be girls, they make up only about 7% of children released to date. When they are released or escape from armed groups, they receive little or no support to reintegrate into their communities, and many are shunned.



IRAQ

Human Rights Watch has documented the recruitment or use of children by Sunni and Shia Arab armed groups fighting in Iraq, including militias in the battle to retake Mosul. Armed groups in Iraq affiliated to the Kurdistan Workers' Party have recruited boys and girls, according to an HRW report in December. It documented 29 cases in northern Iraq in which Kurdish and Yezidi children were recruited by two armed groups, the People's Defense Forces (Hêzên Parastina Gel, or HPG) and the Shingal Resistance Units (Yekîneyên Berxwedana Şingal, or YBŞ).

MYANMAR

Internal armed conflicts have seen children widely used by both state armed forces and armed groups. Despite a minimum enlistment age of 18, large numbers of boys have been recruited, often forcibly, into the national army. Child Soldiers International has helped secure the release of 700 children from the army since 2012 while action has been taken against 382 national army officials.

NIGERIA

The terrorist group Boko Haram recruited 2000 child soldiers in 2016, according to the UN. It was also reported that they used girls as suicide bombers in Maiduguri, when two bombs went off killing at least one person. A local militia member, Abdulkarim Jabo, was reported to have said he thought the girls were each aged about seven or eight, commenting: "They got out of a rickshaw and walked right in front of me without showing the slightest sign of emotion. I tried to speak with one of them, in Hausa and in English, but she didn't answer. I thought they were looking for their mother. She headed toward the poultry sellers, then detonated her explosives belt."

SOMALIA

In April 2016, the UN reported that 903 children had been recruited - 555 by Al-Shabaab. Around 150 children were reportedly abducted for recruitment purposes from madrasas by Al-Shabaab in the Bay region. Of those cases, 26 (all boys) were verified by the UN. The Somali National Army also recruited a high number of children (218), who were used for various tasks,

such as manning checkpoints. Recruitment was also attributed to clan militias (68), Ahl al-Sunna wal-Jama'a (40) and Galmudug forces (17).

SOUTH SUDAN

An estimated 17,000 children have been recruited in South Sudan since 2013. Many children were recruited by the Cobra Faction and the SPLA In Opposition, two armed groups which have been fighting the government. Last October, 145 child soldiers were released, according to UNICEF.

SYRIA

Since 2014, warring sides have recruited children as young as seven. More than half of children recruited in cases verified by UNICEF in 2015 were under 15. Children have been filmed executing prisoners in grisly propaganda videos by the Islamic State group. Last year the UN said: "A total of 362 cases of recruitment and use of children were verified and attributed to ISIL (274), the Free Syrian Army and affiliated groups (62), Liwa' al-Tawhid (11), popular committees (5), Kurdish People's Protection Units (4), Ahrar al-Sham (3), the Nusrah Front (2) and the Army of Islam (1). Of the verified cases, 56% involved children under 15 years of age, a significant increase compared with 2014. The payment of salaries and ideology continued to be major influencing factors."

YEMEN

There have been nearly 1500 cases of child recruitment in Yemen since the escalation of hostilities in 2015. According to UNICEF, this is a long-term problem in Yemen. In Yemeni culture, it's considered that a boy enters manhood at the age of 14 or 15 - and part of being a man is taking up a weapon. The UN documented nearly 850 cases of child recruitment in 2015, a five-fold increase over 2014. Houthis forces recruited a majority of these children - but Popular Committees and the extremist group Al-Qaeda in the Arabian Peninsula, which at times reportedly fought alongside pro-government forces, also recruited children. In 2013, the UN secretary-general cited reports of young boys being recruited by Al-Qaeda, also called Ansar al-Sharia, for sexual exploitation.



A Brief History of Dogs in Warfare

By Logan Nye

Source: <https://undertheradar.military.com/2017/03/brief-history-dogs-warfare/>



Mar 20 – Puppies are fluffy and adorable and cuddly companions. Companions who are capable of sinking long, sharp teeth into the flesh of enemy skulls and pulling muscle from the bone.

And in honor of National [K9 Veterans Day](#) celebrated on March 13, we took a look at the history of dogs in warfare.

While dogs are known as man's best friend, they're also fur missiles that have served in mankind's wars [since at least 600 B.C.](#) when the Lydian king deployed dogs to help break the invading army of Cimmerians.

In the early days, the dogs were used to break up enemy formations, charging into the ranks and tearing down as many enemy soldiers as possible. Friendly forces would either hit the enemy just behind the dogs or would wait, letting the dogs sow chaos before the humans hit with maximum force.

As warfare modernized, so did the service of dogs. They gained armor for avoiding injury in combat (think large dogs in little knight costumes) and breeders tailored new generations of dogs better suited for fighting. Dogs were pressed into new roles, acting as couriers, sentries, and scouts.



Rrobiek, a Belgian Malinois military working dog, and his handler, Army Staff Sgt. Charles Ogin, 3rd Infantry Regiment, practice bite training after work in Baghdad, Feb. 14, 2017. (U.S. Army photo by Sgt. Anna Pongo)

In American military history, dogs [served primarily as morale boosters](#), though some acted as prison guards and sentries. In one case during the Civil War, a Confederate spy who suspected she would be searched hid documents in a false coat of fur on her dog. The

documents were safely delivered to Gen. Pierre G. T. Beauregard who was a [little surprised when the woman cut the false hide off of her dog](#).



On the water, dogs served as rat catchers and mascots. Ships' dogs [also helped find food and water on undeveloped islands](#).

During World War I, dogs originally appointed as unit mascots distinguished themselves in open combat. One of America's greatest animal war heroes served in World War I. [Stubby the dog](#) started hanging out with Connecticut soldiers drilling for service on the front lines.



Stubby went overseas with the 102nd Infantry and gave soldiers early warning of artillery, gas, and infantry attacks. During a raid against German defenses, Stubby was wounded by a hand grenade. Stubby stayed in the war and later apprehended a German spy. He was later promoted to sergeant.

[Sgt. Stubby rocks his great coat and rifle during World War I.](#) (Photo: Public Domain)

Of course, the introduction of true industrial war in World War I brought other changes to animal service, including the beginning of dogs acting as engineers. Dogs were fitted with cable-laying equipment and would place new communication lines when necessary, providing a smaller target for enemy soldiers trying to prevent Allied communication networks.

In World War II, dogs returned to their old roles, but they were also pressed into new ones. In one of the more horrific moments for animal combat, Soviet forces trained dogs to scurry under German tanks while wearing magnetic mines. The mines would detonate against the

hull, disabling or killing the tank but also the dog.

[Rob was a heroic parachuting dog of World War II later awarded the Dickin Medal.](#) (Photo: Imperial War Museum)

The first airborne dogs [jumped into combat on D-Day](#), accompanying British paratroopers as they fought the German armies.

America's greatest dog of its greatest generation was likely Chips, a German Shepherd, Collie, Husky mix that forced the [capture of 14 Italian soldiers in one day](#) during the invasion of Sicily despite being wounded.

Throughout Korea and Vietnam, dogs continued to serve next to their humans.





Australian soldiers pose with their black labs trained to hunt Viet Cong soldiers in the infamous tunnels of the Vietnam War. (Photo: Australian War Memorial)

In Vietnam, an Air force sentry dog named Nemo was patrolling the airbase perimeter with his handler when they were attacked by Viet Cong guerillas. The handler killed two enemies and [Nemo savagely attacked the rest](#) while the handler called for reinforcements. Nemo lost an eye and the handler was injured, but Nemo kept him safe until reinforcements arrived.



Cairo

In Iraq and Afghanistan, dogs have served primarily in explosive detection roles, [helping American and allied forces avoid IEDs and mines](#). They've also served on assault teams with special

operators.

While some of the dogs in modern special operations are trained to engage directly with the enemy, [Cairo went on the kill/capture mission against Osama Bin Laden](#) but was there to search out hidden passages, enemies, or weapons.





Logan Nye is a former Fort Bragg paratrooper who deployed with the 82nd Airborne Division's 4th Brigade Combat Team.



Kim Jong-nam killed by VX nerve agent, a chemical weapon, say Malaysian police

Source: <https://www.theguardian.com/world/2017/feb/24/kim-jong-nam-north-korea-killed-chemical-weapon-nerve-agent-mass-destruction-malaysian-police>



Kim Jong Nam, left, the estranged half-brother of North Korean leader Kim Jong Un.

Feb 24 – Malaysian police have said the substance used in the killing of Kim Jong-nam was a “VX nerve agent”, a highly toxic liquid used only in chemical warfare.

Khalid Abu Bakar, Malaysia’s inspector general, later added that one of the two women suspected of involvement in the poisoning also suffered its effects. “She was vomiting,” he said without elaborating.



The findings follow a preliminary analysis of swabs taken of the face and eyes of the victim, who is the half-brother of the North Korean leader, Kim Jong-un. More items linked to the attack at Kuala Lumpur airport are still being analysed and the terminal will be decontaminated, said police.

The substance VX – also known as ethyl N-2-Diisopropylaminoethyl Methylphosphonothiolate – is classified by the United Nations as a weapon of mass destruction.

[Kim Jong-nam died on 13 February from a seizure on his way to hospital](#) after complaining that a woman had sprayed chemicals on his face at Kuala Lumpur airport. [Leaked CCTV footage](#) show a woman grabbing his face. Malaysian police had said earlier two attackers rubbed a liquid on him before walking away and quickly washing their hands.

Asked about the possibility that North Korean agents might have imported the world’s most toxic nerve agent and deployed it in an international

airport, a source close to the [Malaysia](#) government commented: “Not very diplomatic”.



Khalid said authorities were determining how VX entered the country and that the terminal where Kim Jong-nam was killed, in a budget airline departure lounge, will be decontaminated. As a weapon, VX does not quickly dissipate and can remain on material or the ground for long periods.

An employee at Malaysia Airports Holdings, the company that manages the airport, told the Guardian it had not closed the terminal or been contacted by police about a decontamination since the attack 11 days ago.

China, which afforded a level of protection to Kim Jong-nam during his stays there and in Macau, has yet to comment on the finding.

The US government's Centers for Disease Control and Prevention describes VX as the most potent of all nerve agents and one that would be lethal on contact with the skin unless immediately washed off. Its only known use is in chemical warfare, it says.

The agency says exposure to a large dose of VX may result in convulsions, loss of consciousness, paralysis and fatal respiratory failure. Kim Jong-nam is reported to have complained of pain in his face shortly after the attack. A leaked [photo](#) at the medical centre shows him laid back on a chair with his eyes closed.

VX is a clear, colourless liquid with the consistency of engine oil. A fraction of a drop, absorbed through the skin, is enough to fatally disrupt the nervous system, [according to the Council on Foreign Relations](#). It was developed in the 1950s in the UK during research into pesticides but was later found to be too toxic to be used safely.

Saddam Hussein was accused of using VX during the Iran-Iraq War and there are concerns that stockpiles also exist in Syria. Only the US and Russia have said they possess VX or a similar agent.

North Korea is thought to have among the world's largest stockpiles of chemical weapons, and is one of six countries not to have signed or acceded to the [Chemical Weapons Convention \(CWC\)](#), according to the US non-profit organisation the Nuclear Threat Initiative. Defectors have accused North Korea of testing its chemical agents on people.

Raymond Zilinskas, who directs the chemical and biological nonproliferation program at the Middlebury Institute of International Studies in California, said it seemed unlikely the killers applied VX directly.

"Even if they or her were wearing gloves, the fumes would have killed them," he said. He suggested the assassins might have used a "binary concoction", smearing two non-fatal elements of VX which mix on the victim's face.

He added that because North Korea does not belong to the Chemical Weapons Convention, Malaysia might ask the UN secretary general to investigate. "Whether [North Korea](#) would allow UN inspectors to enter the country is of course a big question. But the matter certainly could be taken up by UN security council and/or general assembly," he said.

[Four people of different nationalities have been arrested](#) and seven North Koreans are wanted in connection with the attack. Malaysian police have not directly pinpointed North Korea as being behind the death.

The Malaysia Star [said](#) police had seized "various chemicals" at an apartment in Kuala Lumpur on Thursday night.

On Thursday, North Korea accused Malaysia of having a "sinister purpose" and collaborating with South Korea over the killing. In the first [report](#) from state-run KCNA news agency since the attack, the government said Malaysia had broken international law by conducting autopsies on a diplomatic passport holder and withholding the body.

Tong Zhao, a North Korea expert from at the Carnegie-Tsinghua Centre for Global Policy in Beijing, said the latest revelations about the killing of a man China considered a positive, pro-reform figure, would further damage Chinese confidence in Pyongyang.

"The reason China has been reluctant to impose comprehensive and crippling economic sanctions against North Korea ... is partially due to the fact that China still has faith in the ability of the North Korean government to transform and modernise itself.

"Such faith might be undermined by this recent murder."



“If China reconsiders its overall approach to North Korea – and I think there are already signs of that – the bilateral relationship could be radically changed.”

VX is the deadliest nerve agent ever created. Just a tiny drop absorbed through the skin is enough to cause “fatal disruption of the nervous system”, according to the Council on Foreign Relations. It is 100 times more deadly than the nerve gas sarin, which was used by members of a Japanese



VX is hard to detect. It is a clear, tasteless and colourless liquid with a consistency something like engine oil.

Its full chemical name is S-2 Diisoprophylaminoethyl methylphosphonothiolate.

VX was first synthesised in the early to mid-1950s by Ranaji Ghosh, a chemist working for Imperial Chemical Industries in Britain.

The US army was involved in several controlled and accidental releases of VX gas. Iraq was reported to have produced over 50 tonnes. Under Saddam Hussein, Iraq is thought to have used VX in a 1988 attack against the Kurds and during the Iran-Iraq war.



Who has VX?

The US and Russia are the only countries that have admitted owning VX stockpiles, but more countries are believed to hold it.

The US destroyed a small portion of its stockpile under the [Chemical Weapons Convention](#) and there have been moves for Russia to follow suit.

According to a [French intelligence assessment](#) published in September 2013, [Syria's chemical weapons stockpile](#) includes “several tens of tonnes” of VX.

While the Aum Supreme Truth doomsday cult used sarin gas in its subway attack, it is believed to have used VX injections in assassination attempts on several dissident members and cult opponents. One person was reported to have died.

North Korea claims it has never had a chemical weapons programme. But in fact it is believed to possess between 2,500 and 5,000 tons – behind only the US and Russia – including VX, according to the [Nuclear Threat Initiative](#).

“The South Korean government assesses that [North Korea](#) is able to produce most types of chemical weapons indigenously, although it must import some precursors to produce nerve agents, which it has done in the past,” the NTI said.

“At maximum capacity North Korea is estimated to be capable of producing up to 12,000 tons [of chemical weapons]. Nerve agents such as sarin and VX are thought to be the focus of North Korean production.”

How does it affect the body?

Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents, according to the CDC.

The “V” in VX stands for venom, “a tribute to this compound class having high potency and a characteristic ability to penetrate the skin”, according to the [National Academies website](#).

The centre said exposure to near-lethal and lethal doses “quickly causes loss of consciousness, convulsions, flaccid paralysis and apnoea”. [Just 10 milligrams of VX](#) on the skin is enough to kill.

It is thought possible to treat a VX attack with an injection of multiple antidotes, but the nerve agent works so quickly that a victim would have to be treated immediately to stand any chance of survival.

“V” in VX stands for “venom”

◆ Ranaji Ghosh (UK) first synthesized VX in the early 1950s.

Vapor Density: 9.2 (Air = 1)

Viscosity: similar to motor oil but less volatile.

Color: Amber-colored liquid; colorless (if pure)

Odor: None (if pure); with impurities: rotten fish

Inhalation: twice as lethal as sarin and 10 times more toxic in inducing miosis.

Skin: at least 100 times more toxic than sarin **due** to its low volatility, its stability and its lipophilicity.

- ▶ The fraction of the applied dose of VX that penetrated the skin when applied to the **cheek** ranged from 3.5% at –18°C to 31.9% at 46°C over a three hour time period.
- ▶ Only 0.4% at –18°C to 2.9% at 46°C penetrated the skin when VX was applied to the **forearm**.

Signs and symptoms following exposure to the skin begin within 0.5-18 hours.

- A **small drop** may at first cause localized muscle twitching and sweating, followed by nausea, vomiting, diarrhea and generalized weakness.
- **Higher doses** of VX may show no symptoms for up to 30 minutes, but thereafter may rapidly suffer loss of consciousness, convulsions, difficulty breathing, profuse secretions from nose and mouth, generalized muscle twitching, paralysis and death.





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- ◆ Invasive Technology: MONICA/MIDAS
- ◆ CWA Simulants.

Pensioner arrested over threat to poison Haribo bears with cyanide

Source: <https://www.thelocal.de/20170217/pensioner-arrested-over-threat-to-poison-haribo-bears-with-cyanide>

Feb 17 – Bonn prosecutors said on Friday that they are investigating a retired man who reportedly tried to extort Haribo and supermarket chain Kaufland. Broadcaster WDR first reported about the case, revealing that the 74-year-old had allegedly threatened to poison candy using cyanide last December if the two companies didn't pay him €1 million. Prosecutors have said that there has at no point been a danger to the public.



"Haribo has at all times cooperated with the investigation," a company spokesperson said.

"As the police have also confirmed, there has at no time been a threat to our consumers."

According to WDR, the man attached signs to different



products from the two companies, reading "careful, poison", and left the items in multiple stores. Haribo "Gold Bears" and Kaufland pizzas were reportedly some of the main targets.

The man had also reportedly ordered and paid for cyanide on the darknet, though he did not receive it.

He had sent his demands to the companies by mail at first, and then by email, according to WDR. But by this point, he was already on police radar.

The man was arrested on Christmas Eve and reportedly said he was having financial difficulties. He had also reportedly tried to extort money from supermarket chain Lidl.

"My client receives a pension of about €180, his wife €900. That is not close to enough to live on," said the pensioner's lawyer, Thomas Ohm.



Chemists from Moscow state University created the most powerful antidote to chemical weapons

Source 1: <http://chelorg.com/2017/02/28/chemists-from-moscow-state-university-created-the-most-powerful-antidote-to-chemical-weapons/>

Source 2 (in Russian): <https://ria.ru/science/20170228/1488907534.html>

Feb 28 – Chemists from Moscow University named after M. V. Lomonosov have created nanoparticles that can neutralize powerful chemical weapons such as VX nerve gas and similar pesticides, said in an article published in the Journal of Controlled Release.

«Very important is the simplicity of our approach: our products can be obtained by simple mixing of aqueous solutions of highly purified enzyme safe and biocompatible polymer. He will self-assemble due to

electrostatic interactions between protein and polymer,» says Alexander Kabanov, Moscow state University, quoted in a press-service of the University.

The most toxic chemical weapons that can kill a person within minutes at minimal concentrations, belong to the class of so-called fosfororganicheskikh chemical compounds. These substances were first synthesized in Nazi Germany in the late 1930-



ies, however, were widely spread in the defense industry only in the middle of the last century, when was created the most dangerous types of these substances – British nerve gas VX and its Soviet equivalent VR.

All stocks of VX, VR, sarin, and other combat gases in all countries of the world shall be destroyed in accordance with the Convention on the prohibition of chemical weapons in 1997. Only Russia and the United States acknowledged the presence of such substances on its territory, however, experts on international security suspect that the stocks of these gases can exist in several States in the Middle East and South Asia. In addition, less dangerous versions of other fosfororganicheskikh substances continue to be used as pesticides. So, as they say scientists, the problem of neutralization of these poisons and pesticides remains an important issue for scientists. Russian chemists propose to use nanoparticles, so-called nanosim, created with the participation of the group of Kabanov in the 90-ies in the United States.

They are hollow nanoparticles of fat molecules or other organic compounds that are filled with medicine that is delivered into the desired area of the body. For example, today, therefore, when chemotherapy drugs are delivered directly to cancerous tumors. The shell of the nanoparticles gradually dissolve, releasing imprisoned in them molecules exactly where they should be, not affecting the healthy tissue of the body.

Proteins in the polymer cell

The scientific team of Professor Kabanov adapted these nanoparticles to packaging and delivery is somewhat different toppings –

molecules of a special enzyme developed at MSU to neutralize sarin and other organophosphorus compounds.

This substance actively destroys the molecules of the nerve poisons and thus has one big disadvantage – its «producer» are bacteria, causing the molecules of this enzyme are rapidly destroyed by the immune system when introduced into the human body. In addition, this «antidote» to the unstable by its chemical nature and its reserves are almost completely disintegrate by themselves in just a month even when stored at near zero temperatures.

By placing the molecules of the substance into nanoparticles, Kabanov and colleagues have slowed the process of destruction in the human body, which allowed to increase the concentration of enzyme in the body and make it suitable for protection against chemical warfare agents and pesticides. As such, the antidote can be stored for more than three years, which distinguishes it from pure enzyme. These nanoparticles, scientists have tested on rats, the body which administered a fatal dose of the two substances – the pesticide paraoxon and poison VX. The preparation of nanoparticles before this experiment saved the rats from pesticide and nerve poison, while all the other individuals from the control group died.

According to Kabanova, simplicity and adaptability of the approach in combination with the obtained results give hope that this drug will be successful in clinical application.

For example, the presence of such medications from the doctors during the attacks in Damascus in 2013, when Islamist militants used sarin against the civilian population, could save the lives of hundreds of Syrians.

Presidential envoy says chemical weapons disposal in Russia ahead of schedule

Source: <http://tass.com/politics/931600>

Feb 17 – The chemical weapons disposal at the Kizner facility in Russia's Republic of Udmurtia is ahead of schedule, Chairman of the State Commission on Chemical Disarmament Mikhail Babich said on Friday.

"Until the end of 2018, we need to complete the disposal process at this facility and thus complete the entire process of chemical weapons disposal in Russia... Work is ahead of schedule here," said Babich, who is also Presidential Envoy to the Volga Federal District, while visiting the Kizner facility.



At the same time, in his words, it is yet too early to fix the final date when the process will be completed since the work depends on technological processes.



"Nevertheless, I would like to stress that we have done everything to complete the disposal process on time and ensure the safety of the personal and the local population," Babich stressed.

He also said that apart from the chemical weapons disposal, there was a need to carry out clean-up activities at the disposal facilities. A relevant program is being considered by the Russian

government, its implementation is expected to begin in 2018, Babich noted. "For now, we believe that clean-up activities will take five to six years but we may shorten the time by using new technologies," the presidential envoy added.

Chemical weapons disposal

More than 76% of the chemical weapons stockpiles have already been destroyed in Udmurtia.

In 2015, the disposal of chemical weapons was completed at four facilities located in Russia's Penza, Kirov, Bryansk and Kurgan regions.



On January 13, 1993, Russia signed the Chemical Weapons Convention, declaring around 40,000 tons of chemical warfare agents. The disposal of chemical weapons began in December 2002 in accordance with the federal target program adopted in March 1996,

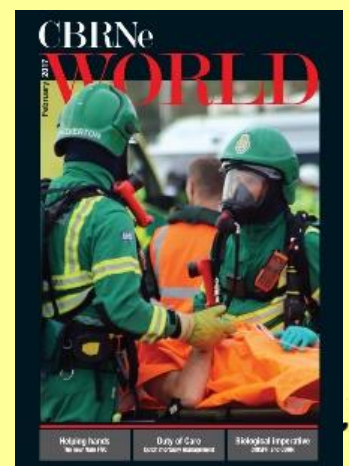
Over 279 bln rubles (roughly \$4.7 bln) have been spent for implementing this program.

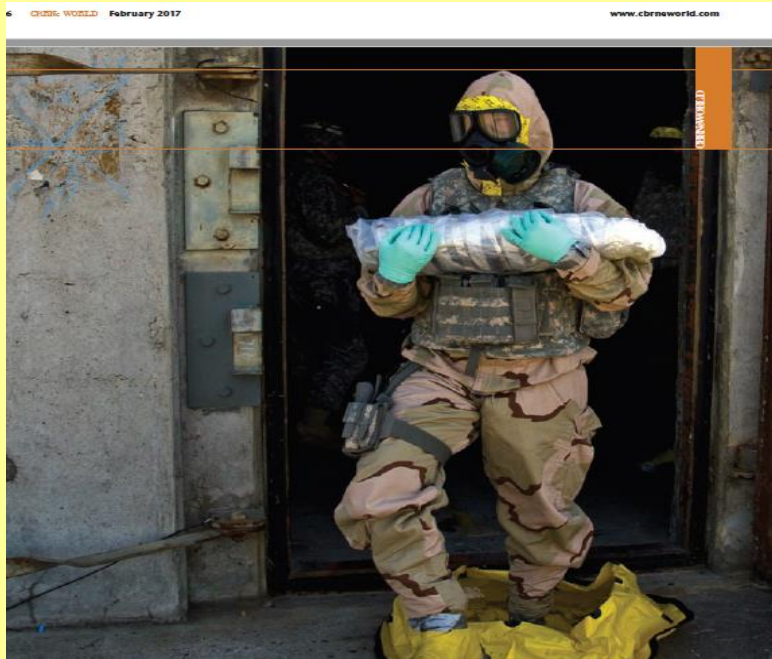
CBRNe World Feb 2017 issue

Source:

http://www.cbrneworld.com/magazine/downloads/february_2017#ixzz4aKut5l8p

12th year of publishing! This issue has interviews with the Georgians on their work interdicting radiological smugglers, with the Germans and Czechs on their new CBRN framework nation concept within Nato and the Humming Terrapin crew, who are not a musical ensemble but good people at DTRA that have been getting acoustic signatures for nuclear explosions. All this and much, much more wait for you in the pages of the February edition!



**EDITOR'S COMMENT:**

From the Feb 2017 issue of the CBRNe World – article on “Drachenfeuer” (US/German exercise, “Dragon Fire”); this time not on CBRN PPE **but on the “baby” bullet-proof vest and absence of helmet!** (pp.14-17).

Also in this issue (pp.58-59)

Jaap Bongers, mortuary manager in the pathology department at Rotterdam's Erasmus University Medical Centre, on ensuring that even the last stage of response is safe

The last link in a CBRN event chain

Forget nuclear: Chemical weapons are the real weapons of mass destruction threat

By Orsolya Raczova

Source: <http://globalriskinsights.com/2017/03/chemical-terrorism-credible-threat/>



There is a credible risk that ISIS or ISIS inspired terrorists in Western countries could obtain chemical weapons. Chemicals are the most widely available weapons of mass destruction and perhaps the least challenging sort to pursue. An attack involving chemicals can potentially result in civilian casualties, chaos and serious economic consequences.

Mar 03 – Islamist terrorism poses a significant threat. The modus operandi of [ISIS or ISIS inspired individuals](#) is diverse and shows no moral restraints – as recent attacks in Brussels

and Berlin demonstrate. This '[new breed of terrorism](#)' is connected via a transnational network enabled by the online sphere. Therefore, [closed groups](#) or even lone wolves



living in social isolation in Western countries can become part of Islamist terrorism, and find inspiration and technical assistance to carry out attacks.

ISIS as well as Al-Qaeda and its affiliates have demonstrated intent to develop and use [chemical weapons](#). Their aspirations reached Western based individuals: manuals [for the use of chemical weapons](#) have been found in Brussels in the 1990s, showing interest in its use, while there is also evidence that Islamists trained foreign fighters to manufacture and use chemical weapons.

Chemical weapons

It is [relatively easy](#) to obtain information on producing chemical weapons through open source information. Yet, the synthesis itself is technologically demanding and often produces [toxic side products](#). Moreover, the deadliest chemicals are also the most difficult to manufacture. [Nerve agents](#), including VX and sarin, are manufactured from precursors that are difficult to obtain, while the synthesis and dispersal requires expertise and special equipment. The only partially successful chemical terrorist attacks targeting civilians on a mass-scale were carried out by the wealthy Japanese cult [Aum Shinrikyo](#) in the 1990s, aiming to reach civilians on the Tokyo underground.

[Dual-use chemicals](#) are available in large quantities in the industry and require only minimal processing and preparation before use. They are also referred to as [toxic industrial hazards \(TIH\)](#), as they are highly poisonous; these include acids, ammonia, chlorine, sulphur and formaldehyde. [Chlorine](#) for example, is widely available – in small doses it is likely to irritate the eyes and the skin and inflame lungs, but it can also be lethal if inhaled.

The danger TIH pose is not to be ignored. TIH are not only easy to obtain but an attack on a site containing TIH can lead to mass casualties. For example, some 40 tonnes of methyl isocyanate were released from a pesticide factory in Bhopal, India in 1984, leaving [over 8,000 dead](#) in the first three days after the disaster, with a further 20,000 dying from illness related to the TIH exposure.

Challenges and opportunities

If chemical agents are not readily available, they need to be manufactured at a secure location. Terrorist groups such as Aum, Al-Qaeda, as well as ISIS have controlled territories ([safe havens](#)), enabling them to work on chemical weapon programmes without external interference. Due to the presence of [foreign fighters](#) in the Middle East, it is feared that individuals may receive the necessary training on ISIS controlled sites, and return to Europe with dangerous know-how.

Synthesis and particularly dispersal poses the highest challenges to carry out a successful attack. Aum failed to synthesize pure sarin and developed only a [simple delivery method](#), poking holes on plastic bags containing sarin on the Tokyo subway, failing to execute a large-scale attack. The most efficient way to disperse the agents would have been through an aerosol device. Aum has, in fact, carried out [a targeted attack](#) using aerosolised sarin on judicial officials in Matsumoto in 1994, killing 7 and injuring 600, without killing the targeted individuals. The fact that an established cult with financial means, territory and know-how failed to manufacture a sophisticated chemical weapon to carry out a mass-casualty attack is indicative of the [technical difficulties](#) of manufacturing chemical weapons.

Potential consequences of chemical terrorism
It is extremely difficult to achieve a mass-casualty attack without military-grade weapons and effective dispersal methods, which even wealthy terrorists such as Al-Qaeda and Aum have not been in possession of. Yet, even a small-scale attack with a low mortality rate can easily cause panic and disruption. Therefore, chemical attacks have serious psychological, social, economic and financial consequences. For example, after the Tokyo subway attack, [more than 4,700](#) sought medical attention – thus, much more people went to hospitals than the number that could have been exposed to sarin.

Due to the wide availability of TIH, anything containing such dual-use chemicals is at risk – industrial sites, transportation of chemicals or [seaports](#). An explosion or interference with a site containing toxic materials, such as [the Ludwigshafen site](#) or in Bhopal, may lead to explosion,



contamination of the air, water, soil and materials, and so casualties, and financial losses due to closure and decontamination efforts. Following a potential chemical attack, if the [San Francisco International Airport](#) was to shut down, revenue loss per day would reach \$85 million, with immediate results of fear, chaos and disruption.

Therefore, a terrorist attack involving chemical weapons is not necessarily a direct targeting method towards civilians by terrorists. Targeting

sites can easily have as serious consequences as targeting civilians, as incidents such as the ones in Bhopal demonstrate. Although there has not been a targeted claimed terrorist attack resulting in mass casualties in the West by Islamist groups, it does not mean the danger is negligible. Although there are strong technical obstacles to manufacture chemical weapons, the wide reach of Islamists, their cruelty, and the widely available dual-use chemicals indicate that chemical terrorism is a serious threat.

Orsolya Raczova specializes in the Central Eastern European region and European defense issues. She previously worked for the European Central Bank, the Berlin-based Institute for Cultural Diplomacy, and a Hungarian think tank. Orsolya holds an MSc in Politics and Communication from the London School of Economics.

EDITOR'S COMMENT: It is so easy to write an article on asymmetric terrorism but without proper knowledge of what CBRN terrorism is, will result in a confusing article like this one. **Destruction = Hiroshima and Nagashaki [N]; disruption = Tokyo [C]. Bioterrorism can cause both.**



Good riddance to 2016

Editorial by Gwyn Winfield

CBRNe World Dec 2016 issue

A text you have to read!

Depending on where you stand politically 2016 has either been a miserable or a wondrous year. The CBRN year is a lot like the music year, however, a long litany of bad news with more of the same forecast for 2017.

Syria and Iraq continue to be the most worrying, the largest users of chemical weapons (CW) since the Iran/Iraq conflict. Use of chlorine and mustard has become entirely normalised, and while sarin has not – it is not inconceivable. The most worrying element of this is the spread from Syria to Iraq and from there to other conflicts that are supported by governments similar to those involved in the Syrian conflict. On this basis, a confirmed use of CW in Yemen or even in Libya would not seem a massive leap of conjecture. Moreover, as Brigadier General Ismail postulates in his interview, it does not seem too far-fetched to anticipate the use of toxic industrial chemicals in Europe or North America. If a terrorist can capture a truck full of steel and shoot the driver then it seems quite likely they could do the same for phosgene or chlorine. The end of structured resistance in Aleppo and Mosul is likely to see Daesh fragmenting and a return to the kind of terrorism agenda previously pursued by al Qaeda.

Much as 2014 and '15 had Ebola, 2016 had Zika. Unlike Ebola, Zika had a deadline... the bio-apocalypse had to happen around the Olympics. When the games went off without a hitch the media promptly dropped the disease like it was hot. This masked a growing increase in cases within US, and US territories, that has seen nearly 4,000 pregnant women with lab evidence of Zika and nearly 40,000 Zika cases reported (from Centers for Disease Control figures). It points to a worrying trend

with the media whipping up a bio storm and arbitrarily putting it back in its box. The future, therefore, for other outbreaks is bleak. Epidemics now need a sustainable narrative if funding is to be maintained.

As Jez Littlewood mentions in his article, 2016 saw a major breakdown in the biological weapons convention (BWC) that is perhaps the death knell for this confused, attenuated organisation. With CW use normalised in the Levant it would be hard not to see this as the 'ask not for whom the bell tolls' moment for the OPCW too. Could 2016 be the beginning of



the end for multi-national organisations aimed at reducing the risk of chemical and biological weapons? Also in 2016, the axe fell on a history of systemic failure within Dugway Proving Ground and other government facilities for mailing live agent to a variety of countries. There always needs to be a villain in these narratives, and eventually the army decided to deliver a career-killing reprimand, as *USA Today* called it, to Brigadier General King, the current head of the 20th CBRNE command. Gen King has taken this stoically, and it reminds me of Commander Richard Farrington, captain of *The Nottingham* in 2002, who was in command when his ship crashed into the 'world's biggest rock.' His comment at the time was: "We have done significant damage to a major British warship. This is not a good day for me... [The accident was caused by] an uncomfortable mix of unhappy coincidences and human error... Sun comes up every morning; you run your ship aground, you get court-martialled." The same judgement would appear to be apt for Gen King. The problems both preceded and post-dated his appointment, yet you mail out live anthrax, you get court-martialled. It will be interesting to see whether a FEMA representative is also encouraged to fall on their sword for exposing 9,600 first responders to live ricin for the past five years at the centre for domestic preparedness.

Meanwhile funding for CBRN, like most other response arms (with the exception of tactical) continues to bob along at subsistence level. Occasionally there's a blip of good news, but mainly a grinding erosion of capability as staff members that accrued valuable training in 2003-6 start to leave post and are replaced by younger members of staff who, while talented, have not had the same training opportunities.

The drift to the right that has occurred in US and European politics would traditionally be taken as positive for law enforcement and the military. Yet it is hard to see this as a given for CBRN. Any increases are more likely to be in conventional arms, though this may free up some extra budget for the fringe elements. Russia remains resolutely off the US agenda, and many European countries are still unsure whether they want to pay for the cost of Nato, so despite Ukraine it is difficult to see a swing to improve land forces.

It's hard not to feel depressed by the current situation, with the prospect of more of the same in 2017, so perhaps we should focus on the positives. No major sporting events are scheduled for 2017, so hopefully there won't be a massive media spike in interest in CBRN agents, usually in the summer 'silly' season, to distract from the real business. Equally the fall of Mosul and Aleppo in 2017 is likely to prompt a pause in the transition from conventional warfighting to covert terrorism. This gear change is likely to take time, and will give security forces a chance to prepare. It is all cold comfort, but until the financial situation improves it is the best we can do.

In the same issue of CBRNe World



Lillemor Örebrand of FOI explains a study on how stubble affects the fit factor designed and led by Andreas Fredman and Jerker Thorpsten, also of FOI

CBRNEWORLD

I moustache you a question...

A well-groomed and styled beard is a men's fashion trend nowadays. But is it possible for men to be both stylish and safely protected using negative pressure full face air purifying respirators, or do they have to choose?

Although it seemed to be an established truth that any beard should be avoided we found very few studies to verify this. FOI, the Swedish defence research agency, performed a study to shed some light on the problem.



FOI is a leading European research institute in the defence and security sector. Its research areas include matters concerning all aspects of toxic chemicals, viruses, bacteria and ionising radiation including non-proliferation and export control, disarmament issues and threat assessments. This study was performed to examine how the fit factor of a negative pressure full face mask would be affected with stubble of different lengths. We expected that the study would lead to valid results upon which to base sound recommendations on stubble and use of full face negative pressure air purifying respirators, hereafter denoted as the gas mask.

Twelve men were asked to join the study. They were selected to represent various degrees of beard growth, beard stiffness, facial shape and experience in wearing masks.

Conclusions

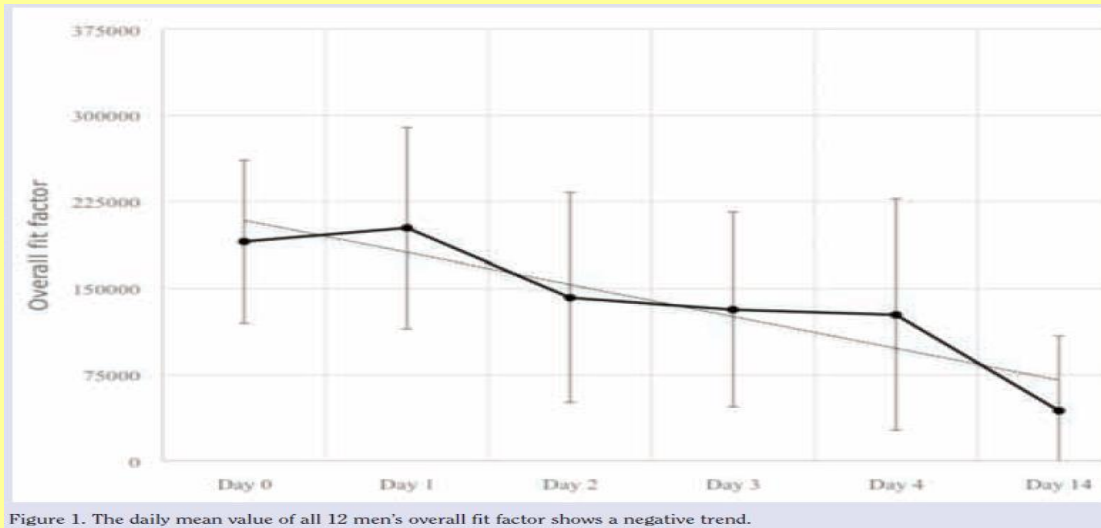


Figure 1. The daily mean value of all 12 men's overall fit factor shows a negative trend.

Regardless of the latest fashion for stubble, the old truth regarding beards and gas masks seems to hold true since the data in this study suggests the following conclusions:

- Individual variations in beard growth, and possibly other factors as well, to various degrees, negatively affect the fit factor during a 14-day period without shaving.
- On a short time scale the fit factor was improved, possibly because moisture from the skin sealed the mask.
- To ensure the best possible fit and protection using a full face negative pressure air purifying respirator, be sure to clean shave before donning.

DeconTect

Source: <http://www.firstlinetech.com/decontact/>

DeconTect provides high efficacy decontamination products that can decontaminate chemical warfare agents, toxic industrial chemicals (TICs), toxic industrial materials (TIMs), as well as biological and radiological agents from personnel, personal protective equipment (PPE), sensitive equipment, and critical infrastructure. DeconTect provides an array of dry decon products that integrate together to provide comprehensive decontamination and an alternative for cold weather decon.

When and Where can DeconTect be Used?

Immediate Decon

- Effectively decontaminate weapons and sensitive equipment with **FiberTect**, a dry activated carbon decontamination wipe. **FiberTect** immediately and easily absorbs and adsorbs chemical warfare agents as well as toxic industrial chemicals and materials (TICs and TIMs)



Tactical Decon

- Neutralize chemical and biological agents instantly with **Dahlgren Decon**. This three-part solution is easily mixed onsite and is effective immediately on a variety of surfaces. Protect infrastructure with a decontaminant that is fast acting and non-corrosive.



DECONGEL 1128 –
Industrial Sprayer



FastGrab EMS Decon Kit



FiberTect



FiberTect for Oil



Individual Decon Kit

Operational Decon

- Maximize operational time with quick decontamination of personal protection equipment(PPE) using **FiberTect** and **Dahlgren Decon** together. Execute effective bulk decontamination with **FiberTect** mitts and wipes, then neutralize and kill any remaining contaminants by using **Dahlgren Decon**.

Cold Weather Decon

- When cold temperatures present more danger to the victim than the actual contaminant, it's critical to find a cold weather decon alternative. **FiberTect** and **Dahlgren Decon** require little to no additional water and can be implemented quickly to neutralize and remove contaminants without the use of traditional decon lines and showers.



COMING SOON!

Hospital CBRN Preparedness

Author: BrigGen (retd) Ioannis Galatas, MD

An ICI Publication

STAY
TUNED

Ioannis Galatas, MD

HOSPITAL CBRN PREPAREDNESS



International CBRNE Institute
Les Bons Villers - Belgium

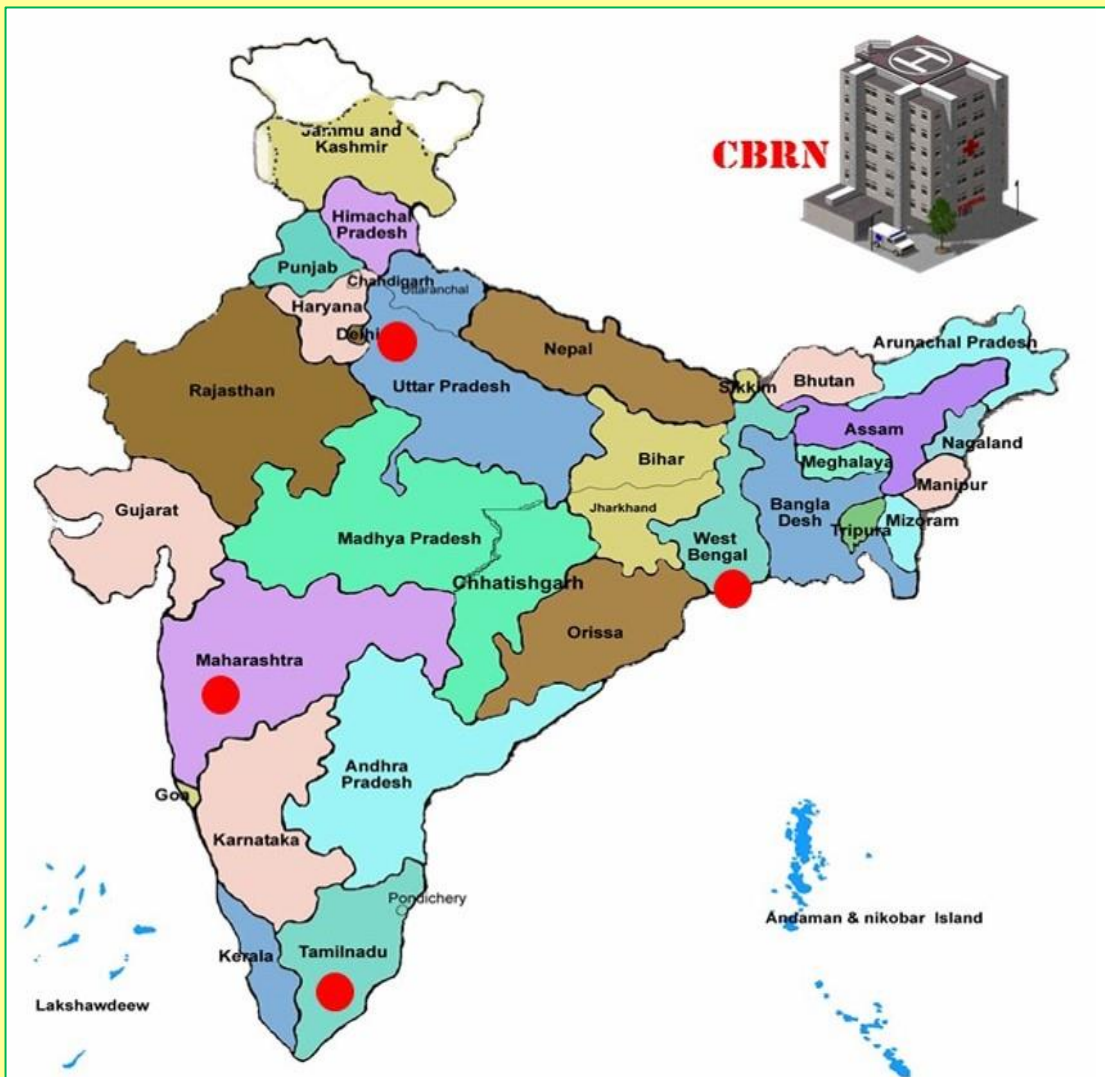


India – Govt plans medical facilities for victims of chemical, biological, nuclear attacks

Source: <http://www.hindustantimes.com/india-news/govt-plans-medical-facilities-for-victims-of-chemical-biological-nuclear-attacks/story-UxmORXO1hXWP3tluLFHOMK.html>

Jan 28 – India plans to build treatment facilities for patients exposed to chemical, biological, radiological and nuclear (CBRN) attacks as part of its comprehensive disaster management plan.

The Union ministry of health and family welfare has sanctioned the construction of four hospitals, each with 50 beds, for the purpose. “As of now, we do not have a facility dedicated to treating CBRN victims.



This is part of the Centre's broader disaster management plan. The ministry has already sanctioned Rs 80 crore for each hospital, and will allot more if required,” said Dr Jagdish Prasad, director general of health services.

The hospitals are expected to come up in Tamil Nadu, West Bengal, Maharashtra and Delhi.

In the national capital, the health ministry plans to build the facility on the premises of either Safdarjung Hospital or the All India Institute of Medical Sciences (AIIMS). Land has already been allotted for the purpose in the other three states.



"The original plan was to set it up at Safdarjung Hospital, but there seems to be some problem. So, we might just have to borrow an acre of land from AIIMS instead," said Dr Prasad.

The ministry trains medical personnel from various states to handle CBRN victims in collaboration with agencies such as the Bhabha Atomic Research Centre in Mumbai. These trained personnel then become a part of state rapid response teams.

Using CBRN weaponry is considered an unconventional warfare technique, and specialists are required to handle situations where hazards such as these are present. "Though we are keeping ourselves prepared, it is not meant only to handle terror attacks. There have been instances of disaster such as the 2010 Mayapuri radiation leak, where a dedicated facility of the kind would have helped," said Dr Prasad.

Design Reality & Scott Safety win an iF product design award

Source: <http://www.designreality.co.uk/index.php/news/item/design-reality-scott-safety-win-an-if-product-design-award>

Feb 01 – Design Reality and Scott Safety are delighted to announce that Scott Sight, has won an iF product design award 2017.

Scott Sight, a product of Scott Safety's 'Firefighter of the Future initiative' is an industry first, hands-free thermal imaging in-mask, that provides the wearer with unmatched situational intelligence without the need to stop searching a room or put down hose lines and other vital equipment.

Scott Sight's revolutionary design integrates a lightweight camera and display in the firefighter's mask, keeping the thermal image in view at all times. Technically, Scott Sight's thermal imaging camera delivers a wireless 160 x 120 image at nine frames per second to the in-mask display and utilizes an auto dimming Infinity lens, free from environmental obstruction.

Since over 60 years, the iF design award has been recognized as an arbiter of quality for exceptional design. The iF label is renowned worldwide for outstanding design services, and the iF design award is one of the most important design prizes in the world. **A total of 5,575 entries from 59 countries were submitted to this year's iF design award.**



Scott Sight

Source: <https://www.scottsafety.com/en/us/Pages/ProductDetail.aspx?productdetail=Scott+Sight>

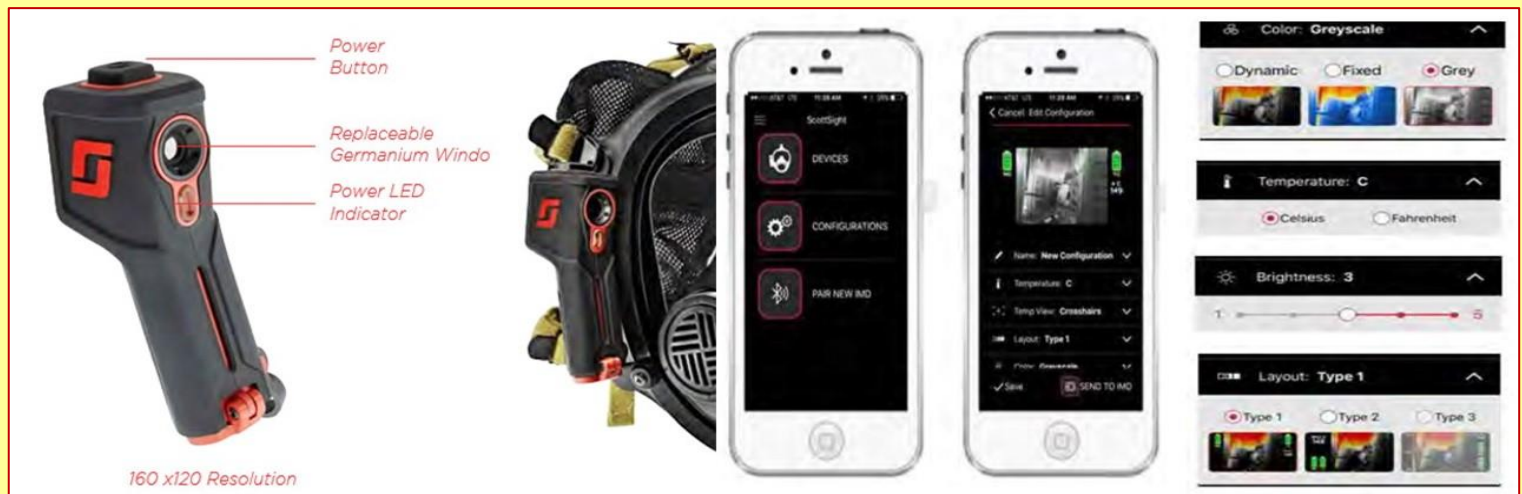
Finally, a truly hands-free thermal imager. Scott Sight provides unmatched situational intelligence without the need to stop searching a room or put down your hose line.

Firefighters have used hand-held thermal imaging cameras since the 1990s to see through the thick smoke often encountered during fires. Advancements in thermal imaging technology have now reduced the size of the components and enabled new applications. Scott Sight's revolutionary design integrates a lightweight camera and display in the firefighter's mask, keeping the thermal image in view at all times.

- **Hands-free thermal imaging** – Need we say more?
- **Enhanced situational awareness** - improved hot zone accountability.
- **Powerful and light** – At 8 ½ ounces you won't even know it's there.
- **Fits any AV-3000 HT facepiece** – Buy altogether as a completed kit or upgrade your current AV-3000 HT facepiece



- **160x120 resolution at 9 frames per second** – Everything you need and nothing you don't.
- **In-mask display** - See a clear image unobstructed by the environment.
- **Infinity lens** – Ensures a clear picture with no eyestrain.
- **Adjustable display** – Configurable to your line of sight



- **Minimum four-hour battery life** – Powered by simple, everyday AAA batteries.
- **Spot or Ambient temperature settings (F or C)** – User configurable.
- **User configurable screen options** – Different user interfaces for different tastes.
- **Extremely economical** – We believe that every firefighter would benefit from having Scott Sight so we priced it that way.
- **NIOSH Certified to NFPA 1981, 2013 ed, NIOSH 42CFR Part 84, UL 913 6th ed, ATEX, IECEx and IP 66/67**
- **Scott Sight Mobile Configuration Application** - Available for download on IOS or Android - Configures IMD to customize brightness, icon layouts, temperature displays and display colors.

Kim Jong Nam's assassination by VX and the 'Sunchon Incident' of 1989

Source: <http://www.dailynk.com/english/read.php?catald=nk00300&num=14394>

Mar 04 – Suspicions that North Korea maintains a stockpile of biochemical weapons have been raised since the Malaysian authorities confirmed that VX, a deadly nerve agent, was used to kill Kim Jong Nam.



VX is the most powerful nerve agent known and is classified as a weapon of mass destruction.

Some estimate that North Korea has stockpiled approximately 5,000 tons of chemical weapons, but this takes into account only the material manufactured from early 2010. Considering that the country was reported to have begun manufacturing chemical weapons since the 1970s, the total amount possessed is likely to be higher.

Decades ago, Dr. Ri Sung Gi (photo) was a renowned chemist who invented Vinalon, a lightweight synthetic fiber, ushering in a small textile revolution in North Korea. However, reports allege that Kim Il Sung secretly ordered Dr. Ri to kickstart the country's biochemical weapons program, with the chemist having no choice but to comply.

Dr. Ri died while being criticized by many North Korean residents, rather than being recognized for his contribution to the country's economic development.



The reason for the criticism is that in 1989, there was an incident in which scores of people died instantly or collapsed in the streets of Sunchon City, South Pyongan Province, and were transported to hospital. I arrived in the city the next day and was unaffected, but at the time, all hospitals in Sunchon City and neighboring Pyongsong were full of injured people, some of whom were even transferred to Pyongyang.

It was later revealed that some local residents inadvertently precipitated the incident after climbing onto a tank car stationed at Sunchon Railway Station. They opened the lid, thinking it contained diesel oil [to siphon off] but it was in fact a toxic precursor purportedly for use in the manufacture of biochemical weapons. Soon after the lid was opened, a cloud of yellow gas spread into the air, and the people nearby immediately collapsed, with



hundreds of people dying at the scene in the span of only a few hours. Thousands were injured and left with gruesome side effects, but the authorities primarily focused on preventing the news from spreading to other regions.

Now, 30 years on, state institutions including the Hamhung branch of the State Academy of Sciences are reportedly continuing their research into the development of chemical weapons.

The North Korean government transformed its domestic chemical industry into a producer of weapons of mass destruction for its own nefarious purposes. The international community must respond appropriately to a regime that resorts to the use of a weapon of mass destruction in a public place to secure its reign of terror.

North Korea's 'Chemistry' with WMDs

By Ajey Lele

Source: http://www.idsa.in/idsacomments/north-korea-chemistry-with-wmds_avlele_060317



Mar 06 – Post the 2003 Iraq war, the debate regarding weapons of mass destruction (WMD) was confined mostly to the realm of nuclear weapons for more than a decade. The perception that WMDs are not for actual use but for deterrence broadly continues to hold in the post Cold War period too. However, it is also a fact that certain categories of WMD like chemical weapons (CW) have been used during the Cold War. In the post Cold War era too, the Syrian conflict and the alleged use of CW to kill the half-brother of North Korea's leader Kim Jong-un in Malaysia continues to shine a spotlight on the dangers of the use of such weapons.

In the post 9/11 period, it was professed that the major threat in the realm of WMDs could emerge mainly from the international terror groups. The use of CW in Syria in August 2013 however dealt a blow to this thinking. It was confirmed by the United Nations that the CW were used at a location called Ghouta (suburb in Damascus), killing nearly 1,500 civilians. These weapons were found used at few other locations in Syria during earlier occasions too. President Barack Obama had asserted in 2012 that any possible usage of chemical weapons would amount to crossing a 'red line', which would invite a US military response. The military



intervention by the US forces in Syria did happen few months after the use of CW by the Syrian forces (or by rebel forces as claimed by the Assad regime).¹ CW were also used as the bargaining tools in the West Asian geo-political theatre. One of the reasons for Libya to join the Chemical Weapons Convention (CWC) by declaring its weapons stockpile during 2004 was Gaddafi's desperation to normalise relations with the Western world.

North Korea has blatantly breached the CW 'red line' in a very peculiar manner in the latest incident. Kim Jong-nam was killed on February 13 at Kuala Lumpur airport while he was waiting to catch a flight. Two women wiped a substance on his face leading to his death within 20 minutes. It has been found that the substance used for this killing was a nerve agent called VX. This agent is considered as one of the most potent chemicals which affects the nervous system and disturbs the functioning of human muscles eventually leading to death. This substance is derived from organophosphate pesticides and its lethal dose ranges from about 10 milligrams via skin contact to 25-30 milligrams, if inhaled.² This substance has been classified by the United Nations as a WMD.

The attack was a bit of a surprise as Pyongyang had not given any indications regarding a renewed interest in CW. For more than a decade now, North Korea has been attracting global attention by undertaking nuclear tests and launching missiles. They have also undertaken few satellite launches by using their own rockets. By successfully orchestrating an assassination by using CW, North Korea has succeeded in sending a message that they are not averse to using the WMD in their possession. Kim Jong-un is keen to ensure that no challenge emerges to his position from his extended family. From the North Korean point of view, the use of VX agent was a perfect choice, because this agent is known to cause instant death.

The most appalling aspect of the killing was that though the victim died within about 20 minutes, nothing is known to have happened to the women who were seen to have used their hands

to apply the VX agent on the face of the victim. This clearly indicates that some successful method has been devised to protect the women from the dangerous affects of the nerve agent. Also, the production of VX is not a simple task and requires a lot of technological sophistication. The major question which remains unanswered though is the manner in which the deadly CW reached Malaysia.

North Korea is alleged to have the world's third-largest stockpile of CW. They are known to have produced agents like Sarin, VX, Mustard, Tabun and Hydrogen Cyanide. North Korea is one of the three states (apart from Egypt and Sudan) that has not signed or acceded to the CWC. It is believed to be producing CW since the 1980s and is now estimated to have stockpiles of around 25 chemical agents amounting to approximately 5,000 tons. North Korea is also known to have made investments in biological weapons, and believed to be having 12-13 types of biological weapons, including anthrax, plague, among others.³

North Korea has taken the biggest of political risks by using CW at this point in time and that too in a friendly foreign state. North Korea and Malaysia established bilateral relationship more than 45 years ago. Both the states opened embassies at Kuala Lumpur and Pyongyang in 2003. Since 2009, Malaysians did not require a visa to travel to North Korea (and vice versa). After the airport incident, North Koreans are now required to obtain a visa to visit Malaysia.

The incident is also spoiling the important relationship that Pyongyang shares with its all-weather friend, China. Beijing has been extremely upset with the brazen missile testing undertaken by North Korea in recent times. China, which was importing coal from North Korea in spite of the UN sanctions, decided to suspend all imports on February 19. For the Trump administration, dealing with North Korea will continue to be a major challenge. The CWC, considered one of the most successful arms control treaty mechanisms in the world and which would be celebrating its twenty years of existence in April 2017, continues to face serious challenges even today.

Gp. Capt. Ajey Lele (Retd.) is Senior Fellow at the Institute for Defence Studies and Analyses, New Delhi.



CBRN Exercise (UK)

Aug 31, 2011

Source: <https://www.youtube.com/watch?v=ellnDobSq6g>



EDITOR'S COMMENTS: (1) Those of you conducting CBRN classes can use this video to show all the things that you must NOT do in a real incident...! (2) The only good thing in the scenario was the angry contaminated man that resisted first responders. A possibility that should be taken seriously!

Tear Gas Attack On Hamburg Metro Affects 50

Source: <http://www.breitbart.com/london/2017/03/10/tear-gas-attack-hamburg-metro/>



Mar 10 – **Unknown attackers launched a tear gas attack on a train in Hamburg that reports say has injured at least six and affected 50 people and led to a massive police presence at the Hamburg train station.**



At 6:55 pm Friday evening passengers on a train in Hamburg on the S-Bahn line 11 were subjected to a tear gas attack by two young men affecting 50 including a three-year-old girl. Paramedics and police arrived on the scene to treat the passengers of the train for various ailments including respiratory injured German paper *Bild* reports. The attack occurred just before the train reached **Sternschanze station** in the centre of Hamburg and upon arriving all passengers fled into the station to escape the gas.

Federal police at the train station said that the perpetrators were likely two young men who had fled the scene. Rüdiger Carstens, spokesman for the federal police said, "The recordings of the surveillance cameras were secured. The investigations continue."

Less than a month ago **Hamburg airport** had to be [partially evacuated](#) as the result of a similar attack. In that attack, an unknown toxin was released through the airport's ventilation system and it led to 68 people needing treatment for irritated eyes and breathing difficulties. The **Hamburg metro** system also saw an attack on a woman earlier this year when a Moroccan migrant [pushed her](#) onto the train tracks of the subway. The 34-year-old woman



was pushed by the 16-year-old and was knocked out due to the fall from the platform. Before the attack CCTV footage revealed the 16-year-old attempted to rob the woman.

The attack also follows a 24 hour period which has seen an [axe attack](#) on a train and at the [main railway station in Dusseldorf](#) and a [machete attack](#) that injured an 80-year-old man in Dusseldorf earlier on Friday.

EDITOR'S COMMENT: "Unknown attackers"??? Why not "terrorists"???

Chemical terrorism may spread across the Middle East

Source: <http://vestnikkavkaza.net/articles/Chemical-terrorism-may-spread-across-the-Middle-East.html>



The International Meeting on Syria in Astana is scheduled for March 14-15 and will be attended by representatives of the Syrian Government and the armed opposition groups that have supported the cessation of hostilities. Moscow is satisfied with the progress of the Astana Process, where the driving force is the three guarantors of the cessation of hostilities are Russia, Turkey and Iran. "Agreements reached in this format have made it possible to meaningfully reduce the level of violence in Syria and improve the humanitarian situation. It became possible to substantially expand and consolidate the ceasefire and involve a number of armed groups based in southern Syria in the political process," Russian Foreign Ministry spokeswoman Maria Zakharova said.

Mar 12 – The Ministry believes that the new meeting in Astana will be of much help for holding the fifth round of the UN-sponsored intra-Syrian talks in Geneva, which are to begin on March 23. "We hope that preparations for the new contacts in Geneva will facilitate yet another step towards forming a broad-based and strong delegation of the Syrian opposition, which would take into account the vision and points of view of all ethnic and religious segments of Syrian society and whose willingness to negotiate is not in question," Zakharova said.

Meanwhile, the military and political situation in Syria remains tense. The government forces are building on their successes in the fight against ISIS and Nusra. The situation in Iraq's Mosul, where terrorists are using chemical weapons, is just as difficult.

"In this context, it is interesting what western experts are saying. They stated that after ISIS fighters occupied Mosul in the summer of 2014, they obtained access to a research library and laboratories of a local university, which greatly enhanced their



capability to produce chemical weapons. ISIS counted among its members former Iraqi officers who were involved in Saddam Hussein's chemical weapons programme, as well as certified chemistry experts from abroad. As for ISIS chemical weapons production facilities in Iraq, Iraqis themselves and representatives of the US-led anti-ISIS coalition reported the discovery of these facilities," Zakharova noted. "The recurring cases of chemical terrorism in the Middle East, including in Syria and Iraq, are a matter of grave concern. Not only do fighters from ISIS, Jabhat al-Nusra and other affiliated

extremist groups have industrial and domestic toxic substances in their possession, such as chlorine, but also toxic weapons-grade agents, including mustard gas and sarin. All this confirms what we have been saying all along, that terrorists have the capability to produce and use chemical weapons. Non-state actors in Syria and Iraq were able to expand their cross-border terrorist activity, making it more systematic. There is a threat of chemical terrorism spreading across the Middle East," she concluded.

Duraflow

Source: <https://www.scottsafety.com/en/emea/pages/ProductDetail.aspx?productdetail=Duraflow>

The DURAFLOW powered air respirator is designed with end user comfort in mind. Its sleek, modern ergonomic profile allows the user to experience enhanced comfort while working in the most demanding environments. DURAFLOW features a durable body to withstand arduous environments and a range of design features including: real-time air flow control; audible/visual alarms; 2 battery options, LED operation displays. Additionally DURAFLOW'S high IP rating (IP67) means the unit can be submerged for cleaning*. DURAFLOW is available with a wide range of approved Scott Safety headtops and filters for a variety of applications.



REAL-TIME FLOW CONTROL

Intelligence in the unit is constantly monitoring the flowrate in real-time to ensure correct flowrate delivered to user. Even as system parameters change such as battery power deteriorating correct flowrate is guaranteed. Alarms sound if correct flowrate cannot be achieved so user can take appropriate action.

VERSATILE RESPIRATORY SOLUTION

With an extensive range of headtops, filters and accessories for a variety of hazardous applications, DURAFLOW provides flexible options for your respiratory needs.

COMFORTABLE TO WEAR FOR LONG PERIODS OF TIME

The lightweight, low profile ergonomic design provides comfort even over extended durations of hard work.

2 LITHIUM-ION BATTERY OPTIONS

- Standard duration battery -up to 8 hours coverage; Extended duration battery available for longer shifts -up to 16 hours coverage. *
- Both batteries utilise high energy density Lithium-Ion technology for increased power performance



IP 67 INGRESS PROTECTION

Unit can be submerged when fitted with battery and decontamination plugs, and is resistant against a variety of commonly used cleaning solutions (please refer to instruction manual for exact Cleaning & Maintenance details)

REMOVABLE BATTERY

DURAFLOW has a removable battery to allow users to charge and change batteries for uninterrupted work.

EASILY SERVICEABLE

Service support for main parts available as per Scott Safety's wide approved PAPR service network.

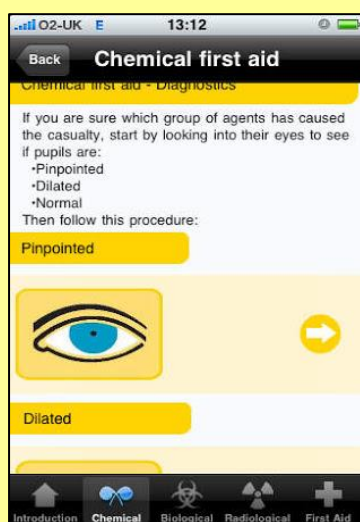
ULTRA LIGHTWEIGHT

At approx 600g (without filters or battery), DURAFLOW is ultra-light and has a compact profile for comfortable long shift duration.

***Please note:** decontamination hose plug, filter plugs and battery should be fitted if submerged for cleaning. Battery operating times are based on a fresh battery, appropriately new filters being used at room temperature and Extremes of temperature, the age and cycle of the and high workrates may negatively impact operating time. If the application is sensitive to operating time it is recommended that the end user consult Scott Safety to determine which type of battery should be used.

**CBRN Survival Guide for iPhone**

Source: http://download.cnet.com/CBRN-Survival-Guide/3000-2129_4-75497926.html



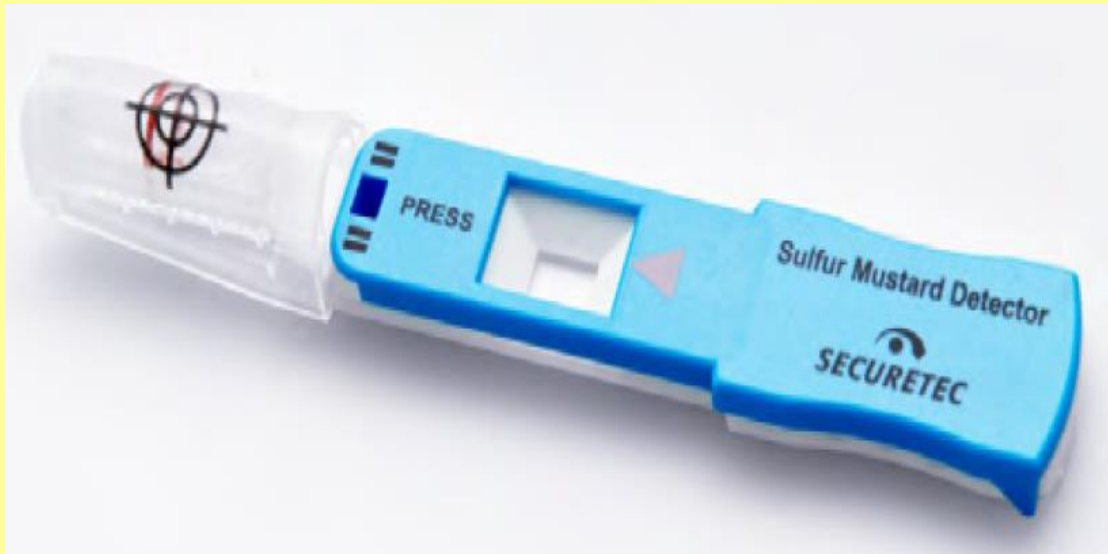
The CBRN Survival Guide (Chemical, Biological, Radiological and Nuclear) is a straight forward guide that offers clear and concise advice for surviving any toxic hazard. The guide provides background information on the spectrum of CBRN hazards and offers sensible first aid advice on casualties of blast and toxicological effects. The guide is designed for those staff who may be caught within the edge of the hazard area from a CBRN incident, and as such assumes a basic level of CBRN knowledge. As you read the guide, get to know the layout and where to find specific subject matter. In an emergency, the "don't panic" section provides a very quick reminder of the immediate actions. Given an indication of the type of hazard, safety data will provide a ready reckoner of the likely extent of damage and downwind extent of danger. You should assume that nowhere is safe unless you have the appropriate technological sensor equipment; you should always refer to the emergency services for on-scene advice and guidance. This guide is provided

to compliment the awareness training you should already have received and acts as a useful aide memoir on the correct procedures to follow in the event of a CBRN incident.



Rapid Test Sulfur Mustard

Source: <https://www.securetec.net/en/rapid-test-sulfur-mustard>



Using the Sulfur Mustard Detector, medical staff can determine if a patient has been exposed to the chemical weapon mustard gas and derive protective measures. The Sulfur Mustard Detector specifically

detects mustard gas by means of a skin smear test. The analysis provides a qualitative result. The Sulfur Mustard Detector can only be used once. The test can only be used for in-vitro diagnostics.



Test principle

The Sulfur Mustard Detector is based on an immunological process. Free Sulfur Mustard on skin surface is absorbed by the moistened sampling pad. The sampling pad transmits

the specimen to the test strip. On the test strip, there are Sulfur Mustard-specific antibodies coloured with a red label. Sulfur Mustard absorbed by the wiper binds the antibodies.

The test contains an integrated ampoule filled with liquid. The test starts once the ampoule is crushed and the liquid is released. The liquid carries the antibody-bound analytes towards the test line. The test line turns visibly red. The test is only valid if the control line is also coloured in red. After 10 minutes, the test can be evaluated.

Advantages

- small and lightweight test
- easy to handle by paramedics
- quick and reliable result
- no additional equipment needed

Product Specifications

- Detection of sulfur mustard on skin



- CE IVD marked (In Vitro Diagnostic Device)
- Test results in 3 -10 min
- Shelf life: 18 months
- Test conditions: +5 to +45 °C
- Storage: +5 to +25 °C

Big Event CBRN Security - A Nightmare for India

By Col. Naidu Gade

Source: <http://www.cbrneportal.com/big-event-cbrn-security-a-nightmare-for-india/>



Mar 22 – India, world's largest democracy is a pluralistic nation of 1.3 billion people with diverse religions, cultures, languages and sports. It is a vibrant democracy with intense political activities. Its urban and even rural areas are densely populated. A large number of cultural, religious, political and sporting events occur frequently throughout the year. The congregations at these events vary anywhere between a hundred thousand to a few million people. Since its independence in 1947, India is beset with a host of internal security challenges spread all most all over the vast nation in the form of militancy in the States of Punjab and Jammu & Kashmir, lingering insurgencies in the Northeast, Maoists violence in the so called 'Red Corridor', and a number of home grown and foreign aided terrorist organisations. These hostile elements obtain information through the internet and other sources on making and using of crude Chemical, Biological and Radiological weapons to cause large scale human casualties. They could even obtain, without much difficulty, CBRN Material from India's loosely regulated and secured large chemical industry, several biological and bio-tech laboratories and a host of institutions using radiological material in the equipment meant for medical diagnostics and industrial radiography. Therefore, a grave threat of the use of CBRN material by these hostile elements exists and big religious, cultural, political and sporting events would obviously be the attractive targets.

Threat Assessment

The biggest threat to big events in India is assessed to be the use of biological agents by releasing disease causing pathogens in to the atmosphere, water bodies, food and drinking water, even though the effects of such an attack would only be evident much after the occurrence of the event. Major segment of the people attending these big events are of floating nature, there by greatly increasing risk of disease getting communicated to the much larger population which do not attend the event. The most possible threat assessed to be is the release of toxic chemical agents in to enclosed spaces of sports stadia, cultural concert halls and even jam packed open arenas. The outcome in such a case would be instantaneous, very lethal and create great panic resulting in stampedes and consequent casualties. The impact of such attacks would be very high on the morale of the population and also the disaster responders. A relatively easy but very effective threat with both immediate and long term effects would be the use of Radiological Dispersal Devices or Radiation



Emission Devices placed at multiple locations within the place of the big event. These radiological devices release harmful radiations thereby contaminating the place, the people and the environment around causing severe health problems to the exposed and requiring huge cleanup efforts of these contaminated places.



The Vulnerabilities

Large events with huge congregations especially the religious events are most vulnerable to the CBRN threats. Lack of awareness on the effects of use of CBRN material on part of the participating crowds



leads to panic situations and hinder rescue and relief operations. Lack of adequate public outreach exercises and advisories to educate people on the risks and the need for an orderly conduct by the attendees of an eventuality causes more problems. Poor health, hygiene and sanitation conditions at such huge gatherings accentuate the vulnerabilities. Inadequate infrastructure like access roads hinders and delays the movement of first responders and other rescue teams to the affected event location. Extreme climatic conditions prevalent at these event locations

play a role to increase the number casualties. Casual attitude of people and the governmental agencies towards safety and security in general, has always been an enhancing factor of occurrences of such calamities. Noncompliance to the laid down rules and regulations for the conduct of such events and corrupt regulatory bodies have often resulted in catastrophic results. Inadequate and dispersed disaster response mechanisms result in delayed and diminished rescue and relief operations.

A Nightmare

The areas where such big events occur are not well defined and bounded. Some of the religious events, especially the events related to the immersion of Hindu idols during festival seasons across India and bathing by millions of people in the holy rivers during the Kumbh and other events, are widely spread over hundreds of square kilometers and to multiple locations all over the country. Access control of such large areas is never possible. Preventive security measures like scanning, screening and deployment of CBR sensors is impossible as they require huge resources to install and to monitor. Hygiene and sanitation arrangements to cater for millions of people attending these events would be a gigantic task and has always been short of requirements. Millions of people attending these events need to be immunized from possible diseases. Thousands of security personnel would be required to be deployed for ensuring safe conduct and passage of these events. Most of the political rallies especially during elections attract large number of supporters and ensuring security at such politically charged events has always been a night mare to the security agencies.



Conclusions

CBRN attacks pose a far greater potential to cause catastrophic consequences. Consequently, attention must be paid to the security of dangerous CBRN materials, weapons, and technologies through: Anticipating emerging threats

- Identify and understand potentially dangerous actors, technologies, and materials; Control access to CBRN materials
- Prevent terrorists and other malicious actors from gaining access to dangerous CBRN materials, weapons, and technologies; Control movement of CBRN Materials



- Prevent the illicit movement of dangerous CBRN materials, weapons, and technologies; and Protect against hostile use of CBRN material
- Identify the presence of, effectively locate, interdict, disable, attribute, or prevent the hostile use of CBRN material.

Col. Naidu Gade is a civil engineer and a management & security professional, with 40 years of rich experience in the field of Combat Engineering, CBRNe Defence and Security & Disaster Management. He is a qualified CBRN and EOD Specialist. As Chief CW Inspector at OPCW, he led teams of international professionals on a large number of verification missions to various member countries, to verify the inventory of Chemical Weapons and monitor their destruction. Currently he is Chief Consultant – CBRNe Security and Disaster Management with 'CBRNe Secure India' a 'platform for bringing in awareness in the general public, government and corporate entities on the threats arising from the use of CBRNe material and their disastrous consequences. He is also the Technical Consultant for Bluecher GmbH, Germany – World leaders in CBRN Individual Protection Technologies.



***Bacillus anthracis* Bioterrorism Incident, Kameido, Tokyo, 1993**

By Hiroshi Takahashi*, Paul Keim†, Arnold F. Kaufmann‡, Christine Keys†, Kimothy L. Smith†, Kiyosu Taniguchi*, Sakae Inouye*, and Takeshi Kurata*

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Historical Review; Volume 10, Number 1—January 2004

Source: https://wwwnc.cdc.gov/eid/article/10/1/03-0238_article

In July 1993, a liquid suspension of *Bacillus anthracis* was aerosolized from the roof of an eight-story building in Kameido, Tokyo, Japan, by the religious group Aum Shinrikyo. During 1999 to 2001, microbiologic tests were conducted on a liquid environmental sample originally collected during the 1993 incident. Nonencapsulated isolates of *B. anthracis* were cultured from the liquid. Multiple-locus, variable-number tandem repeat analysis found all isolates to be identical to a strain used in Japan to vaccinate animals against anthrax, which was consistent with the Aum Shinrikyo members' testimony about the strain source. In 1999, a retrospective case-detection survey was conducted to identify potential human anthrax cases associated with the incident, but none were found. The use of an attenuated *B. anthracis* strain, low spore concentrations, ineffective dispersal, a clogged spray device, and inactivation of the spores by sunlight are all likely contributing factors to the lack of human cases.

Incident

On June 29, 1993, five residents of Kameido, Koto-ward, an eastern area of Tokyo, reported foul odors to local environmental health authorities. On investigation, officials found that the odors originated from the eight-story headquarters building of the religious group Aum Shinrikyo. The group was suspected of abducting several escaped members and anti-Aum Shinrikyo activists; however, lacking strong evidence of criminal activity, national security and law enforcement authorities had not restricted Aum Shinrikyo's activities.



On June 30, the local environmental health authority registered 41 complaints that foul odors were causing appetite loss, nausea, and vomiting in some exposed persons. Because of the complaints, officials requested permission to inspect the building's interior, but Aum Shinrikyo members refused. Officials checked the building's surroundings, collected air samples, and began to survey activity at the building, but other than the nuisance posed by the odor, no readily apparent risk to human health could be found.

Figure 1. Spraying scenes from the Aum Shinrikyo headquarters building (photographs taken July 1, 1993, by the Department of Environment, Koto-ward).

On the morning of July 1, neighbors reported loud noises and an intermittent mist emanating from one of two cooling towers on the building's roof (Figure 1). As the day progressed, residents (mostly living south of the building) lodged 118 complaints about the foul odors with the environmental health office. Light rain fell early in the day (a total of 7 mm, 1 mm each hour from 1:00–7:00 a.m.). Wind (2–4 m/sec) blew from



north-northeast to northeast in the morning and northeast to east-northeast in the afternoon. The minimum and maximum temperatures were 16.9°C at 3:00 a.m. and 4:00 a.m. and 19.9°C at 3:00 p.m., respectively. The day was rainy and cloudy, with no direct sunlight.

The same day, residents in the neighborhood reported a “gelatin-like, oily, gray-to-black” fluid from the mist from the cooling towers collecting on the side of the building. Environmental officials collected samples of this fluid and stored them in a refrigerator (4°C) for later testing.

Intermittent misting continued until demands from local residents forced Shoko Asahara, founder of Aum Shinrikyo, to agree on the morning of July 2 to cease using the rooftop device and to clean and vacate the building. No equipment remained when officials inspected the building on July 16, although they noted black stains on the walls.

This incident was largely forgotten until, in the aftermath of the March 1995 sarin gas attack on the Tokyo subway system, police investigations uncovered evidence that Aum Shinrikyo was involved in bioterrorism. The true nature of the Kameido incident was not revealed to the public until Asahara was arraigned on May 23, 1996. Aum Shinrikyo members testified that the odors were caused by their efforts to aerosolize a liquid suspension of *Bacillus anthracis* in an attempt to cause an inhalational anthrax epidemic. They believed this epidemic would trigger a world war and lead to Asahara's ruling the world. At the time of the incident, the illnesses reportedly associated with the release were not well studied. In particular, no one sought evidence of inhalational anthrax or other syndromes caused by the anthrax bacillus, since the true nature of the mist was not recognized. Reports of short-term loss of appetite, nausea, and vomiting (symptoms not typical of *B. anthracis* infection) among some residents were the only contemporary evidence of human illness associated with the incident. Vague reports of illness in birds and pets were also noted in local media (1), but the exact nature of these illnesses remained unclear.

Laboratory Findings

In November 1999, after long negotiation, local environmental authorities agreed that the one remaining fluid sample, collected as part of the 1993 investigation, could be tested for microbiologic pathogens. The



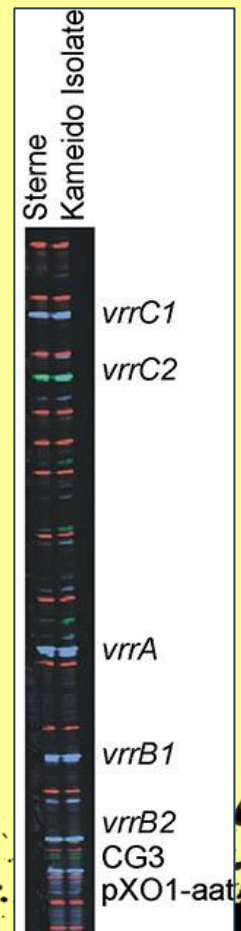
test tube, which contained 2.6 mL of a turbid, gray-to-black fluid, was transferred to Northern Arizona University in Flagstaff, Arizona, for testing to identify and characterize its microbial flora.

Figure 2. Fluid collected from the Kameido site cultured on Petri dishes to identify potential *Bacillus anthracis* isolates.

Provisional microscopy examination of the fluid stained by malachite green/safranin showed bacterial spores, a large amount of debris, and vegetative bacterial cells. Aliquots of the fluid were streaked on sheep blood agar plates and incubated aerobically at 37°C. After overnight growth, the plates were found to contain mixed bacterial flora; approximately 10% of the colonies were similar in appearance to *B. anthracis*. Suspect colonies were nonhemolytic and had the “gray ground glass” appearance typical of *B. anthracis* (Figure 2). Based on the number of colonies on the plates, the original liquid suspension had about 4×10^3 colony-forming units (CFU) of the *B. anthracis*-like agent per milliliter.

A representative selection of 48 colonies of the *B. anthracis*-like agent was purified by single colony streaking and then subjected to multiple-locus, variable-number tandem repeat analysis (MLVA). The MLVA polymerase chain reaction (PCR) primers are specific for eight amplicon sites unique to *B. anthracis* (2), two of which are plasmids carrying genes for anthrax toxin (pX01) and capsule (pX02). Amplicon-size patterns are diagnostic for particular diversity groups and strains within *B. anthracis* (3).

Figure 3. Multiple-locus, variable-number tandem repeat analysis genotype of all 48 Kameido isolates and the Sterne strain of *Bacillus anthracis*: *vrrA*, 313 bp; *vrrB*₁, 229 bp; *vrrB*₂, 162 bp; *vrrC*₁, 583 bp; *vrrC*₂,...



Analysis of the 48 suspect colonies confirmed them to be *B. anthracis*, and all had the same genotype. Of the eight marker sites, one—the locus for the pX02 plasmid coding for the anthrax capsule—consistently failed to amplify (3). All colonies contained the pX01 plasmid (coding for anthrax toxin) but lacked the pX02 plasmid (Figure 3). This genotype was identical to that of the Sterne 34F2 strain, used commercially in Japan to vaccinate animals against anthrax.

Epidemiologic Findings

In Japan, culture-confirmed human anthrax is on the national notifiable disease list, and physicians are required to report all cases to the government. During the 1990s, only four human anthrax cases were reported (4). One of these cases, in Tokyo in August 1994, was in a man in his eighties from Sumida-ward, adjacent to Koto-ward (the location of Kameido); however, this case had no apparent association with the July 1993 incident.

Figure 4. High-risk area for infection, based on foul odor complaints.

A retrospective case-detection survey was conducted to assess the possibility that some anthrax cases might have gone unrecognized or unreported. Using the official “foul odor” complaints as a guide, residences of the 118 complainants from July 1, 1993, were mapped to identify the area with the presumed highest risk for infection (Figure 4). The high-risk area included a 7-digit zip code area (0.33 km²) in Kameido, containing approximately 3,400 households and 7,000 residents. In 1999, physicians at 39 medical facilities (15 internal medicine, 7 dermatology, and 17 other specialties) serving the high-risk area were surveyed by telephone. None of these physicians reported having seen cases of anthrax, unexplained serious respiratory illnesses, or hemorrhagic meningitis, which is often a complication of systemic anthrax (5,6) in residents of the high-risk area.



Discussion

The Kameido incident is the first documented instance of bioterrorism with an aerosol containing *B. anthracis*. Aum Shinrikyo members testified in 1995 that they were working with *B. anthracis*, but 6 years passed before the strain was isolated and characterized (3).

Why the Kameido incident failed to produce any documented cases of anthrax has not been fully explained, but the basis may be multifactorial. A virulent strain of *B. anthracis*, a sufficient concentration to cause disease, effective aerosolization, and favorable weather conditions would all have been necessary to produce the anthrax epidemic Aum Shinrikyo members said they wanted.

Molecular subtype analysis results demonstrate that the strain used in Kameido was a vaccine strain of *B. anthracis* without the ability to produce a protective capsule (3). This strain is generally regarded as nonpathogenic for immunocompetent people and is widely used in livestock without adverse consequences. Even if the strain had been virulent, however, the concentration of spores in the liquid suspension (10⁴/mL) was significantly less than the 10⁹ to 10¹⁰ organisms/mL considered to be optimal in a liquid-based biologic weapon.

The viscosity of the suspension was also greater than desirable. Successfully weaponizing anthrax spores requires creating a fine-particle cloud with a sufficiently high concentration of *B. anthracis*. The human respiratory infectious dose 50 (dose that will produce an infection in 50% of exposed persons) is unknown but has been estimated to be 8,000 to 10,000 spore-bearing particles <5 µm in diameter (7). Kameido residents described a gelatinous substance, suggesting the suspension would be poorly dispersed and droplets would be too large to form particles <5 µm in diameter. Additionally, the effectiveness of the spray system (code named “Water Mach” by the Aum Shinrikyo) was questionable; it apparently broke down repeatedly, and hydrostatic back pressure caused the suspension to leak from tubing used to transport it up eight stories. The spray head may have clogged with the high-viscosity fluid, contributing to back pressure.



Climate could have been another mitigating factor. While *B. anthracis* spores resist many environmental influences, they are killed by sunlight (7), with an estimated survival time in direct sunlight in July of <2.5 h. In Kameido, survival time may have been longer since the weather was overcast on July 1 (the day the mist was reported), but spore inactivation by solar radiation would still have reduced the already-low potential for infection.

Because of the associated foul odor, residents quickly detected a problem, but local officials did not suspect Aum Shinrikyo of developing biologic weapons, and they conducted no microbiologic examination at the time. The actual cause of the foul odor remains undetermined, but it may have been caused by heating the medium used to grow *B. anthracis* or failing to wash the medium from the suspension before dispersal. Geographic distribution of complaints about the odor corresponded with expected dispersal patterns of the aerosol under prevailing weather conditions. Infection risk could theoretically extend beyond the area of the foul odor complaints; however, focusing the telephone survey on this “high-risk” area provided the greatest chance of finding related cases of anthrax. Routine disease reporting by Tokyo-area medical association members did not provide evidence of potentially related cases outside the high-risk area.

Conclusions

The Kameido investigation first showed the value of a high-resolution subtyping system for *B. anthracis* in forensic investigations. Its value was confirmed during investigations of the “anthrax letters” mailed to several persons in the United States in 2001 (6).

The details of Aum Shinrikyo activities led to a wider appreciation that subnational organizations may use biologic agents as weapons. Awareness is especially important in being prepared for a bioterrorist attack, since recognizing its nature early can substantially reduce associated sickness and death (8,9). Early recognition, however, requires training health professionals to recognize these diseases, having laboratories available to rapidly confirm clinical suspicions, and developing an active national surveillance program. Countries must also be able to rapidly deploy trained medical personnel, medical materials, and epidemiologists to affected communities. Most countries will need coordination among government agencies and private facilities with expertise relevant to the agents involved. To be effective, these measures require ongoing planning, preparation, and practice.

Dr. Takahashi is staff epidemiologist of the National Institute of Infectious Diseases, Japan, and supervisor of the Japanese Field Epidemiology Training Program. He has a special interest in epidemiologic investigation of emerging pathogens, including, recently, SARS.

►► Notes are available at source’s URL.

Refining the paediatric Ebola case definition: a study of children in Sierra Leone with suspected Ebola virus disease

By Fitzgerald F., Wing K., Naveed A., et al.

Source: [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(17\)30415-4.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(17)30415-4.pdf)

Feb 24 – The case definition for suspected Ebola virus disease is broad, so many negative children are isolated for testing, risking nosocomial infection. We collected data on children [aged less than 13 years] admitted to Ebola holding units in Sierra Leone to refine the case definition and describe outcomes of admitted children.

Interpretation

Contact history, fever, conjunctivitis, abdominal pain, and diarrhoea are key characteristics for diagnosis of paediatric Ebola virus disease. The case definitions developed can be used flexibly—for example, for triage into risk categories to reduce risk of nosocomial infection.



Handwashing and Ebola virus disease outbreaks: A randomized comparison of soap, hand sanitizer, and 0.05% chlorine solutions on the inactivation and removal of model organisms Phi6 and E. coli from hands and persistence in rinse water

By Wolfe M.K., Gallandat K., Daniels K, et al.

Source: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0172734>

Feb 23 – To prevent Ebola transmission, frequent handwashing is recommended in Ebola Treatment Units and communities. However, little is known about which handwashing protocol is most efficacious. We evaluated 6 handwashing protocols (soap and water, alcohol-based hand sanitizer (ABHS), and 0.05percent sodium dichloroisocyanurate, high-test hypochlorite, and stabilized and non-stabilized sodium hypochlorite solutions) for 1) efficacy of handwashing on the removal and inactivation of non-pathogenic model organisms and, 2) persistence of organisms in rinse water. Model organisms E. coli and bacteriophage Phi6 were used to evaluate handwashing with and without organic load added to simulate bodily fluids. ... Chlorine-based methods may offer a benefit of reducing persistence in rinse water. We recommend responders use the most practical handwashing method to ensure hand hygiene in Ebola contexts, considering the potential benefit of chlorine-based methods in rinse water persistence.

Device rapidly, accurately, inexpensively detects Zika virus at airports, other sites

Source: <https://www.sciencedaily.com/releases/2017/02/170222101822.htm>

Feb 23 – **About the size of a tablet, a portable device that could be used in a host of environments like a busy airport or even a remote location in South America, may hold the key to detecting the dreaded Zika virus accurately, rapidly and inexpensively using just a saliva sample.** While scientists across the world are scrambling to find some sort of immunization, researchers from Florida Atlantic University are working to develop a diagnostic tool to reduce the impact of the outbreak until a vaccine is identified.

“Most of the Zika cases in the United States and especially in Florida are travel related,” said Waseem Asghar, Ph.D., lead investigator and assistant professor at the Department of Computer and Electrical Engineering and Computer Science in FAU’s College of Engineering and Computer Science and in the Department of Biological Sciences in FAU’s Charles E. Schmidt College of Science. “We are working to develop a tool that can be used without expensive laboratory equipment and skilled technicians in various settings like an airport or a community health center to provide reassurance to expectant families and those

concerned because of recent travel. For about \$2 and within 15 minutes, we hope to accurately determine whether or not an individual has an active infection.”

FAU notes that currently, patients are diagnosed by testing whether they have antibodies against the Zika virus in their bloodstream, however, the antibody test cannot discriminate accurately between the Zika virus and other flaviviruses such as Dengue, West Nile virus and Chikungunya. The more accurate method for detecting the virus is by looking for pieces of the viral genome in a patient’s blood sample using a test known as polymerase chain reaction (PCR). PCR is costly (\$20,000+), bulky and requires highly skilled laboratory personnel to operate. Furthermore, results for PCR testing can take hours to yield results.

“Flaviviruses are found in mosquitoes and ticks that may infect people and cause a range of mild-to-fatal diseases,” said Asghar. “Because flavivirus antibodies cross-react with one another current tests cannot distinguish between them.” This new device is based on technology that Asghar and



colleagues developed to detect [HIV](#). It uses inexpensive paper- or plastic-based materials, a cassette-sized container holding up to 12 samples at a time and a receptacle about the size of a tablet. These materials are easy to make, easy to use, and can easily and safely be disposed of by burning, providing an appealing strategy for developing an affordable tool for diagnosing the Zika virus in developing countries as well as low- and middle-income countries where there is limited laboratory infrastructure.

They are working to adapt their device to diagnose the Zika virus, and recently received a \$199,280 one-year grant from the Florida Department of Health to establish proof-of-principle and then further test and commercialize this device.

"We would also like to thank FAU's Institute for Sensing and Embedded Network Systems Engineering (I-SENSE) for providing seed grant support to develop a Zika test, which significantly contributed to the development of our current device prototype," said Asghar.

Asghar's collaborators on the grant are Massimo Caputi, Ph.D., co-principal investigator and associate professor of biomedical science

in FAU's Charles E. Schmidt College of Medicine, whose research is focused on identifying novel therapeutics for HIV; and Mariano Garcia-Blanco, M.D., Ph.D., professor and chair of biochemistry and molecular biology at the University of Texas Medical Branch at Galveston, whose research is focused on infection of human and insect cells with flaviviruses and autoimmune diseases such as multiple sclerosis.

The Zika virus, transmitted to humans through the bite of an infected *Aedes aegypti* mosquito, is especially dangerous for pregnant women, and is linked to several severe birth defects transferred to the fetus – including microcephaly – a condition in which a baby is born with a small head or the head stops growing after birth.

From 1 January 2015 to 15 February 2017, the Centers for Disease Control and Prevention (CDC) has listed 5,040 Zika virus cases reported in the United States, with 4,748 cases in travelers returning from affected areas. Florida has the highest cases of the Zika virus at 1,069 reported cases with 214 cases acquired through presumed local mosquito-borne transmission and the majority from travelers returning from affected areas.



Risk of Ross River Virus could be next global epidemic

Source: <http://www.homelandsecuritynewswire.com/dr20170224-risk-of-ross-river-virus-could-be-next-global-epidemic>

Feb 24 – Australia's Ross River Virus (RRV) could be the next mosquito-borne global epidemic according to a new research study led by the University of Adelaide and The Australian National University.

The virus has been thought to be restricted largely to Australia and Papua New Guinea where it is harbored by marsupial animals, specifically kangaroos and wallabies, and spread by mosquitoes.

The research, published in the [International Journal of Infectious Diseases](#), shows that the virus may have been circulating silently in the South Pacific ever since a large epidemic of more than 500,000 cases in 1979-80, thought to have been started by an infected Australian tourist who travelled to Fiji.

"Ross River Virus is found naturally in Australia, where it was circulating in kangaroos and wallabies long before the arrival of the first

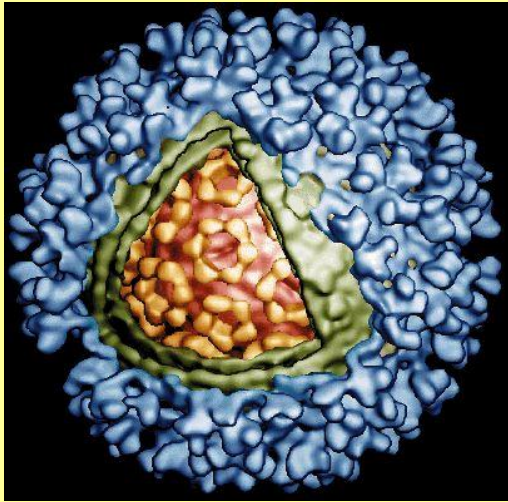
Australians over 40,000 years ago," says one of the project leaders Professor Phil Weinstein, Professorial Research Fellow with the University of Adelaide's School of Biological Sciences.

"When humans arrived, first Aboriginal Australians and then Europeans, they were bitten by the same mosquitoes and became infected: they had all of the sore joints, fever, rash, and fatigue that we associate with the disease today. Although RRV has never killed anyone, it can be extremely debilitating for several months, and up to years in a few unlucky individuals."

Adelaide says that the 1979 epidemic in the Pacific Islands Countries and Territories was the first time that RRV had "escaped" from its marsupial reservoir. But without marsupials, the epidemic burned itself out the following year – or so it was thought.



“The first clues about local transmission in the Pacific Islands came when more recent tourists



from New Zealand and Canada who had been to the South Pacific, but not Australia, were diagnosed with RRV when they returned home,” Professor Weinstein says.

In partnership with French collaborators in Tahiti and France, the researchers tested blood samples of American Samoans.

“We were surprised to find that of those who were born after the 1979-1980 epidemic and had lived in American Samoa their whole lives, a massive 63 percent had antibodies to RRV, strongly suggesting local transmission of the virus after 1980,” says Dr. Colleen Lau, NHMRC Research Fellow in ANU’s College of Medicine, Biology and Environment.

“There are no marsupials in American Samoa, so the only reasonable conclusion is that the virus was able to circulate in local mammals rather than marsupials. If RRV can circulate in non-marsupials in the South Pacific, then it can find a home anywhere in the world.

“Isolation of the virus from non-marsupials will provide us with definitive evidence that RRV can become endemic globally.”

Professor Weinstein says: “With the large number of Australians now travelling, it would not be unreasonable to expect one or more tourists to carry RRV overseas to seed a new epidemic. With the right conditions, this could take off globally in exactly the same way that Zika did.

— Read more in Colleen Lau et al., “New evidence for endemic circulation of Ross River Virus in the Pacific Islands and the potential for emergence,” [International Journal of Infectious Diseases](#) (2017).



Are hospital floors an underappreciated reservoir for transmission of health care-associated pathogens?

AJIC. March 1, 2017; Volume 45, Issue 3, Pages 336–338

Source: [http://www.ajicjournal.org/article/S0196-6553\(16\)31014-8/fulltext](http://www.ajicjournal.org/article/S0196-6553(16)31014-8/fulltext)

Hospital room floors may be an overlooked source of infection, according to a study published in the March issue of the *American Journal of Infection Control*, the official journal of the Association for Professionals in Infection Control and Epidemiology (APIC). Because items in the patient’s room may touch the floor, pathogens on hospital floors can rapidly move to the hands and high-touch surfaces throughout a hospital room.

Study highlights

- Patient room floors in 5 hospitals were often contaminated with health care-associated pathogens.
- It was not uncommon for high-touch objects to be in direct contact with the floor.
- Touching objects on the floor frequently resulted in transfer of pathogens to hands.
- Floors in hospital rooms could be an underappreciated source for pathogen dissemination.

In a survey of 5 hospitals, we found that floors in patient rooms were frequently contaminated with pathogens and high-touch objects such as blood pressure cuffs and call buttons were often in contact with the floor. Contact with objects on floors frequently resulted in transfer of pathogens to hands.



Position Paper: Bioterrorism Preparedness & Response - A Proposed Model for Bioterrorism Response: Initial Operations and Characterization

Source: https://www.interagencyboard.org/sites/default/files/publications/IAB%20Bioterrorism%20Preparedness%20and%20Response_A%20Proposed%20Model%20for%20BT%20Respo....pdf

Feb 08 – This paper presents the InterAgency Board's position on developing a national bioterrorism response capability: proposed equipment, training, and capability requirements for a validated biothreat response team; structured and validated activities that should occur during the incident characterization and initial response phases of a bioterrorism response; and equipment and training standards.

The Evolving Chemical/Biological Terrorism Threat

By Ashley Frohwein

Source: <https://www.domesticpreparedness.com/resilience/the-evolving-chemical-biological-terrorism-threat/>

Mar 01 – On 1 January 2017, British Minister of State for Security Ben Wallace warned that the Islamic State group (IS) has no moral qualms about carrying out a mass casualty attack with chemical weapons in Britain, and pointed to a December 2016 [Europol report](#) warning that IS may use chemical and biological (CB) weapons against [European targets](#). The threat is growing.

As stated in the U.S. Department of Defense's [Fiscal Year 2017 President's Budget Submission](#), CB threats are constantly expanding; the rapid advancement of CB capabilities, as well as their global proliferation, "greatly extends the spectrum of plausible actors, agents, concepts of use, and targets." In the past, many counterterrorism experts discounted the [likelihood of CB attacks](#) against Western targets by terrorist groups because many of these armaments tended to be expensive, hard to acquire, and difficult to weaponize and deploy. All this has changed. This article addresses a number of recent developments that have broadened the range of CB terrorism threats and made it easier for terrorists to obtain CB weapons. These developments suggest that the terrorist CB threat against the West – including both Europe and the U.S. homeland – is growing.

There is ample evidence that IS seeks to increase its CB capabilities. **In November 2015, U.S. and Iraqi intelligence officials warned that IS had established – [with the help of scientists](#) from Iraq, Syria, and elsewhere in the Mideast – a branch to aggressively develop chemical weapons. [Iraqi intelligence reports](#) have alleged that IS also has a biological weapons development program.** Although IS's self-proclaimed caliphate has shrunk considerably since the onset of the U.S.-led campaign against the group in Iraq and Syria, the group will continue to have a relatively safe haven to develop and gain experience with CB weapons so long as it continues to control territory. Also, IS's increased presence in the United States – the Federal Bureau of Investigation has investigated [IS suspects in all 50 U.S. states](#) – and other Western countries has created more opportunities for the group to smuggle CB weapons and plot and launch attacks with them in the West.



The Chemical Threat

[Chemical weapons](#), unlike nuclear, biological, and radiological ones, have already been used by terrorist organizations. The Aum Shinrikyo Japanese doomsday cult successfully used sarin in five coordinated attacks on the Tokyo subway in 1995. From late 2006 through mid-2007, al-Qaeda in Iraq employed [crude chlorine bombs](#). That group's successor, IS, has made

extensive use of chemical weapons on the battlefields of [Iraq and Syria](#), where it has gained experience developing, as well as commandeering, these weapons and has acquired tactical understanding of how to deploy them.

In late 2015, IS claimed that it seized weapons-grade chemicals from [Syrian government](#)



[stockpiles](#), although U.S. defense and intelligence officials expressed [skepticism](#) that these weapons were acquired from the Assad regime. Regardless of the validity of IS's claim, the Syrian government's failure to declare all elements of its [chemical weapons program](#) and to have them removed in accordance with the deal brokered by the United States and Russia in 2013 means that IS could potentially acquire these weapons as the chaotic Syrian civil war continues.

Even as IS's increasing use of chemical warfare became undeniable, commentators emphasized that the group had employed only rudimentary commercially available chemicals, such as chlorine and the agricultural fumigant phosphine, rather than more complex and deadlier ones. But as senior U.S. intelligence officials stated in early 2016, IS has somehow acquired and used the blister agent sulfur mustard, which has no use other than in [chemical warfare](#), in [Syria and Iraq](#). It is unclear whether IS manufactured the agent themselves, or if the group obtained it from [undeclared stocks in Syria](#). Either way, IS's possession and use of sulfur mustard demonstrates that the group's offensive chemical capabilities have grown.

Beyond IS's chemical warfare experience, two broader factors also indicate that the terrorist chemical weapon threat, from IS as well as other terrorist groups, is rising. The first is the rapidly increasing growth and sophistication of the worldwide chemical industry, including the development of a greater number of [dual-use materials](#) – that is, materials that can be used for both commercial applications and WMDs – which is partly driven by the emergence of nanotechnology. Terrorists were previously able to use various toxic industrial chemicals and other commonly available chemical agents to create chemical weapons, but they now have a far wider range of chemicals from which to choose. The other broad factor is the increasing online availability of materials and recipes for manufacturing various threats, including chemical weapons. This online availability of CB know-how, coupled with the recent proliferation of encrypted communications technologies, makes it easier for hostile actors to acquire this information while simultaneously complicating

law enforcement and intelligence agencies' efforts to interdict and disrupt these threats.

The Biological Threat

Terrorist groups have long sought to acquire biological weapons. For example, al-Qaeda began [pursuing biological weapons](#) in the early 1990s, when the organization was still small and located in the Sudan. However, as noted by the authors of a late-2015 report by the Blue Ribbon Study Panel on Biodefense, [A National Blueprint for Biodefense: Leadership and Major Reforms Needed to Optimize Efforts](#), the threat from biological weapons is “real and growing.” This threat is growing partly because it now takes far less time to develop some biological weapons and because “it is reasonable to believe that what the United States could accomplish more than 40 years ago, [individuals] can accomplish now.”

Scientific and technological advances, some of which improve abilities to prevent and cure deadly diseases, also make it more feasible for states and [non-state actors](#) to develop biological weapons. One such advance is [genome editing](#), a way of making specific changes to the DNA of a cell or organism. Genome editing has the potential to fundamentally change mankind's [ability to diagnose, treat, and prevent diseases](#). However, as Director of National Intelligence [James Clapper](#) told the Senate Armed Services Committee in February 2016, genome-editing research conducted by countries with regulatory or ethical standards different from those of Western countries likely increases the risk that potentially harmful biological agents or products will be created. Relatedly, the recent proliferation of commercially available [genome-editing kits](#) – some of which sell for less than \$200 and are advertised as being appropriate for users with “zero experience with biotechnology” – makes it easier for individuals to cheaply, quickly, and independently develop dangerous pathogens.

The recent growth in the number of medical research facilities, both in the United States and abroad, authorized to possess lethal biological pathogens or toxins [heightens the risk](#) that terrorists, or hostile actors willing to sell these substances to them, could steal these biological agents. In December 2016, the



Blue Ribbon Study Panel (mentioned above) released a follow-on report, [*Biodefense Indicators: One Year Later, Events Outpacing Federal Efforts to Defend the Nation*](#). In it, the authors noted that, despite biocontainment advances, the accidental release of pathogens from laboratories is an ongoing threat because laboratory safety remains inadequate. The United States' highest-level laboratories continue to release organisms accidentally, they

noted. Additionally, as the U.S. State Department has noted, many international laboratories that possess dangerous pathogens are often [*inadequately secured*](#).

CB threats present unique challenges for intelligence agencies, law enforcement, and first responders. As terrorists' CB capabilities continue to grow and evolve, so too must the approach to preventing, protecting against, and responding to them.

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Inside the Chinese lab poised to study world's most dangerous pathogens

Nature 542, 399–400 (23 February 2017)

By David Cyranoski

Source: <http://www.nature.com/news/inside-the-chinese-lab-poised-to-study-world-s-most-dangerous-pathogens-1.21487>



Wuhan Virology Institute

Feb 22 – Hazard suits hang at the National Bio-safety Laboratory, Wuhan, the first lab on the Chinese mainland equipped for the highest level of biocontainment.

A laboratory in Wuhan is on the cusp of being cleared to work with the world's most dangerous pathogens. The move is part of a plan to build between five and seven biosafety



level-4 (BSL-4) labs across the Chinese mainland by 2025, and has generated much excitement, as well as some concerns.

Some scientists outside China worry about pathogens escaping, and the addition of a biological dimension to geopolitical tensions between China and other nations. But Chinese microbiologists are celebrating their entrance to the elite cadre empowered to wrestle with the world's greatest biological threats.

"It will offer more opportunities for Chinese researchers, and our contribution on the BSL-4-level pathogens will benefit the world," says George Gao, director of the Chinese Academy of Sciences Key Laboratory of Pathogenic Microbiology and Immunology in Beijing. There are already two BSL-4 labs in Taiwan, but the National Bio-safety Laboratory, Wuhan, would be the first on the Chinese mainland.

The lab was certified as meeting the standards and criteria of BSL-4 by the China National Accreditation Service for Conformity Assessment (CNAS) in January. The CNAS examined the lab's infrastructure, equipment and management, says a CNAS representative, paving the way for the Ministry of Health to give its approval. A representative from the ministry says it will move slowly and cautiously; if the assessment goes smoothly, it could approve the laboratory by the end of June.

BSL-4 is the highest level of biocontainment: its criteria include filtering air and treating water and waste before they leave the laboratory, and stipulating that researchers change clothes and shower before and after using lab facilities. Such labs are often controversial. The first BSL-4 lab in Japan was built in 1981, but operated with lower-risk pathogens until 2015, when [safety concerns were finally overcome](#).

The expansion of BSL-4-lab networks in the [United States](#) and [Europe](#) over the past 15 years — with more than a dozen now in operation or under construction in each region — also met with resistance, including questions about the need for so many facilities.



Muyi Xiao for Nature – The central monitor room at China's National Bio-safety Laboratory.

"Viruses don't know borders"

The Wuhan lab cost 300 million yuan (US\$44 million), and to allay safety concerns it was built far above the flood plain and with the capacity to withstand a magnitude-7 earthquake, although the area has no history of strong earthquakes. It will focus on the control of emerging diseases, store purified viruses and act as a World Health Organization 'reference laboratory' linked to similar labs around the world. "It will be a key node in the global biosafety-lab network," says lab director Yuan Zhiming.

The Chinese Academy of Sciences approved the construction of a BSL-4 laboratory in 2003, and the epidemic of SARS (severe acute respiratory syndrome) around the same time lent the project momentum. The lab was designed and constructed with French assistance as part of a 2004 cooperative agreement on the prevention and control of emerging infectious



diseases. But the complexity of the project, China's lack of experience, difficulty in maintaining funding and long government approval procedures meant that construction wasn't finished until the end of 2014. The lab's first project will be to study the BSL-3 pathogen that causes Crimean–Congo haemorrhagic fever: a deadly tick-borne virus that affects livestock across the world, including in northwest China, and that can jump to people.



Future plans include studying the pathogen that causes SARS, which also doesn't require a BSL-4 lab, before moving on to Ebola and the West African Lassa virus, which do. Some one million Chinese people work in Africa; the country needs to be ready for any eventuality, says Yuan. "Viruses don't know borders." Gao travelled to Sierra Leone during the recent Ebola outbreak, allowing his team to report the speed with which the virus mutated into new strains¹. The Wuhan lab will give his group a chance to study how such viruses cause disease, and to develop treatments based on antibodies and small molecules, he says.

The opportunities for international collaboration, meanwhile, will aid the genetic analysis and epidemiology of emergent diseases. "The world is facing more new emerging viruses, and we need more contribution from China," says Gao. In particular, the emergence of zoonotic viruses — those that jump to humans from animals, such as SARS or Ebola — is a concern, says Bruno Lina, director of the VirPath virology lab in Lyon, France.

Many staff from the Wuhan lab have been training at a BSL-4 lab in Lyon, which some scientists find reassuring. And the facility has already carried out a test-run using a low-risk virus.

But worries surround the Chinese lab, too. The SARS virus has escaped from high-level containment facilities in Beijing multiple times, notes Richard Ebright, a molecular biologist at Rutgers University in Piscataway, New Jersey. Tim Trevan, founder of CHROME Biosafety and Biosecurity Consulting in Damascus, Maryland, says that an open culture is important to keeping BSL-4 labs safe, and he questions how easy this will be in China, where society emphasizes hierarchy. "Diversity of viewpoint, flat structures where everyone feels free to speak up and openness of information are important," he says. Yuan says that he has worked to address this issue with staff. "We tell them the most important thing is that they report what they have or haven't done," he says. And the lab's international collaborations will increase openness. "Transparency is the basis of the lab," he adds.



The plan to expand into a network heightens such concerns. One BSL-4 lab in Harbin is already awaiting accreditation; the next two are expected to be in Beijing and Kunming, the latter focused on using monkey models to study disease.

Lina says that China's size justifies this scale, and that the opportunity to combine BSL-4 research with an abundance of research monkeys — [Chinese researchers face less red tape than those in the West](#) when it comes to research on primates — could be powerful. “If you want to test vaccines or antivirals, you need a non-human primate model,” says Lina.

But Ebright is not convinced of the need for more than one BSL-4 lab in mainland China. He suspects that the expansion there is a reaction to the networks in the United States and Europe, which he says are also unwarranted. He adds that governments will assume that such excess capacity is for the potential development of bioweapons.

“These facilities are inherently dual use,” he says. The prospect of ramping up opportunities to inject monkeys with pathogens also worries, rather than excites, him: “They can run, they can scratch, they can bite.”

Trevaan says China's investment in a BSL-4 lab may, above all, be a way to prove to the world that the nation is competitive. “It is a big status symbol in biology,” he says, “whether it's a need or not.”

David Cyranoski had worked in Japan for several years before moving into journalism with Nature in 2000. His varied employment history includes translation for a semiconductor-manufacturing equipment company and teaching history to foreign exchange students. In addition to covering the Asian-Pacific region.

Open Science Prize Announces Epidemic Tracking Tool as Grand Prize Winner

Source: <http://www.hstoday.us/single-article/open-science-prize-announces-epidemic-tracking-tool-as-grand-prize-winner/76f49dbd7e30f7d3f124fdb154837899.html>

A prototype online platform using real-time visualization and viral genome data to track the

The Open Science Prize is a global competition designed to foster innovative solutions in public



spread of global pathogens like Zika and Ebola won the [Open Science Prize](#) competed for by international teams. The competition is an initiative by the National Institutes of Health (NIH) in collaboration with the Wellcome Trust and the Howard Hughes Medical Institute (HHMI).

health and biomedicine using open digital content. The prize, which was launched in October 2015, aims to forge new international collaborations that bring together open science innovators to develop services and



tools of benefit to the global research community.

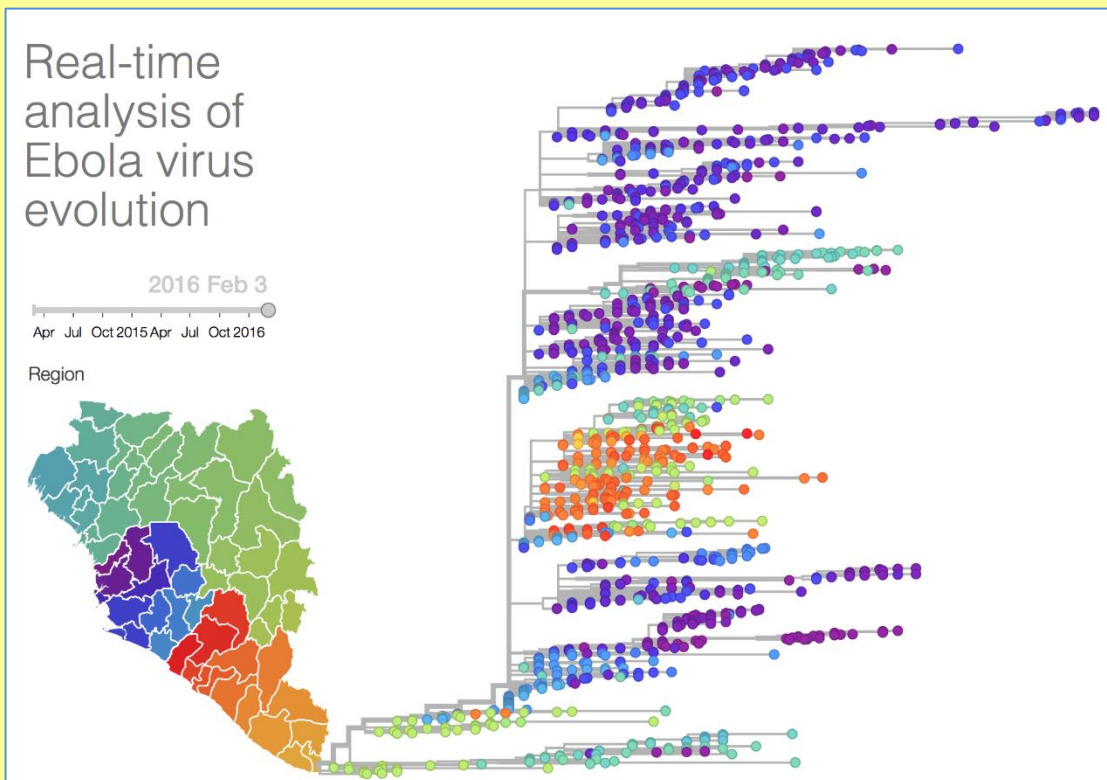
The winning team, Real-time Evolutionary Tracking for Pathogen Surveillance and Epidemiological Investigation, created the nextstrain.org prototype to pool data from researchers across the globe, perform rapid phylogenetic analysis and post the results on the platform's website. The team will receive \$230,000 to fully develop their prototype with NIH awarding \$115,000 to the US members of the winning team, while Wellcome Trust and HHMI will contribute \$115,000 to the winning team.

"Nextstrain.org placed first out of three top finalists, selected from a pool of 96

collected, analyzed and the results disseminated in near real-time. The statistical analyses behind nextstrain.org can be conducted in minutes, and can reveal patterns of geographic spread, timings of introduction events, and can connect cases to aid contact tracing efforts," the announcement explained.

The phylogenetic analyses are posted on the website as interactive and easy to understand visualizations.

"Nextstrain.org aims to synthesize publicly available pathogen genomic data to arrive at an understanding of epidemic spread not available through traditional surveillance systems," said Trevor Bedford, Ph.D., of the Fred Hutchinson Cancer Research Center in Seattle, and one the



multinational, interdisciplinary teams including 450 innovators from 45 countries," an announcement said, noting the "award is the culmination of a year-long process which included development and demonstration of working prototypes and multiple stages of rigorous review by panels of expert Open Science advisors and judges from the Wellcome Trust and NIH."

"Genome sequences of viral pathogens provide a hugely valuable insight into the spread of an epidemic, but to be useful, samples have to be

two leaders of the team behind nextstrain.org.

"Our efforts with nextstrain.org are only possible through open data sharing by others in the community. We've really enjoyed working with these teams in the field as they collect and share viral genome data," added the other team leader, Richard Neher, Ph.D., of Biozentrum at the University of Basel, Switzerland.

"They hope that the platform will be of great use to researchers, public health officials and the public who want a snapshot of an epidemic."



“All six finalist teams were considered exemplary by the funders and are to be commended for their tenacity in developing creative approaches to applying publicly-accessible data to solve complex biomedical and public health challenges,” a statement read. “The topics spanned the breadth of biomedical and public challenges, ranging from understanding the genetic basis of rare diseases, mapping the human brain, and enhancing the sharing of clinical trial information. As evidenced from the six Open Science Prize finalists, public health and biomedical solutions are enriched when data are combined from geographically diverse sources. Final prototypes developed by the six finalists can be accessed here.

“Many congratulations to Nextstrain.org. Their prototype is an exemplar of open science and will have a great impact on public health by tracking viral pathogens,” said Robert Kiley, who leads Wellcome’s work on open research. “Overall, we had received many fantastic submissions for the prize, tackling issues from air quality to genomics and clinical trials to neuroscience. All entrants demonstrated what’s possible when data and code are made open for

all. We hope this competition has inspired and spurred on others to think about opening up data to create more innovation in this space.”

Dr. Patti Flatley Brennan, NIH Interim Associate Director for Data Science and director, National Library of Medicine, said, “This competition hallmarks a new direction in open science funding from disease-specific efforts toward disease agnostic projects in which scalable solutions can be applied to multiple disease areas and even to solving other scientific problems. In many ways, the Open Science Prize is a model program and NIH is looking forward to participating in new initiatives that accelerate open data sharing.”

“As increasing amounts of data are produced by scientists around the world and made openly available through publicly-accessible repositories, a major challenge to fully maximize this health information will be the lack of tools, platforms and services that enable the sharing and synthesizing of disparate data sources,” the statement said, noting, “Development in this area is essential to turning diverse types of health data into usable and actionable knowledge.”

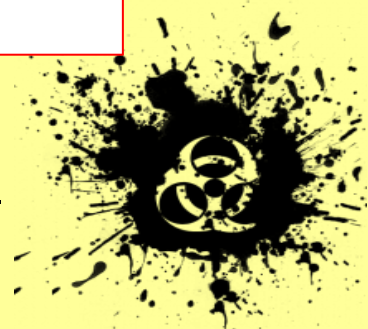
CAPSULES

(Containment And Protection System Utilizing Life Support)

Source: <http://www.isovacproducts.com/>



CAPSULES™ is a portable patient isolation unit (PIU) which prevents particulate (biological and radiological) cross-contamination between the patient and the external environment.





This unit includes features that enable medical intervention to the patient via user-end supplied medical equipment. CAPSULS™ is intended to be used in the:

- Transportation and isolation of patients on aircraft, ambulances, ships, or any vehicle capable of safely relocating a patient on a standard litter.
- Temporary isolation with or without transport of patients within hospitals or other medical environments.

Operational Rescue Containment Apparatus (ORCA)

ISOVAC's ORCA (Operational Rescue Containment Apparatus) is a portable Patient Isolation Unit (PIU)



designed to prevent chemical and particulate (biological and radiological) cross-contamination between an enclosed patient and the external environment.

It has been optimized for use with the Stokes Litter in Marine environments. Use of the ORCA PIU allows safe transport of contaminated patients while protecting boat and cutter crews, aircrews, passengers, auxiliary care providers, and transport assets.



PathSensors Launches Low Cost, High Speed Anthrax and Bio Threat Detection Solution for Mail Security Screening

Source: <http://www.prweb.com/releases/2016/12/prweb13922611.htm>

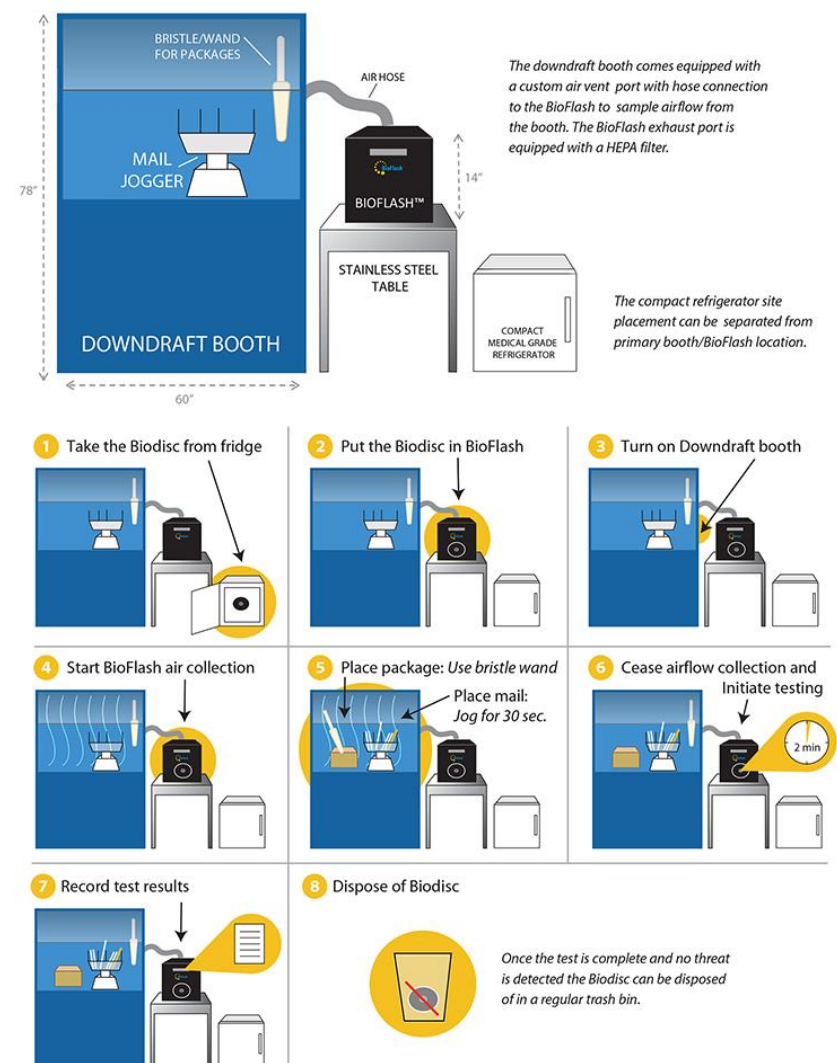
December 2016 – Baltimore bio tech firm, PathSensors, Inc., announced today the launch of its new Bioflash MailGuardtm mail security screening solution. The Bioflash MailGuardtm system provides a fast, highly accurate, easy to use and low cost threat detection solution for government and commercial mail room operations that need to screen mail and packages for potential threats such as anthrax. The system is now in use at a major commercial mail room screening facility thanks to PathSensor's initial launch customer, a global document management company.



"Government agencies, document management companies, outsourced mail room screening operators and commercial mail room managers have all told us that they need a turn key bio

threat detection solution that is highly accurate with virtually no false alarms; fast to detect threats and able to handle high volumes of mail and packages; easy to use, and, above all, with a much lower cost of ownership than alternative approaches," commented Ted Olsen, CEO, PathSensors, Inc. "The Bioflash MailGuardtm is the first and only solution to meet all these requirements and the results – as demonstrated by a successful field launch earlier this year with a major commercial mail room operation – show that the Bioflash MailGuardtm is a true breakthrough technology."

The BioFlash MailGuardtm System consists of an integrated biological testing unit, down flow booth, mail jogger, and compact medical refrigerator and requires standard 110v power to operate. The biological testing unit has the ability to connect to the Internet via an optional tethered laptop computer, which permits remote system diagnostics and secondary testing confirmation as needed. It can detect over 25 biological threats in concentrations as low as 100 CFU in less than five minutes. The Bioflash MailGuardtm uses PathSensor's CANARY® technology, which is currently deployed by Defense and Homeland Security customers, and which can be Integrated with x-ray, chemical and other threat detection technologies.



Biofire – FilmArray Test Kits

Source: <http://www.biofiredefense.com/biosurveillance-systems/filmarray-test-kits/>

The FilmArray reagents pouch contains all the required reagents for sample preparation, reverse transcription-PCR, PCR, and detection in a freeze-dried, room temperature stable format making it the ideal system for any mobile lab. Prior to a run, the operator injects hydration solution and the unknown sample into the pouch. The FilmArray instrument does the rest.

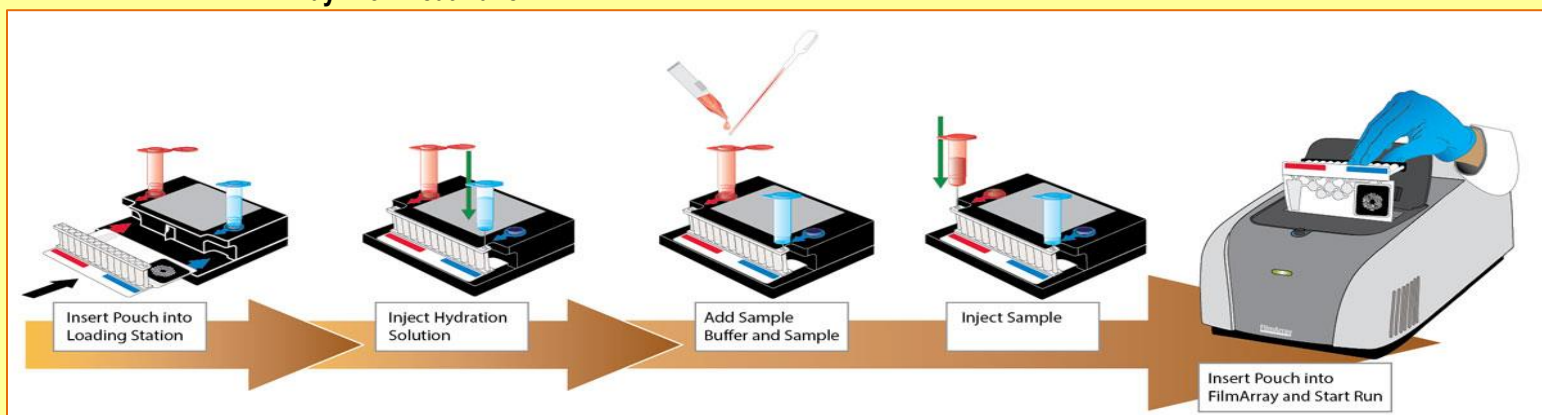
1. First, the FilmArray extracts and purifies all nucleic acids from the unknown sample.
2. Next, the FilmArray performs a nested multiplex PCR. During the first-stage PCR, the FilmArray performs a single, large volume, massively multiplexed reaction.
3. Last, individual singleplex second-stage PCR reactions detect the products from the first stage PCR. Using endpoint melting curve data, the FilmArray software automatically generates a result for each target.



Setting up the FilmArray is Simple

Training is minimal and you only need 2 minutes of hands-on time with no precise pipetting required.

FilmArray BioThreat Panel



The FilmArray BioThreat Panel tests for a comprehensive list of 16 threat pathogens.

- **Simple:** 2 minutes of hands-on time
 - **Easy:** No precise measuring or pipetting required
 - **Fast:** Turnaround time of about 1 hour
 - **Comprehensive:** 16 pathogen / 26 target panel
- With just one test you can identify pathogens in environmental samples in about an hour with only 2 minutes of hands-on time.



FilmArray BioThreat Panel

- | | |
|---|---|
| <ul style="list-style-type: none"> • <i>Bacillus anthracis</i>, 3 Targets • <i>Brucella melitensis</i>, 2 Targets • <i>Burkholderia</i>, 2 Targets • <i>Clostridium botulinum</i> • <i>Coxiella burnetii</i>, 2 Targets • <i>Ebola virus</i> (Zaire) • <i>EEE virus</i> • <i>F. tularensis</i>, 2 Targets | <ul style="list-style-type: none"> • <i>Marburg virus</i>, 2 Targets • <i>Ricinus communis</i> • <i>Rickettsia prowazekii</i>, 2 Targets • <i>Variola virus</i> • <i>VEE virus</i>, 2 Targets • <i>WEE virus</i> • <i>Yersinia pestis</i>, 2 Targets • <i>Orthopox virus</i>, 2 Targets |
|---|---|

Grant awarded for study of the body's immune response to bioterrorism agent

Source: <https://homelandprepnews.com/biological-threats/21366-grant-awarded-study-bodys-immune-response-bioterrorism-agent/>

Mar 03 – Meenakshi Malik, associate professor at the Albany College of Pharmacy and Health Sciences, was recently awarded a \$480,000 grant to expand her study into *Francisella tularensis*, the bacteria that causes the potentially fatal disease tularemia.



The three-year grant was funded by the National Institute of Allergy and Infectious Diseases (NIAID).

The Centers for Disease Control and Prevention (CDC) designated *Francisella tularensis* as a Category A bioterrorism agent, which “pose the highest risk to the public and national security.” The class is reserved for agents such as anthrax, plague, and smallpox.

Malik’s grant will help assist in discovering how *Francisella tularensis* stifles the immune system and what causes the body’s immune response to trigger in the event of exposure. In addition, the grant was made to determine if an effective vaccine against tularemia could be developed.

“The challenge with *Francisella tularensis* is that very little is still known about how this bacterium causes immune suppression,” Malik said. “As soon as we

discover a few factors responsible for muting the body’s immune responses, we find out that this pathogen possesses multiple redundant mechanisms to circumvent our actions and shut down the body’s defense systems.”

“It has been challenging to understand these mechanisms, but we are making progress.”

Lasers to keep poultry safe from avian bird flu

Source: <http://www.homelandsecuritynewswire.com/dr20170306-lasers-to-keep-poultry-safe-from-avian-bird-flu>

Mar 06 – Last week, the British government has extended the avian influenza (bird flu) prevention zone to April 2017. Also, the requirements of the zone have changed, meaning keepers may let their birds out provided that they have enhanced biosecurity measures in place. These restrictions have caused havoc for free-range and organic poultry farms across the United Kingdom. [Orchard Eggs](#) in West Sussex is not taking any chances with its chickens and it is taking advantage of the latest laser technology to protect its birds.

As Daniel Hoeberichts, the owner of Orchard Eggs, explains “Our birds are housed across fifty acres of orchard and we want to do everything to keep them safe from infection. Once we heard about the Agrilaser Autonomic it seemed like an ideal solution to complement all of our other biosecurity measure.”





Dan England, Director of [PestFix](#) (U.K.) says: “The outbreak of avian influenza here in the U.K. back in December 2016 has caused untold stress to the poultry and egg sector. The advent of new [APHA Animal & Plant Health Authority](#) protocol allows free range birds outdoors, if they can be kept segregated from wild birds. With this rule, the laser technology for bird dispersal comes into its own. Because they are domesticated, the hens are unaffected by the laser.”

Enhancing biosecurity

The [automated laser](#) is an innovative method of repelling unwanted birds without causing harm to the wild birds, the chickens, and the surrounding environment (see [video](#)). The system has been developed by the Dutch company [Bird Control Group](#) in cooperation with the Technical University of Delft, The Netherlands. The laser is silent and shows effectiveness of 90 to 100 percent in bird dispersal at farms. This makes it a viable alternative to the expensive method of installing nets at the entire poultry farm.

Avian influenza prevention zone

The prevention zone was first declared from 6 December 2016, and all poultry and captive bird keepers had to apply heightened biosecurity including keeping their birds indoors if possible, or otherwise separated from wild birds. This was renewed on 4 January 2017 to last until 28 February. This further zone will remain in force until at least the end of April 2017.

Hospital waste management

Source: <https://www.slideshare.net/sharrygajuryalnepal/hospital-waste-management-30528327>

HOSPITAL WASTE MANAGEMENT

-Dr.Sharad H.Gajuryal,
JR,MD Hospital Administration
BPKIHS



Plague vaccine receives orphan drug designation from FDA

Source: <http://www.healio.com/infectious-disease/vaccine-preventable-diseases/news/online/%7B3b35fd70-93b1-4116-8d09-318a236d6f98%7D/plague-vaccine-receives-orphan-drug-designation-from-fda>

Mar 09 – CSRA Inc. has announced that the FDA recently granted orphan drug designation to an investigational plague vaccine that is being developed by the company's subsidiary, DynPort Vaccine Company LLC, according to a press release.

The **recombinant rF1V vaccine** is being developed as a component of the Department of Defense's medical countermeasures portfolio against bioterrorism agents, the release said. It was originally created by researchers at the United States Army Medical Research Institute of Infectious Diseases, and will be used to combat infections caused by *Yersinia pestis* in patients who were likely exposed to the bacteria. "We are excited that the FDA has granted Orphan Drug status for the rF1V vaccine," Gary S. Nabors, PhD, president of DyPort Vaccine Company, said in the release. "Orphan Drug Designation provides important incentives to support the development of products for rare diseases. These incentives include the waiving of prescription drug user fees and the ability to market the vaccine exclusively in the U.S. for 7 years following approval."

According to the release, there have been three pandemics involving *Y. pestis* over the last 1,700 years. An estimated 200 million deaths worldwide have been caused by the bacterium, which has been classified as a Category A priority pathogen by the National Institute of Allergy and Infectious Diseases and the CDC.

Bioterrorism expert mysteriously killed in St. Louis bicycle accident

Source: <http://www.naturalnews.com/2017-03-14-bioterrorism-expert-mysteriously-killed-in-st-louis-bicycle-accident.html>

Mar 14 – On Friday, February 24, university professor and [bioterrorism expert](#), Robert Mark Buller, was mysteriously killed while riding his bike in the 10600 block of Riverview Drive.



The 67-year-old professor taught molecular microbiology and immunology at St. Louis University, and was described in the university's obituary as "one of the nation's foremost poxvirus researchers."

The obituary added, "He was a member of multiple national committees and

governmental advisory groups, some that advised the intelligence community on biodefense."

Meghan Buller, the professor's daughter, described her father as a humble man. "He told me he was bad at math, but he got a Ph.D., and he had his own lab, and he advised the government," she explained. "He was an amazingly important person and never wanted anyone else to know."

According to police, Buller was killed just before 6 p.m. When a man driving a Ford attempted to pass Buller on the left, he swerved and was struck by an oncoming Audi A8. Police say that Buller was pronounced dead at the scene. All others involved in the accident, including an 8-year-old boy and a 44-year-old woman, were taken to a hospital in stable condition.

SLU's obituary explained that Buller's job was to look for new ways to prevent and protect against viruses that could potentially be used as weapons of bioterrorism.



Outside of his work at St. Louis University, Mr. Buller volunteered with Habitat for Humanity, the international nonprofit organization dedicated to building affordable houses in impoverished areas all over the world. Buller also sponsored impoverished children from several different countries, and frequently donated to Wounded Warriors.

In addition, Buller was an active member of Our Lady of Lourdes parish in University City, which is where he lived happily with his wife, Joslyn. After working for over two decades at St. Louis University, Buller was just starting to prepare for his retirement in 2018.

Of course, some Americans may find the death of the bioterrorism professor a bit too coincidental, considering the fact that the Islamic State has made threats to use toxic agents to kill large numbers of civilians. If ISIS, Al-Qaeda or another terrorist organization were to launch an attack on the United States, it would make sense that they would eliminate those who could foil their plans before actually carrying them out.

Still, this is only a theory, and it should not take attention away from the terrible pain and sadness being felt by Buller's family and friends. May God bless them in this time of hardship.

Citizens with unknown virus held at specialized fever hospitals

Source: <http://www.egyptindependent.com/news/citizens-unknown-virus-held-specialized-fever-hospitals-sources>

Mar 15 – Several people are being held at Imbaba and Abbassiya specialized fever hospitals after contracting a virus that doctors are still unable to diagnose, medical sources said amid a media blackout on the part of the Health Ministry.

An informed source said a secret meeting was held at the ministry on Monday to discuss the issue. Further meetings are ongoing. The number of patients held at the hospitals does not exceed five cases, the source added.

A medical source inside Imbaba hospital said some of the infected have been isolated because, until the virus is identified, doctors in Egypt are unable to prescribe a suitable treatment.

Al-Masry Al-Youm toured the hospital, trying to reach out to these patients but the reporter was unable to enter the building where they are held.

Dr. Sherif Fam, head of the Imbaba specialized fever hospital, refused to give information about the patients, claiming he was busy. However, one of the doctors confirmed that about five patients are being held there.

Dr. Mohamed al-Sawy, Fam's deputy, said: "We don't have anything like that. Maybe it's in Abbassiya hospital."

Another doctor indicated that talks are ongoing with the ministry's central laboratories to identify the virus.

Dr. Ashraf al-Atraby, head of the Health Ministry's department for fevers, denied that anyone is being held at either of the hospitals. He suggested the reporter try to reach ministry spokesperson Khaled Megahed for comment, but he did not respond.

Plague: Dozens of cases in Madagascar

Source: <http://outbreaknewstoday.com/plague-dozens-cases-madagascar-73673/>

Dec 2016 – Plague, a disease many think of as something from the history books, is alive and well in many areas of the globe and is clearly no stranger to Madagascar. During the last decade, the island country [reported more than 7,000 human plague cases](#), second most on the planet. Reports coming out of the country say that an outbreak in the Befotaka Atsimo and the Midongy Atsimo district say that dozens of deaths have been reported in two months. "We have heard about people who died for little known causes in Ambalarano two months ago. The inhabitants of this commune who come to shop in Midongy Atsimo speak of it, but they believe that it is due to the sorcery ", [it is reported in the new source, L'Express \(computer translated\)](#).

The victims would have the same symptoms, namely lymph nodes, such as those of bubonic plague.



The website, [Africa Review](#), offers more definitive numbers: *Bubonic plague has killed at least 31 people in Madagascar's southern district of Befotaka Atsimo.*

Bush fires, blamed on persistent drought, have reportedly driven disease carrying rodents into villages, where they have transmitted the disease to humans.



Teams from the Ministry of Public Health and the Pasteur Institute of Madagascar (IPM) were dispatched to investigate the scene Monday; however, they have not yet arrived. It is an almost inaccessible zone, there are still about thirty kilometers to walk, the L'Express report states.

According to the general secretary of the Madagascar Ministry of Health, between 300 and 600 suspected cases are reported each year, with about 30 cases of pulmonary plague and 10 to 70 deaths.

According to the World Health Organization (WHO), plague is endemic in the country, with epidemic seasonal peaks ranging from September to March.

Plague is an infectious disease caused by the bacterium, *Yersinia pestis*. It is found in animals throughout the world, most commonly rats but other rodents like ground squirrels, prairie dogs, chipmunks, rabbits and voles. Fleas typically serve as the vector of plague. Human cases have been linked to the domestic cats and dogs that brought infected fleas into the house.

People can also get infected through direct contact with an infected animal, through inhalation and in the case of pneumonic plague, person to person.

Yersinia pestis is treatable with antibiotics if started early enough.

There are three forms of human plague; bubonic, septicemic and pneumonic.

Diagnostic Kit Detects Virulent Pathogens in Remote Locations

Source: <https://globalbiodefense.com/2017/01/05/diagnostic-kit-detects-virulent-pathogens-remote-locations/>

Jan 2017 – A team of researchers has developed a portable detection system that can rapidly identify some of the most virulent, often multi-drug resistant pathogens. This device was designed to be used in places where laboratory resources are lacking, such as isolated villages in developing countries.

Microbial infections afflict approximately 1.5 billion people annually, killing roughly 4.6 million, most of that toll in the developing world. The lack of diagnostic facilities in remote locations prevents timely identification of pathogens. That frequently forces caregivers to guess when diagnosing and treating microbial infections.

Under these circumstances, treatment is less likely to be effective. For example, when an infection's cause can't be identified with certainty, caregivers frequently use broad spectrum antibiotics to boost the probability of killing the pathogen. Unfortunately, as compared to precisely targeted antibiotics, the use of broad spectrum antibiotics increases the likelihood of spreading antimicrobial resistance genes, said Lars D. RenneJanr, PhD, Group Leader at the Leibniz Institute of Polymer

Research, and the Max Bergmann Center of Biomaterials, Dresden, Germany.

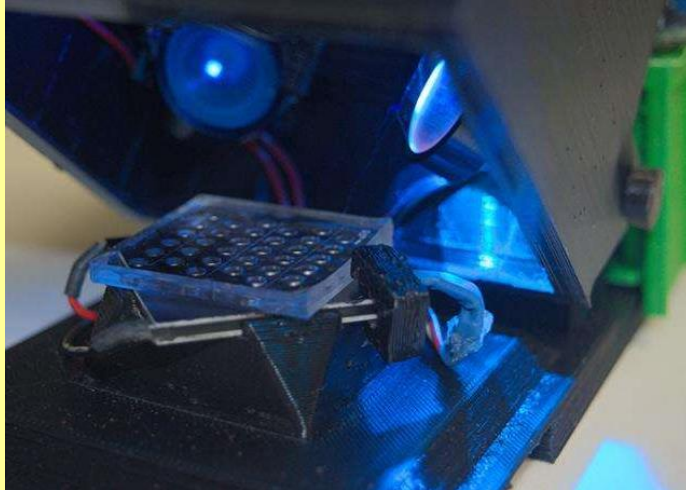
The new battery powered detection system is small and simple. Sixteen microchambers each contain a genetic sequence from one of the sixteen pathogens the device is designed to detect. When one of these



sequences matches a sequence from a patient sample, a fluorescent light illuminates from within the relevant microchamber. Then, an app



detects the position of that chamber, and identifies the pathogen according to that position. This very sensitive assay can provide positive identification with patient samples containing as few as 10 DNA sequences.

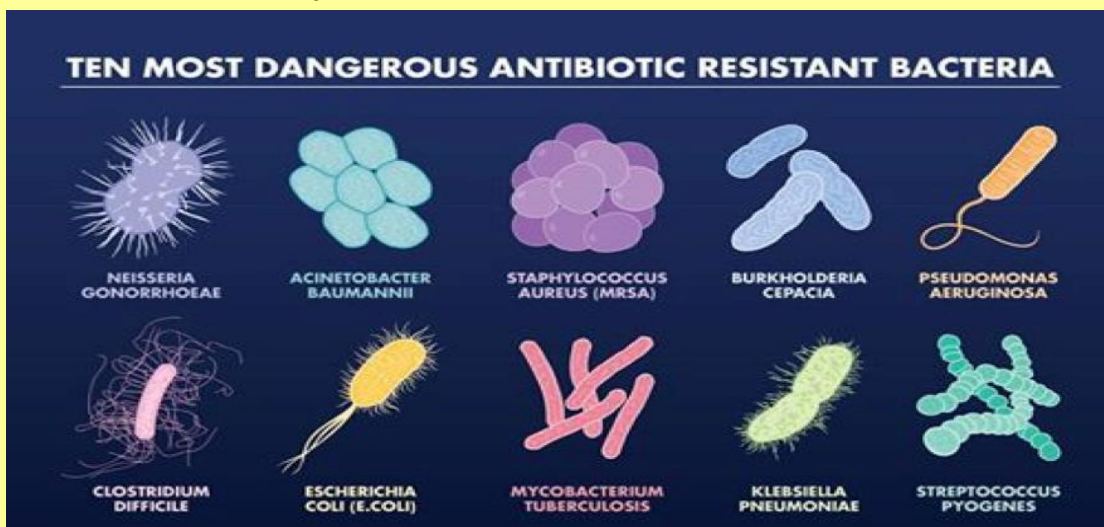


The investigators picked the sequences the device uses by screening the genomes of the relevant bacteria for unique genetic sequences.

The system can identify *Enterococcus faecium*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and various species of the genus, *Enterobacter*.

Applications for the technology, besides healthcare, include a variety of areas where it is necessary to identify environmental bacteria—“food security, agriculture, water quality, and industrial processing and manufacturing,” said Renner.

The research received financing from the Bill and Melinda Gates Foundation, as an effort to bring better healthcare to underserved, remote areas, and to help stem the spread of antimicrobial resistance. The Department of Defense also provided financing, as such diagnostics could help protect soldiers fighting in remote locations, said coauthor Douglas Weibel, PhD, Professor of Biomedical Engineering, University of Wisconsin, Madison.



Pathogens can be identified using single drops of patient samples from blood, urine, or other bodily fluids, said Renner.

Several of the authors have formed a company to build the device for North American markets, and to provide it at cost in the developing world.

Read more at the journal of *Applied and Environmental Microbiology*: *Detection of ESKAPE bacterial pathogens at the point-of-care using isothermal DNA-based assays in a portable, de-gas microfluidic diagnostic assay platform*. (doi: 10.1128/AEM.02449-16).

