

Dedicated to Global First Responders

CBRNE

NEWSLETTER



October 2017



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CBRNE-Terrorism Newsletter – 2017[©]

October 2017

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EDITOR'S CORNER





Editorial

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

Editor-in-Chief
CBRNE-Terrorism Newsletter

Dear Colleagues,

October was a full month with a bit of everything – mostly bad news ! But there were also some bright exceptions reminding us how great human mind is when working for the common good.

Terrorism grounds

- Greenpeace activists stormed VW cargo ship in the Thames Estuary in Kent – if they can do it imagine a group of armed terrorists on board of a commercial sea vessel there in the Mediterranean Sea.
- Drone crashed into Black Hawk in New York City – what if it was a Boeing turbine during take off or landing? Just waiting to happen – accidentally or on purpose.
- Frenchman on terror watchlist becomes police officer – Ops! Excusez-moi! Mon erreur!!
- Definition of terrorism: ... violence or intimidation in the pursuit of political goals! In that respect, if there is no political background there is no terrorism; just bad feelings!
- Cuba sonic attacks – still a mystery!
- Syrian migrant detained in Greece on Islamic State terror charge – it finally happened! We are now a normal European nation. Hope that we will deport him back to his beloved country instead of negotiating information in exchange of free meals at jail and more benefits for his family.
- Knife attack at Marseille (France) train station (3 dead).
- Van rams traffic barricade hitting policeman and injures four citizens (Canada)
- Las Vegas shooting during a country music festival – 59 killed; 527 injured
- French deradicalization program failed – what a surprise for all the nice people that believed in mind manipulation via kindness and promotional movies on how great our societies are!
- Lots of debate on lone wolves – not a word on lone sheep.
- Almost 90% of Syria is ISIS-free now – ISIS moves to Egypt (?) or Libya or SE Asia. The mentality is all over the world like volcanic ash.
- Should jihadists' families be prosecuted? Prosecuted – NO! Deported together with jihadist – YES!

CBR grounds

- Trump and Kim Jong Un continue to debate on how to start the third world war.
- Nuclear deal with Iran is at stake – again.
- North Korea might sell nuke technology or chemical weapons to terrorists in revenge for sanctions – this threat is logic enough to be considered as real.
- Ruthenium-106 in European skies – mystery!
- Anti-corruption blogger Daphne Caruana Galizia murdered by huge car bomb in Malta – yes! In Malta!
- Mogadishu (Somalia) truck bomb – 358 killed; 400 injured. European mass media so SILENT!
- Lots of discussion on fake news – perhaps a new form of terrorism (do not forget the political goal).
- Two referndums – one in Kurdistan and the other in Catalonia, Spain. Both positive for the cause but who cares about majority in democracies. Oil and profits – yes, these are very important issues in democracies!



- Pope Francis tells migrants: “You are worriers of hope!” – Really? Want some to bring hope at the Vatican? By some, I mean a few thousands from Greek islands. Please do!
- Change BC and AD to BCE and CE – if this is not British humor we have a tumor problem!
- Coming soon: Muslim public holidays in Germany – another tumor case.
- British Transport Police: only black and ethnic minority to hire – a third tumor case.
- Blackmailer poisons baby food in Germany – this is serious stuff!
- “Stop the Bleed” campaign – teaching bystanders to save lives – Excellent idea!
- Ring detecting explosives and biological/chemical compounds – Excellent product!

In Greece, the situation is the same: the country is still the BEST to visit but the WORST to live in! But the survival gene is still present and we hope that one day we will laugh about our past although now it seems that we laugh about our future.

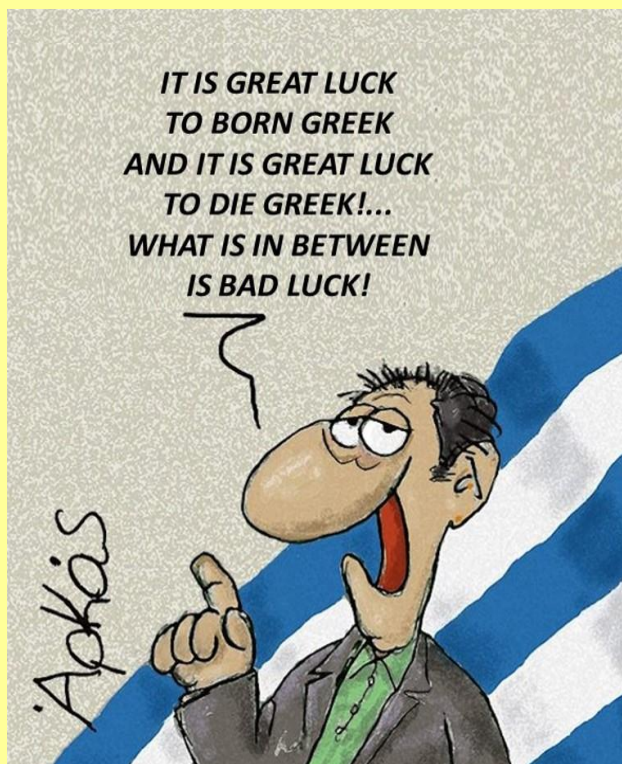
Together with 3 colleagues we created the “CBRNE Team GR” in order to spread the CBRNE knowledge to various first response organizations and entities. In Greece we have a saying: “When Mohamed is not going to the mountain, the mountain goes to Mohamed” – in that respect, we will try to awake all those involved in asymmetric operations and make them believe that it is better to be prepared than surprised or sorry. Our first 2-day course will be given to the 1st Disaster Response Special Unit (EMAK) of Hellenic Fire Service (4 and 5 November 2017). More details in the November issue of the Newsletter.



Finally, I would like to invite you to join the International CBRNE Institute in Belgium – we plan lots of specialized activities for 2018 and it would be great to do them together with you!

Take care First Responders because evil is all over and you are the few but the brave to fight it!

The Editor-in-Chief



New Anti-UAV Laser Successfully Tested

Source: <https://i-hls.com/archives/78796>

Sept 22 – A new development in the anti-UAV field has been attracting much interest. **A Lockheed Martin prototype laser weapon system proved that an advanced system of sensors, software and specialized optics can deliver decisive lethality against unmanned aerial vehicle threats.**

In tests conducted with the U.S. Army's Space and Missile Defense Command in August, the 30-kilowatt **class Athena (Advanced Test High Energy Asset) system** brought down five Outlaw unmanned aerial



systems at the Army's White Sands Missile Range in New Mexico. Athena employed advanced beam control technology and an efficient fiber laser in this latest series of tests of the prototype system.

"The tests at White Sands against aerial targets validated our lethality models and replicated the results



we've seen against static targets at our own test range," said Keoki Jackson, Lockheed Martin's Chief Technology Officer. "As we mature the technology behind laser weapon systems, we're making the entire system more effective and moving closer to a laser weapon that will provide greater protection to our warfighters by taking on more sophisticated threats from a longer range."

According to the company's announcement on its website, Lockheed Martin partnered with Army Space and Missile Defense Command on a cooperative

research and development agreement to test Athena.

The system defeated airborne targets in flight by causing loss of control and structural failure. Lockheed Martin and the Army will conduct post mission reviews, and data collected will be used to further refine the system, improve model predictions and inform development of future laser systems.

Athena is a transportable, ground-based system that serves as a low-cost test bed for demonstrating technologies required for military use of laser weapon systems. Lockheed Martin funded Athena's development with research and development investments. It uses the company's 30-kilowatt Accelerated Laser Demonstration Initiative (ALADIN) that



provides great efficiency and lethality in a design that scales to higher power levels. Athena is powered by a compact Rolls-Royce turbo generator.

Lockheed Martin is positioning laser weapon systems for success on the battlefield because of their speed, flexibility, precision and low cost per engagement, according to the company's announcement.

Next-Level Safe City or Privacy Violation?

Source: <https://i-hls.com/archives/78755>



Sept 20 – **Body cameras have their advantages in the safe city setting, but their contribution to security sometimes raises privacy dilemmas.** Jersey City police are giving body cams a second try after a first attempt three years ago failed.

When Jersey City police Officer Ameer Alateek prepares to go on foot patrol, which now includes a body camera in a cellphone, the cams will always be in action. "Anytime I have a community interaction, the camera will be in use," Alateek said.

The device is set to a mode that only allows it to function as a cop camera. The officer turns the camera on and the recorded footage streams directly to a secure server at the Police Department. "When we started exploring body cameras Google mentioned that they may have a solution. Would we be open to it? And we said, 'Yeah, we'll take a look,'" Jersey City Mayor Steven Fulop told newyork.cbslocal.com. Fulop added that the new system offers more data storage options than traditional body cams, which also helps lower the system's price by millions of dollars. "I think Jersey is a great place to try innovative solutions. It's big enough that you can actually see what happens and try different things, and it's small enough that if it doesn't work, you can adopt different solutions and change and adapt," the mayor explained.

Jersey City plans to roll out the cellphone cameras to all of its 932 officers in the fall. However, as officer Alateek who helped test them admitted, not all residents liked being recorded. "There are situations where there's service to calls and, and when we come in and we have the cameras on, they kind of get camera-shy and they don't want to deal with us," he said.

But Mayor Fulop said it is time to get used to it. He foresees a day when those phone cams might be worn by every New Jersey government employee who deals with the public.

"The quality of the service from our employees are going to be top-notch," Fulop said, "and I think that if anything slips, there's going to be a chance to review that and correct it."

American Civil Liberties Union privacy advocate Jay Stanley said that maybe taking things a bit too far. "Last time I checked, there hasn't been any housing inspectors that have shot unarmed black men," Stanley said. "There's no reason to have the privacy problems that come with these cameras for government employees that don't have that power that police officers have to shoot and kill".



Don't underestimate Kurdistan's resilience

By Ranj Alaaldin

Source: <https://www.brookings.edu/blog/markaz/2017/09/22/dont-underestimate-kurdistan-resilience/>

Sept 22 – Iraq's Kurdistan region will hold a referendum on Kurdish independence next week, which has been met with varying degrees of resistance from both the region and the international community. The international resistance to Kurdish self-determination is not a novel one, and has in fact been a hallmark of the Kurdish national struggle ever since the Kurds were deprived of their own state by imperial powers, which established the nation-state system in the Middle East from the ruins of the Ottoman Empire.



Prevailing state interests, international resistance to upsetting the balance of power in the region, and powerful, resource-rich armed forces at the disposal of the region's (Western-aligned) autocrats made it implausible for the Kurds to redraw the map of the Middle East. That paved the way for a century's worth of rebellions, countless atrocities, and genocide against the Kurds.

Yet, the Kurdish national liberation project in Iraq survived. Its survival stems in large part from the persecution the Kurds have suffered, which has strengthened the unifying thread of Kurdish nationalism and the morally and intellectually resilient cause of Kurdish self-determination. Its survival is also due to

geopolitics and a regional order that became beset with constant instability and conflict, opening up opportunities for external patronage and the development of personal and institutional ties with regional powers.

The Kurds: A recent history

The Kurds—who have been victims of dictatorship, human rights abuses, and systematic displacement, particularly under the Baath Party in Iraq, which killed scores of Kurds in the Halabja genocide and the wider al-Anfal operation—have championed their cause as one of the right to self-determination. This helped guarantee international recognition and legitimacy, and enabled a trajectory that has since moved them closer toward sovereignty. After Saddam Hussein's overreach and miscalculated invasions of Iran and Kuwait in the 1980s and in 1990, the Kurds were in a way rewarded: Having forced the Iraqi military out of Kuwait, the international community imposed a no-fly zone in northern Iraq to protect the Kurds. However, they also became their own enemies when civil war engulfed Iraqi Kurdistan in 1994, just two years after elections were held in the autonomous region and under the protection of the no-fly zone.



The civil war had costly political and humanitarian consequences, resulting in separately administered territories by the ruling Kurdistan Democratic Party (KDP) and Patriotic Union of Kurdistan (PUK). But Kurdistan remained intact. Regional powers did their best to undermine and destabilize the de-facto state, both before and after civil conflict, but this did not get them very far. Despite being better positioned than they are today, their threats to militarily eliminate Kurdistan never materialized.



Indeed, the four-year civil war should have signaled the end of the Kurdish state-building project, but it has proven resilient. Both commentators and policymakers in the West have historically disparaged the Kurds for their internal divisions, claiming they are incapable of self-governance and independence. But this is a demeaning, orientalist argument that colonial and regional powers have long used to suppress the legitimacy of Kurdish self-determination. It has not only proven ill-conceived, but fails to appreciate both the resilience of Kurdish state-building (which comes from a long history of pursuing statehood) and the nuances of Kurdish politics and socio-cultural dynamics.

Political division and unity

The KDP and PUK still have differences, but both were born from the Kurdish national movement. Both President Masoud Barzani (head of the KDP and son of the legendary Mullah Mustafa Barzani) and Jalal Talabani (the founder of the PUK, who is affectionately referred to by Kurds as Mam [uncle] Jalal) are Kurdish nationalists at their core. They perceive themselves and their parties as state-builders that strive for a Kurdish state.

These parties' forced coexistence has actually reinforced the resilience of the Kurdish de-facto state because they have needed to compromise. This political outlook and maturity helped the Kurds achieve the status of a democratic success story. While Kurdish politics and governance has been beset with corruption, poor governance, and nepotism, the Kurdish leadership spoke the language of pluralism and human rights and have strived to position their de-facto state in accordance with international norms in an effort to acquire international recognition and legitimacy. Even as far back as 2002, and in spite of divisions at the time between the KDP and PUK, the European Parliament endorsed the democratic experiment in Kurdistan for the first time.

In the same vein, the political outlook and consciousness of the 1990s ensured the Kurdish state-building project remained resilient after 2003 amid a series of additional challenges that followed the toppling of the Baath regime. This was in stark contrast to the groups that entered Baghdad from many decades of exile and took control of the Iraqi state. The Kurds not only had a more mature political process and a unifying thread, but also experience governing under two separately administered territories. Unlike the rest of Iraq and the experience of Baghdad's main parties after 2003, the two separately administered territories under PUK and KDP control during the 1990s provided the two parties with a prolonged period of governance that was not disrupted by personal and party-based rivalries.

The outlook for Kurdistan

Internationally, Kurdistan's resilience has been helped by a combination of sheer perseverance and luck. The Kurds were helped by the international, particularly American, commitment to toppling the Baath regime after 9/11, ensuring that there was both a moral and strategic imperative to sustaining the Kurdish de-facto state.

In the Middle East today, there has been a breakdown of state institutions and a growth in ungoverned spaces. In those spaces, anti-Western militias and jihadi terrorists have become predominant wielders of power and authority. This reality suggests that if Kurdistan declares independence, the United States is unlikely to abandon it, as that would allow America's enemies in the region to step in and fill the resulting gap by either destabilizing Kurdistan (and the region) or, alternatively, by expanding their own ties and influence over the Kurdish political landscape. Washington has learned painful lessons from its 2011 withdrawal from Iraq and Iran's resulting dominance in Iraq and the region.

That does not mean Iraq's Kurds can be complacent. Domestically, there are still divisions and jockeying over resources and power, as well as public dissatisfaction over services, corruption, bureaucracy, and nepotism. The failure to remedy divisions could exacerbate social discontent and polarization. Since its establishment, the opposition group Gorran has shown a capacity to disrupt Kurdish politics and stability in Kurdistan, meaning the party could also potentially constitute a spoiler for Kurdish independence, its own internal problems notwithstanding.

However, the political climate in Kurdistan is a fluid and dynamic one, as evidenced by Gorran's own factionalism, which has prevented the party from living up to its aspirations to become a viable opposition. Gorran's emergence has actually forced a revision of politics in



Kurdistan, requiring both main parties to rethink their interactions with the electorate, which has, in turn, enhanced the robustness of Kurdistan's political system.

The problem for the Kurdish state-building project is not so much the divisions between and among the parties, but rather the multiple centers of power that have emerged over the past 20 years, particularly as a result of the factionalism within Gorran and the PUK. As such, it could fall on the KDP (whose organization and ability to keep internal disputes "in-house" has given it a competitive advantage) to not only ensure its own political competitiveness in the coming years, but also to manage and mediate the internal politics of its rivals to move Kurdistan toward independence, post-referendum.

Ranj Alaaldin is a Visiting Fellow at Brookings Doha Center

Survey reveals scale of hostility towards Arabs in Britain

By Patrick Wintour (Diplomatic editor)

Source: <https://www.theguardian.com/uk-news/2017/sep/25/survey-reveals-scale-of-hostility-towards-arabs-in-britain>

Sept 25 – **The scale of hostility in Britain towards Islam and Arabs is revealed in a YouGov survey showing most UK voters believe Arabs have failed to integrate themselves into British society, and their presence has not been beneficial.**

The survey also shows that most voters back security policing based on assumptions about the likelihood of races to commit crimes – so-called racial profiling.

Only 28% believe migration from the Arab world has been beneficial to the UK, and 64% believe Arabs have failed to integrate.

The survey also shows most voters believe the number of refugees entering the UK from war-torn Syria and Iraq has been too high.

The three characteristics most closely associated with the Arab world by British people are gender segregation, wealth and Islam, with extremism and a rich history the next two identified characteristics. The degree of association with innovation or forward thinking is miniscule.

The poll, commissioned by the Council for Arab-British Understanding and the Arab News newspaper, also reveals scepticism about UK foreign policy in the region with only 15% of those surveyed saying they agreed that the UK's foreign policy in the Arab world had helped human rights and global security. **Only 13% believe UK foreign policy has been a stabilising force in the Arab world.**

An astonishing 85% say they regard the invasion of Iraq in 2003 by the UK and the US as a mistake, but there is still majority support for the current UK involvement in the air campaign against Islamic State in Iraq and Syria.

The weighted survey, due to be formally unveiled at a conference on Monday, was conducted among 1,200 people from a YouGov panel in August. The published results exclude "don't knows".

The emerging picture – fear, ignorance and hostility – underlines the tensions in UK society about attitudes to Islam and the Arab world in the UK, with the strong backing for racial profiling likely to disturb those worried by the civil liberties implications. **A total of 55% of voters regard it as right for the police to use racial profiling against Arabs or Muslims for security reasons.** Only 24% disagree. Racial profiling allows the security services to police on the basis of working assumptions about the likelihood of ethnic, religious or national groups to commit offences in the UK. Support for racial profiling among Conservative voters reaches 72%.

In a survey that also reveals widespread self-confessed ignorance about the Arab world, a total of 63% say they believe Arabs have failed to integrate themselves into western society and live in isolated communities. That belief is held by 78% of leave voters in the 2016 referendum, but also by 47% of Labour voters in the 2017 election.

Asked if migration from the Arab world has been beneficial to the UK, only 23% agree, 41% say it has not been beneficial and 32% say it has been neutral. Asked if Islamophobia is a growing issue in the UK, 72% agree.



The findings suggest UK voters' concern about migration is hardly likely to disappear after Brexit since much of it is directed at migration from outside the European Union.

For instance, 90% of Brexit supporters in 2016 believe the UK has taken too many refugees from Syria and Iraq. In total across all voting patterns 69% believe too many refugees have been taken in by the UK. Faisal J Abbas, editor in chief of Arab News, said the poll showed on the one hand a shocking lack of knowledge of the Arab world, with 81% of Brits saying they "know little or nothing" about it.

"On the other, it showed that Brits have some very strong opinions about key regional issues. Eight in 10 say Britain was wrong to go to war with Iraq; more than half believe the UK should recognise Palestine as a state, and the majority point to the rising problem of Islamophobia in the UK.

"What is concerning is that these opinions are based on very limited knowledge about the region. The Arab world is home to some of the poorest countries in the world, yet nearly a third of Brits associate it with being wealthy, far more than those who associate it with poverty. One may ask what impact such perceptions might have on aid decisions made by western governments."

EDITOR'S COMMENT: Oh! These Brits! So nationalists and snobs!

Show your face or face a fine: Austrian authorities distribute flyers about burqa ban

Source: <https://www.rt.com/news/404134-austria-burqa-ban-fine/>



Sept 21 – **As less than two weeks remain until the ban on Muslim face veils comes into force in Austria, the authorities decided to inform the citizens and foreign nationals about it once again by issuing statements and distributing flyers.**

"The Anti-Face-Veiling Act prohibits covering facial features in public by clothes or other objects in such a way that they are no longer recognizable," a statement, which will be included in the flyers to be distributed in airports upon arrival, as well as by police officers in public places, says.

The flyers, which include four languages – German, English, Arabic, and Turkish – will also warn both Austrian nationals and tourists that those **violating the new law face fines of up to €150** (US\$178).

The Austrian Interior Ministry also **issued** a similar statement on its website. The law is set to go into effect on October 1. According to the statement, *"all places, which can be accessed at all times or at certain times by a group of people not limited beforehand, including transport facilities such as bus, rail,*



air or maritime traffic,” are considered to be public and come under the provisions of the law. The statement also says that those found in violation of the law will be obliged to remove their face veils at the request of police, or be “taken to a police station by a police officer.”

Officers will be forbidden, however, to remove face veils by force.

The legislation, which is commonly referred to as a ‘burqa ban,’ also covers other headwear. People wearing balaclavas, covering their faces with scarves, or even wearing medical masks without sufficient reason could also be found in violation of the new law, according to the Wiener Zeitung.

The law exempts those covering their faces due to medical or safety reasons, as well as due to hazardous weather conditions such as smog. Participants of street carnivals and other “artistic, cultural or traditional events” are also exempted, along with athletes requiring face-covering gear.

Austria approved the ban on full face veils in May as part of a larger ‘integration law,’ which

the foreign ministry says is aimed at encouraging people to assimilate into Austrian culture.

“People are not judged by their country of origin but by their will to contribute to Austria. The main goal of this law is to promote and call for integration,” the foreign ministry said in a March press release.

The law drew criticism after it was initially proposed, with thousands taking to the streets to [protest](#) in February, chanting slogans such as “Hey minister! Hands off my sister!”

Islam is the fastest growing religion in Austria, with around 700,000 Muslims living in the country – twice as many as in 2001, according to AFP. Almost half of those are Turks, followed by Bosnians, Chechens, Syrians, and Afghans. Austria was also the first European country to recognize Islam as an official religion, but Vienna city councilor Omar al-Rawi told AFP on Thursday that today’s political parties always address Islam “in a negative context.”

French-Algerian millionaire vows to pay burqa ban fines for Muslim women in Austria

Source: <https://www.rt.com/news/404146-french-millionaire-austria-burqa-ban/>

Sept 22 – A French businessman of Algerian origin has called on Muslim women to defy the face veil ban in Austria, offering to pay all their fines. This comes two weeks before the ban enters force.

“I am reaching out to all women in Europe and especially to women in Austria who voluntarily wear the burqa, I will always be there and pay the fines,” Rachid Nekkaz, a French property dealer and a millionaire with Algerian roots, who says he is not personally a “face veil advocate,” told the Austrian Servus TV in an interview seen by Reuters. The interview will be aired on Thursday evening.

“If one accepts religious freedom, one must also accept the manifestations of religion,” he also said, adding that he seeks to protect the people’s right to openly demonstrate their religious beliefs, the Austrian APA news agency reports.

Nekkaz already pays fines for Muslim women wearing face veils in public places in defiance of

the ban in such countries as France, Belgium, the Netherlands and Switzerland. He even established a special organization called “*Touche pas à ma constitution*” (Do not touch my constitution) that settles these bills.

According to Nekkaz, he already spent around € 300,000 (\$360,000) covering face-veil fines in various countries.

His proposal, however, was slammed by Austrian authorities. Austrian Foreign Minister Sebastian Kurz already threatened the businessman with charges over “*incitement to commit an offense*.”

“We would certainly not let it happen,” Kurz said, adding that “those who would wear the niqab or burqa in Austria should expect to face the consequences,” APA reported.

The minister, who is also a leading candidate of the Austrian conservative Austrian People’s Party (OVP) at the forthcoming parliamentary elections, said that



Nekkaz's words should be examined for whether they constitute an "administrative offense," adding that the millionaire could also "face appropriate consequences."

"We will not tolerate any symbols that are aimed at establishment of a parallel society [in Austria]," Kurz said.

Austria approved the ban on full face veils in May, as part of a large "integration law" which the Foreign Ministry says is aimed at encouraging people to assimilate into Austrian

culture. The legislation comes into force on October 1.

However, the legislation called the "Anti-Face-Veiling Act," which is also commonly referred to as a "burqa ban," covers not only the conservative Muslim headwear, such as burqa or niqab. People wearing balaclavas, covering their faces with scarves or even wearing medical masks without sufficient reasons could also be found in violation of the new law.

Does the presence of uniformed police officers raise your threat profile?

By Fred Burton

Source: <https://www.policefoundation.org/does-the-presence-of-uniformed-police-officers-raise-your-threat-profile/>

Sept 21 – **Recently, at a speech and follow-up discussion with the global security department of a major multinational company, an interesting and lively discussion ensued over the topic of whether the presence of uniformed police officers increases the risk to a venue or location.**

The topic was raised in light of the police killings in Dallas and Baton Rouge coupled with the recent targeting of police vehicles and officers during violent demonstrations in St. Louis and Atlanta.

While targeting police officers is nothing new, these incidents seem to be occurring with disturbing frequency, both inside the United States and abroad. In Austin, Texas, in November, 2014, a gunman opened fire on the police headquarters building after also firing shots at the Mexican Consulate and the U.S. Courthouse. In July 2017, an NYPD officer was ambushed and murdered in the Bronx in an incident reminiscent of similar officer murders in 2014 and other ambushes of police officers in Iowa and Pennsylvania in November, 2016.

Although I don't think there is an easy answer, and most police departments have not directly confronted the issue, the fact that companies are raising the issue means that police departments should be as well.

Conventional wisdom centers on the logic that uniformed cops at corporate venues or special events act as a deterrent to violence, crime and even terror. In light of the latest attacks on police

officers, a new question has been raised — is the threat of dragging "cop haters" to your location or special event greater than the benefit of deterrence that comes with having a uniformed officer present?

As a former police officer and special agent, I think it depends on a range of variables; the question shouldn't be answered in a vacuum.

- ◆ Is tactical intelligence available that indicates a heightened threat against police in the area?
- ◆ Has there been recent violence targeting law enforcement personnel or assets?
- ◆ What about protests against cops?
- ◆ Has a baseline threat assessment been done to address these issues?
- ◆ Are other options available, such as off-duty cops in plainclothes or counter-surveillance assets?
- ◆ Can surveillance technology like drones or cameras assist in identifying potential problems?

Conducting a sober assessment of the threat, as much as that is possible in the situation, is critical, even if there are intelligence gaps.

A fascinating **recent study** by the FBI, "[The Assailant Study – Mindsets and Behaviors](#)," indicated that police killers discussed "the expressed desire to kill law enforcement" prior to carrying out their attack, in 28



percent of police killings, but it's not always possible to predict their movements.

Social media has also made the threat more nebulous, while transmitting potential triggers much more quickly. Inflammatory videos and images spread in social media obviously don't tell the whole story of any situation, but they can instigate bigger problems, especially in individuals who are already leaning toward violence. Additionally, emotionally disturbed individuals often direct threats against law enforcement officials; these situations can be exacerbated by social media.

I have always believed that having a uniformed presence, augmented with low-profile plainclothes surveillance assets, is the best model. The plainclothes assets can be used to

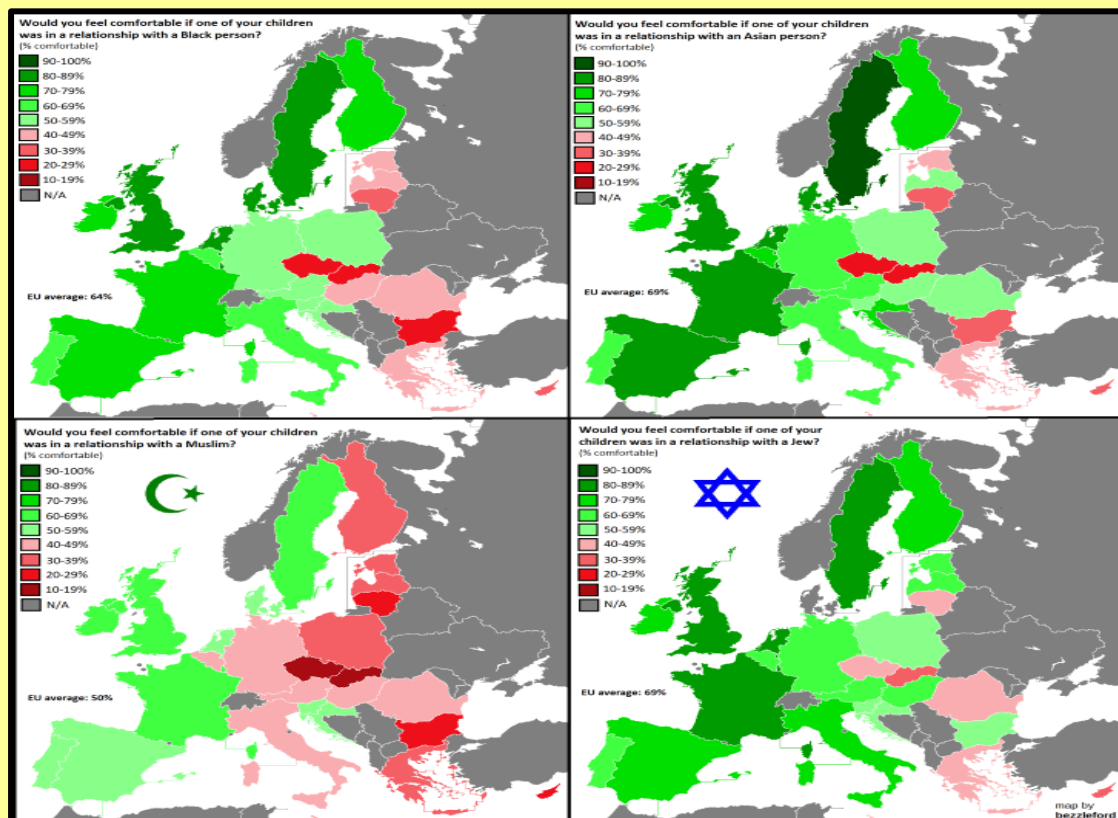
keep an eye on the uniformed officers' backs to help reduce the threat of an ambush-style attack. This combination model also served us very well in protecting VIPs and senior government officials, as I discussed in detail in my book *[Ghost: Confessions of a Counterterrorism Agent](#)* (Random House, 2008). The plainclothes officers can identify the threat in the outer ring of security before they approach or get to the marked units to cause harm.

In a perfect world, you could fill all intelligence gaps about likely threats. But in the real world, being aware that uniformed officers may draw more attention to some events and incorporating that possibility and alternative options into your planning may be the best solution.

Fred Burton is the chief security officer at Stratfor.com, the world's leading geopolitical intelligence platform. He is a former police officer, special agent with the U.S. State Department and New York Times best-selling author.

Would You Feel Comfortable If Your Child Was In A Relationship With X?

Source: <http://brilliantmaps.com/europe-relationships/>



Germany's newly elected populist, far-right AfD: We will fight an "invasion of foreigners"

Source: <http://www.homelandsecuritynewswire.com/dr20170926-germany-s-newly-elected-populist-farright-afd-we-will-fight-an-invasion-of-foreigners>

Sept 26 – Leaders of the populist, nationalist AfD party, which entered the Bundestag for the first time after Sunday federal election, have pledged to fight an "invasion of foreigners" with its new MPs.

Alexander Gauland, speaking in Berlin the morning after the election results came in, said his party would "uncompromisingly address" immigration, an issue the party has campaigned on since late 2015.

Despite its gains, the AfD is unlikely to survive in its current form. The party was created in 2013, and since its inception has been an uneasy coalition of traditional conservatives who left the Christian Social Union (CSU), which is the Bavarian affiliate of Chancellor Angel Merkel's Christian Democrats; blue-collar workers in the declining industrial areas of the former East Germany, and a motley collection of extreme nationalists, neo-Fascists, and neo-Nazis. The party's leadership includes Holocaust deniers, open anti-Semites, and avowed racists and Islamophobs.

Gauland himself has said many times that German guilt over the Holocaust – the dimensions of which he has consistently questioned – was "over done" (*kein anderes Volk habe "so deutlich mit einer falschen Vergangenheit aufgeräumt wie das deutsche"* [no other nation "had so clearly been 'cleaned up' with a false past as the Germans"] he said in September).

He [said](#) that the twelve years under Hitler – 1933-1945 – were not all bad, and that, in any event, Germany for too long had been "obsessed" with the Hitler period and should now let go (*"Man muss uns diese zwölf Jahre nicht mehr vorhalten. Sie betreffen unsere Identität heute nicht mehr. Deshalb haben wir auch das Recht, uns nicht nur unser Land, sondern auch unsere Vergangenheit zurückzuholen"* ["We do not have to hold on to these twelve years, they no longer affect our identity, so we have the right to bring back not only our country, but our past"]).

He also [said](#) that as is the case with the British and the French, *"haben wir das Recht, stolz zu sein auf Leistungen deutscher Soldaten in zwei Weltkriegen"* ("we have the right to be proud of the achievements of German soldiers in two world wars").

Earlier this year Gauland said that he would not want to live in the same neighborhood as Jerome Boateng, a right-back for Bayern Munich and the German national soccer team, because Boateng, who was born in Germany to a Ghanaian father and a German father, was black, and hence not a "real" German.

During the past year, as the party's strength in the polls has grown, the party's leadership has found itself embroiled in an increasingly intense infighting between more moderate and more extreme factions. The more moderate leaders, including the party's star Frauke Petri, wanted to emphasize economic issues and avoid talking about the Second World War and the alleged injustices the Allies had inflicted on Germany. The more extreme factions, led by Gauland, wanted to emphasize issues such as immigration, German identity, threats to the "purity" of the German people, and the dangers posed to the "genuine"

German culture and traditions by non-Christian, non-White immigrants and citizens of fellow EU member states who have "invaded" Germany and are threatening its character.

"One million people – foreigners – being brought into this country are taking away a piece of this country and we as AfD don't want that," Gauland told a press conference late Sunday. **"We say we don't want to lose Germany to an invasion of foreigners from a different culture. Very simple."**

Petri, who had fought in vain to purge Holocaust deniers from the party leadership at the local and state level, said on Monday that she would not caucus with the AfD delegation in the Bundestag, and said she would resign

her position as co-chairperson of the party. There are speculations that she would form an independent party with about twenty elected AfD members who were elected to the Bundestag.

WHAT
is
wrong
with
THAT?



Analysts note that Petri may have been motivated in part by her loss to Gauland earlier this year in the contest over who would be presented to the voting public as the party's "lead candidate." By forming an independent faction, Petri, who is 42, may be calculating that she would have more freedom to lead on issues important to her – and then rejoin and run for the leadership of the AfD in four years when Gauland, 76, would no longer be in the picture.

The AfD won 12.6 percent of the vote, with 6.6 million Germans voting for it. The party is expected to take 94 seats in the 709-member Bundestag, making it the third largest party after Merkel's CDU (33 percent) and the left-of-center SPD (20.5 percent).

The two leading parties were dealt a blow on Sunday. Angela Merkel will remain Germany's chancellor, but the 33 percent her CDU party gained was the worst result in about seventy years. The SPD, with 20.5 percent of the vote, saw its lowest level of support in more than fifty years.



Voice forensics to help Coast Guard nab hoax callers

Source: <http://www.homelandsecuritynewswire.com/dr20170928-voice-forensics-to-help-coast-guard-nab-hoax-callers>

Sept 28 – In 2014, when an anonymous caller cost the U.S. Coast Guard roughly \$500,000 by sending first responders on unnecessary rescue missions twenty-eight times, the agency asked the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) for help.

The U.S. Coast Guard receives more than 200 false distress calls a year over its Very High Frequency (VHF) radio channel 16 — the mariner's "911" — and the number is growing.

These false calls are not simply a nuisance: Every distress call the Coast Guard receives compels the federal agency to launch an expensive search-and-rescue effort involving at a minimum a small rescue boat, a C-130 fixed-wing aircraft or rescue helicopter, and the several Coast Guardsmen to operate them. The cost of each outing can run from \$10,000 to \$250,000. Small boats cost typically \$4,500 per hour to operate and helicopters - \$16,000.

"I have seen responses run into the three figure numbers quite often," said Marty Martinez, special agent in charge for the Chesapeake Region of the Coast Guard Investigative Service in Portsmouth, Virginia.

The penalty for transmitting a hoax distress call to the Coast Guard is up to six years in prison, a \$250,000 fine, a \$5,000 civil fine, and reimbursement to the Coast Guard for the cost of performing the search.

"The men and women of the Coast Guard put themselves at risk every time our surface and air assets respond to a call for assistance. Hoax callers place Coast Guardsmen at unnecessary risk," said Martinez.

"Also, hoax calls interfere with legitimate search and rescue cases, diverting assets from being available to help actual mariners in distress."

Besides wasting taxpayers' money in fruitless rescue operations, the pranksters also divert manpower and equipment from other critical missions such as drug interdiction and other law enforcement efforts.

S&T [notes](#) that in December 2014, S&T connected the Coast Guard with Dr. Rita Singh, who has collected a large repository of sound recordings of different voices and environments over the years. "They were looking for any information we could provide from the caller's audio signal because that was the only evidence they had," Singh said. She is a senior systems scientist at Carnegie Mellon University (CMU)'s Language Technologies Institute, which partners with the Center for Visualization and Data Analytics, an S&T Office of University Programs (OUP) Center of Excellence.

"We have a great partnership with S&T, and we knew CMU had the capability for voice forensics," said Alan Arsenault, chief of the Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance branch at the Coast Guard Research and Development Center.

"We looked at other technology such as mobile direction-finding capabilities and social media analyses tools, but this was really panning out to give us some great details for building a case file," Arsenault said.

In the event of a hoax call, the towers of Rescue 21, a communications management system for the Coast Guard, triangulate a geographical area. Coast Guard Investigative Service special agents will interview local mariners and seek information from local law enforcement in that area, seeking any information that may be useful in identifying the caller. The Coast Guard can even have the recorded call played by the local media to see if anyone recognizes

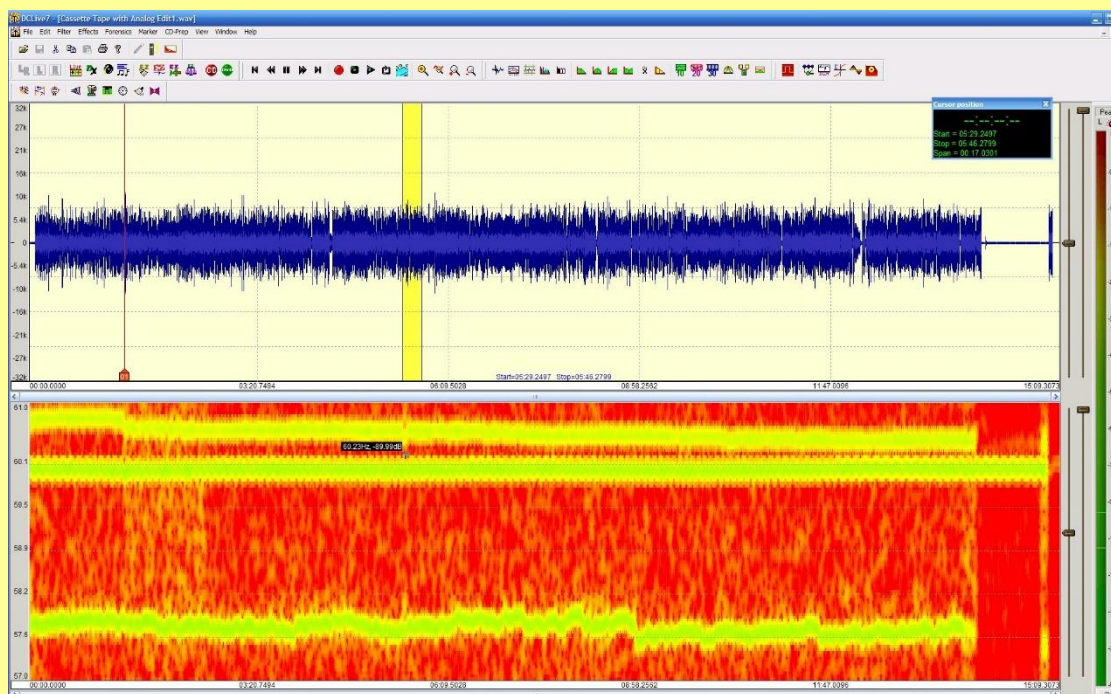


the voice. “It is basically good old detective work - only we are trying to identify a logical suspect based on a voice,” Martinez said. Then Dr. Singh comes in.

The Coast Guard specifically asked Singh to run the hoax calls through her repository, said Matthew Clark, Director of the S&T's OUP. “She came up with this long list of things she could tell S&T and the Coast Guard about the physical characteristics of the perpetrator and his environment.” The list included descent, age, height and weight background noise and the type of room where the call was made. “It is all based on voice and noise.”

“Profiling humans from their voice is a new area of research in voice forensics that is massively driven by recent advances in artificial intelligence,” said Singh.

The only evidence unidentified hoax callers leave behind initially is the raw recording. However, Singh's team can deduce many aspects of the callers using artificial intelligence techniques. Besides the obvious age, gender and ethnicity, they can also glean physical characteristics, health, emotional state, and even a person's educational level and socioeconomic status. The researchers can also profile the place from which the perpetrator makes the call – possible location, room size, type of objects present and the material of the walls, ceiling and floor – all based on background noise and voice echo.



“All this is useful information when you start identifying potential suspects and ask, ‘Does this person meet the characteristics Dr. Singh's team has pointed out?’” Martinez said.

But the Coast Guard still has to identify logical suspects. They go back to Singh with recordings of potential callers to match to the hoax call. If there is no match, Martinez's team has to reevaluate. If there is a match, they have to develop the evidence to place the suspect with the device at the location where the hoax call was made. “Although there is more investigative work to do after a voice match is made, now we are more focused in our efforts based in part on the voice analytics provided by CMU and Dr. Singh,” he said.

This collaboration is already producing results. “In several cases, Singh not only helped exclude potential suspects, but she also narrowed down our suspects to one or two individuals,” Martinez said.

Not a single case with voice forensic evidence has gone to trial yet, but Martinez thinks they are getting very close. He believes that very soon he will be able to include voice analytics as part of the evidence package in court. Currently, voice analytics has helped the Coast Guard focus on a suspect from the Maryland area. “We are slowly bringing the case to conclusion and hopefully prosecution.”



If the investigations are successful, this could lead to more widespread use of voice forensics. The resulting evidence could be used in well-publicized criminal prosecutions to deter other would-be hoaxers.

“Voice forensics is at the tipping point of being used as a piece of evidence, similarly to back in the day when DNA was not yet accepted as evidence,” said Arsenault.

After the Vote, Does the Kurdish Dream of Independence Have a Chance?

Source: <https://mobile.nytimes.com/2017/09/30/world/middleeast/kurds-iraqindependence.html>

Sept 30 — After a century of yearning, the Kurds of Iraq have managed, at last, to pull off a vote for independence, but not without antagonizing nearly everyone in perhaps the world’s most volatile region. The question now is whether an arid, landlocked proto-state dependent on hostile neighbors can overcome its own shortcomings — and Iraq’s disruptive retaliation — to build a viable path to independence.

With its troubled economy and dearth of democratic institutions, its prospects were already tenuous. Its best hopes lay in its oil reserves and American support, but Turkey has threatened to cut off its oil pipeline, and the relationship with the United States soured after the Kurds rebuffed its entreaties to cancel the vote.

Rather than negotiate and then seek international recognition, as the United States and others had asked, the Kurds forged ahead with the referendum.

But if anything, the vote, while satisfying the Kurds emotionally, may have set back their national aspirations.

Now, after a 93 percent “yes” vote on Monday, the Kurds are beseeching Baghdad to negotiate. Baghdad is not only refusing, but has demanded that the vote results be annulled and has moved to isolate the region, known as Kurdistan.

The last nation to win independence, landlocked South Sudan in 2011, has had a rocky start but at least was internationally recognized and had American backing. Kurdistan is all alone in a dangerous neighborhood.

For the Kurds, the vote was a potent and historic touchstone, a declaration to the world that they this is their moment and they are not turning back.

“This is an irreversible step toward independence,” said Peter W. Galbraith, a former American diplomat with close ties to the Kurdish leadership.

But the Kurds may have underestimated the depth of international opposition.

Before they had even stopped celebrating, Iraq and its two powerful neighbors, Turkey and Iran, immediately went to work to negate the vote. Iraq fears losing a third of its country, as well as oil and natural gas reserves. Turkey and Iran fear that independence for Iraq’s Kurds would embolden separatist ambitions among their own Kurdish minorities.

A Fight for Catalonia, Whatever That Means

Source: <http://www.terrorismwatch.org/2017/09/a-fight-for-catalonia-whatever-that.html>

Sept 30 — The question of secession that is being put to voters in Spain’s Catalonia region on Sunday is being seen as a political confrontation between Madrid and Barcelona, or Spain versus Catalonia.

Such a portrayal overlooks the social complexities and growing cleavages within the region of Catalonia itself, the lack of agreement in Madrid about how to respond to the secessionist movement, and the extent to which the debate over secession has also provoked irrational emotions that cannot be explained in political or economic terms.

In fact, as politicians on both sides have raised the stakes, they have forced a vast number of citizens to take sides in a dispute over national identity in which they had zero interest seven years ago when I arrived in Spain.





Back then, in speaking to people who were starting to struggle because of Spain's financial crisis, I found that many couldn't comprehend why politicians were awakening the demons of nationalism rather than solving more pressing issues like corruption and the country's growing income inequality.

EDITOR'S COMMENT: 2.2 mil voted 90% YES – 844 injured by Spanish mainland police forces; plastic bullets were fired against demonstrating crowd.

Pope Francis Tells Migrants: 'You Are Warriors of Hope'

Source: <http://www.breitbart.com/london/2017/10/01/pope-francis-tells-migrants-you-are-warriors-of-hope/>

Oct 01 – **Pope Francis flew to Bologna, Italy, Sunday and met with a large group of migrants and refugees, calling them "warriors of hope" while insisting that nations open broader avenues for immigration.**



During a full day in Bologna, Francis spent an hour meeting hundreds of migrants personally while posing with them for selfies under light drizzle. Later, the pontiff hosted a luncheon for asylum-seekers and prisoners in the St. Petronius basilica. He even donned a yellow plastic ID bracelet used by asylum-seekers to express his solidarity with them.

"Do you know what you are? You are 'warriors of hope!'" Francis exclaimed during his [address](#) to the many migrants present, urging them not to give in to disappointment or despair.

In his address, the Pope also offered his explanation of why he believes some people in Europe oppose mass migration, building on earlier statements in which he suggested that xenophobia was fueling people's concerns.



"Many do not know you and they are afraid," he said. "This makes them feel entitled to judge harshly and coldly while thinking they see well. But this is not true. We see well only with the proximity that comes from mercy. Without this, the other remains a stranger, even an enemy, and cannot become my neighbor." The Pope suggested that immigration is an issue that can only be understood by meeting the people involved, rather than considering its causes and effects from afar.

"From a distance, we can say and think anything, as easily happens when terrible phrases and insults are written across the internet," he said. "If we look upon our neighbor without mercy, we are unaware of his suffering, his problems."

"Today all I see is a great desire for friendship and help," the Pope continued. "I would like to thank the institutions and all the volunteers for the attention and commitment in taking care of those who are here." As he has done on other occasions, Francis recalled the words of the Gospel where Jesus Christ identified with the "least" among us.

"In you I see Jesus Christ, as with any stranger who knocks at our door, who identifies himself with the foreigner, of every age and condition, accepted or rejected," he said.

Regarding concrete applications of his words, the Pope said it is "necessary for more countries to adopt private and community-based welcoming programs and to open humanitarian avenues for refugees in the most difficult situations, to avoid unbearable waiting periods and lost time."

Last week, Pope Francis launched a two-year campaign to educate people about the plight of migrants and to provoke a "shift in thinking" toward them worldwide.

"Brothers, we mustn't be afraid to share the journey! We mustn't be afraid to share the hope!" Francis said in his weekly General Audience in Saint Peter's Square, in which he inaugurated the new project, titled "Share the Journey."

The campaign is being spearheaded by the global Catholic charities network Caritas Internationalis and aims at promoting awareness and action on behalf of migrants and refugees, assisting them in building connections with local communities.

In an address in the Vatican Saturday, Pope Francis seemed to ascribe people's concerns with Europe's migrant crisis to xenophobia, suggesting that a "culture of encounter" could remedy opposition to migration.

The Pope told members of the Association of National Italian Municipalities (ANCI) that he understands "the distress of many of your citizens in the face of the massive arrival of migrants and refugees."

This distress, he continued, "finds its explanation in an innate fear of the 'foreigner,' a fear exacerbated by the wounds caused by the economic crisis, the unpreparedness of the local communities, and the inadequacy of many measures taken in an emergency atmosphere."

"This discomfort can be overcome by offering meeting spaces and mutual knowledge," the pope said Saturday. "Initiatives that promote a culture of encounter, mutual exchange of artistic and cultural riches and the knowledge of newcomers' places and communities of origin are all welcome."

EDITOR'S COMMENT:

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How a TV Station Put Qatar on the Map

By Hilal Khashan

Source: <http://www.meforum.org/6945/how-a-tv-station-put-qatar-on-the-map>

Oct 01 – It wouldn't be outlandish to say that Al Jazeera is a political project masquerading in the guise of journalism.



شبكة الجزيرة الإعلامية
ALJAZEERA MEDIA NETWORK



A New Standard

The network couldn't have made its debut anywhere but Qatar. Ironically, though, it might never have gotten off the ground were it not for

government that didn't practice what it preached at home.

Qatar, after all, does not recognize pluralism. The government prohibits political parties and jails dissidents.

In 2012, a court in the country sentenced Mohammed al-Ajami, a poet, to life in prison for praising the Arab Spring uprisings. More recently, Qatari authorities have imposed travel restrictions on prominent human rights lawyer and activist Najeeb al-Nuaimi. Qatar's interest in promoting knowledge, democracy and liberty went no further than Al Jazeera's broadcasts.

But that didn't stop the network from achieving its goal. Al Jazeera made a splash in the Arab world, quickly setting itself apart from its rivals by giving its viewers what they wanted to hear rather than delivering the same dry, monotonous reporting. The network presented stories on issues that other outlets couldn't or wouldn't touch because of government censorship. As a result, its popularity grew. Knowing how to appeal to its audience gave the network far more political influence than Qatar itself exercised on the global stage, just as Doha intended.

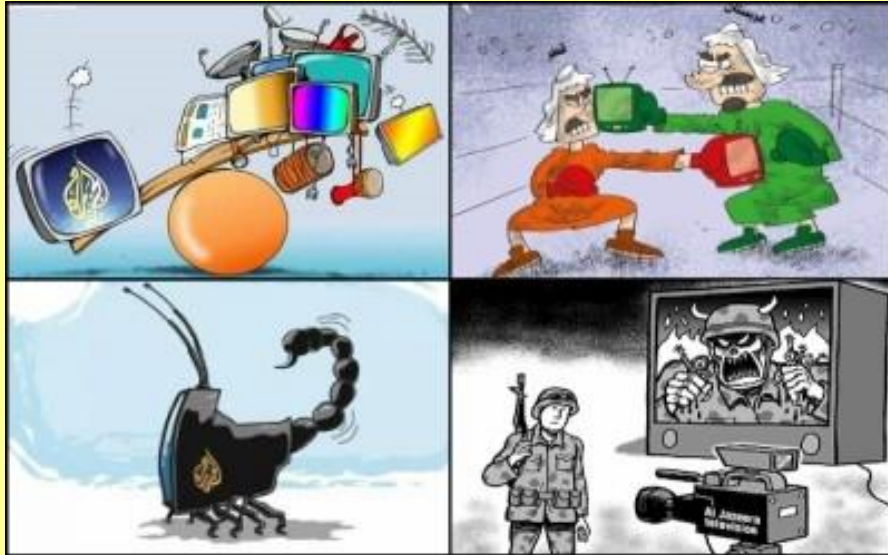
Saudi Arabia. In the 1990s, the kingdom decided to drop its sponsorship of BBC Arabic, which went too far in promoting political openness and critical reporting for the royal family's comfort. The decision put "150 talented BBC-trained Arab presenters, writers, producers and technicians" back on the job market, as the channel's former managing editor, Ian Richardson, recently explained in the *Guardian*, giving Al Jazeera its choice of skilled personnel.

Newly staffed up, the fledgling network fashioned itself after Sawt al-Arab (or "Voice of the Arabs"), the radio station that then-Egyptian President Gamal Abdel Nasser founded in Cairo in 1953. Qatar's emir hoped to use Al Jazeera, much as Nasser used Sawt al-Arab, to advance his image as the pre-eminent pan-Arab leader. To that end, the network adopted a mission in 2004 that prioritized truth and objectivity in its reporting to "support people's right to knowledge, and to strengthen the values of democracy and respect of liberties and human rights."

Al Jazeera's lofty claims stood in stark contrast to the emir's approach to governing. Critics denounced the project; to spend so much money spreading democracy throughout the Arab world seemed disingenuous for a

The Cost of Success

Even if the scope of its reportage is more liberal than that of its peers, however, Al Jazeera isn't immune to politics. The network revised its strategy and policies in 2007, to the detriment of its journalistic integrity. Three years later, five female presenters resigned from their positions at Al Jazeera, citing restrictions on their editorial autonomy among the reasons for leaving the station. (The resignees also complained of comments that higher-ups had made about their attire; Al Jazeera observes a strict and modest dress code.) One of the women, Lebanese TV anchor Lina Zahr Eddine, described the network as a political project par excellence — an account that came as little surprise. In recent years, the management has obstructed the editorial team's efforts to select its own topics for reporting.



Its claims to objectivity, in turn, have become more and more tenuous. During the Arab Spring uprisings, for example, Al Jazeera devoted more coverage to some protests than to others. It reported extensively on the events in Egypt and in Libya, where it sided with the demonstrators rallying against Moammar Gadhafi's administration. In Bahrain and Oman, by contrast, it took a more even-handed approach while downplaying the scale of the protests. And the network refrained altogether from reporting on the unrest in Saudi Arabia's Eastern Province — or on Saudi security forces' fierce response. Since Emir Sheikh Tamim bin Hamad al-Thani came to power in June 2013, he has taken further precautions to ensure that Al Jazeera doesn't offend Qatar's fellow GCC members. The channel has censored its reporting to avoid antagonizing its neighbors. Nevertheless, many of the bloc's rulers still view the network as a threat to the political stability they prize above all else. Qatar's critics in the

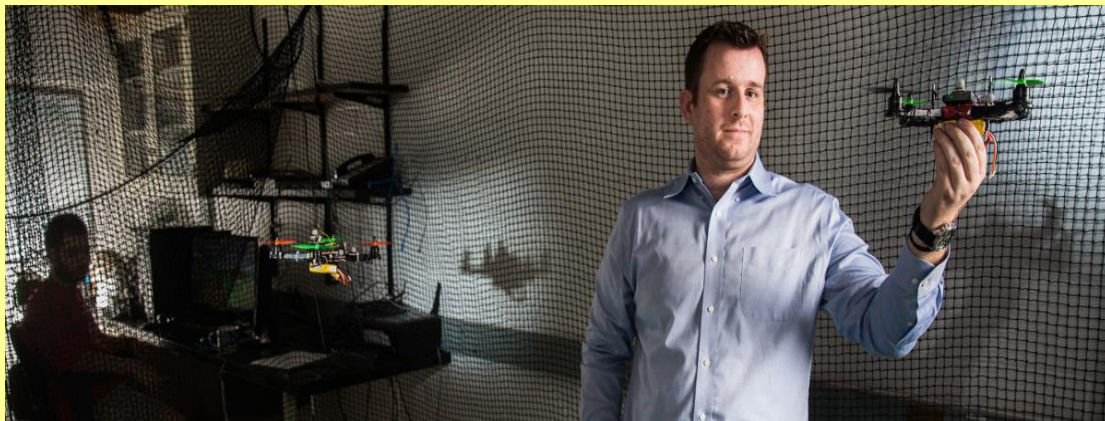
GCC have derided Al Jazeera as a propagator of confusion and hyperbole. Saudi Arabia, the United Arab Emirates and their allies in the blockade against Qatar, moreover, have called on Doha to shutter the outlet as a condition for resuming relations. The UAE minister of state for federal national affairs said in July that at the very least the news outlet must change its policies and practices if it is going to remain in operation. The Emirati minister for foreign affairs added that Abu Dhabi's complaints with Al Jazeera center not on differences of opinion but on the network's "inflammatory rhetoric," which incites "hatred and violence."

These comments speak to Al Jazeera's success as a tool to distinguish Qatar from its fellow GCC states and to buck Saudi Arabia's authority. But they also highlight the costs of that success. If Qatar wants to realize its ambitions as a leader in the Arab world and end the blockade against it, it may have to give up its quest for truth in broadcasting and yield to the Saudi political line.

Hilal Khashan is a professor of political science at the American University of Beirut and a fellow at the Middle East Forum.

Brain-controlled drones are here

Source: <http://www.homelandsecuritynewswire.com/dr20171004-braincontrolled-drones-are-here>



Oct 04 – Single unmanned autonomous vehicles (UAVs) directed by joysticks, radio controllers, and mobile phones are already accomplishing a variety of useful tasks, such as aerial photography and security patrols. But using multiple drones requires multiple human operators, and this presents a coordination problem.

Now a single operator using emerging human-brain interfaces can control a swarm of drones, making possible new classes of applications, according to Panos Artemiadis, director of the [Human-Oriented Robotics and Control \(HORC\) Lab](#) at Arizona State University.

Artemiadis believes that drone swarms using human-brain interface mechanisms will, in the next three to five years, make inroads where individually controlled UAVs cannot. ASU notes a few of the drone applications that are now within reach:



Search and rescue missions

Humans will collaborate with swarms of robots in search and rescue scenarios. The brain-robot interface enables control of many robots at the same time, and it scales the ability of a robotic team to cover larger areas in less time. If the controller detects something in the video stream that warrants closer surveillance, the swarm can be directed to close in on that area.



Fire fighting

Armed with infrared imaging equipment, a drone swarm can be used to track the spread of a forest fire over large areas in real time, allowing firefighters to adjust their plans accordingly. The human controller can follow a reported change in weather conditions, such as a shift in wind direction, with a swarm of drones to determine if the fire has jumped to a new area.

Agriculture analysis

Teams of drones will oversee and analyze large agricultural fields – creating topographic maps for soil analysis and irrigation planning. In addition to being outfitted with cameras, aerial drones will use sensors to identify necessary irrigation adjustments and scanners that can identify crop infections or infestations. Some drone systems are already being used for crop spraying – swarms will be able to accomplish the task more quickly and efficiently.

Entertainment

As drones enter the entertainment arena, we will begin to see mind-controlled drone swarms for events. For example, a single person could operate a fleet of drones shooting photos and videos at an outdoor concert or sports venue, narrowing in on spectator activities for display on the Jumbotron. And while Lady Gaga's Super Bowl drones were controlled by a central computer (and filmed in advance of the show), smaller swarms can be managed by a single human for smaller light displays or to drop gifts (t-shirts or CDs, for example) into a crowd.

Cyber-physical surveillance systems

Understanding brain-drone interfaces allows building cyber-physical surveillance systems that combine human intuition and experience with the sensing capabilities of multiple drones. This would allow more efficient and accurate surveillance systems than what is now available – especially for large, security sensitive events like bowl games, marathons and political rallies.

How America changed its approach to political Islam

By Shadi Hamid, Peter Mandaville, and William McCants

Source: <http://www.homelandsecuritynewswire.com/dr20171005-how-america-changed-its-approach-to-political-islam>

Oct 05 – Sometimes Islamist groups succeed. Sometimes they underperform. But they almost always matter. The United States thus needs answers for questions not just about the nature of Islamist movements, but also about the more politically difficult question of what the United States should do about them.

Shadi Hamid, Peter Mandaville, and William McCants [write](#) in *The Atlantic* that how the United States and Europe should respond—or even whether they should treat Islamist parties as distinctive in the first place—has been a contentious question since at least the



early 1990s. The Arab Spring, two decades later, brought this “Islamist dilemma” back to the fore, and Washington found itself, again, conflicted.

Hamid, Mandaville, and McCants continue:

Understanding the dilemma confronting the United States requires going back a few decades. Although we know from declassified State Department cables that the Egyptian Muslim Brotherhood was on Washington’s radar during the 1950s and 1960s, American foreign policy granted no particular significance to Islamists, other than to wonder whether their religious nature might make them useful partners in checking the spread of “Third World” socialism.

Political Islam did not attract serious attention from American officials until the 1979 Islamic Revolution in Iran. For some time, the events of that year shaped American understandings of Islamism even though Iran’s Shiite revolutionary ideology wasn’t in line with the orientation of most other Islamists and was highly atypical even within Shiite history and tradition.

The event that set the tone for U.S. policy toward Sunni Islamist movements (of the Muslim Brotherhood ilk) was the Algerian parliamentary election of 1991. When it became clear that the Islamic Salvation Front (FIS) was poised to win the two-thirds majority required to change the country’s constitution, the military intervened to annul the results, plunging Algeria into civil war for the better part of a decade. In a spring 1992 speech, Assistant Secretary of State Edward Djerejian indicated that the Algerian army’s



intervention had been prudent because Islamists coming to power through the ballot box would have been a case of “one man, one vote, one time.” In other words, Islamists would make instrumental use of the ballot box to capture the state, only to subsequently dismantle democracy.

Sunni Islamist movements, meanwhile, were evolving rapidly with the times. By the mid-1990s, there were clear signs that these groups could no longer be understood through the original vision of Islamist “founding fathers”—such as the Egyptian Hassan al-Banna or Pakistan’s Abul Ala Mawdudi. By the mid-2000s, Islamist parties had become fixtures in the mainstream politics of Morocco, Egypt, Palestine, Lebanon, Jordan, Yemen, and Kuwait. In Turkey in 2002, the Justice and Development Party (AKP), whose roots lay in Turkey’s Islamist movement, won its first landslide victory.

....

By the time the Arab uprisings toppled regimes in Tunisia, Egypt, and Libya in 2011, the United States had already begun thinking about a new approach toward Islamists. In 2010, the National Security Council began work on a Presidential Study Directive focused on the question of what a push for genuine political reform in the Middle East would look like—including the normalization of Islamists as political actors. The immediate challenge after the revolutions of 2011 was therefore not one of deciding whether to increase engagement with Islamists—the Obama administration had already come around on that issue—but rather the question of how and to what extent to undertake such a shift.

....

Whatever the Trump administration does (or doesn’t) do, political Islam will remain a potent social force and a lightning rod for regional politics. Today, Islamists constitute the ruling government in Morocco, a major opposition force in Jordan, and a significant political counterweight in Kuwait. A recent [Brookings poll of experts](#) suggested it likely that Islamists would return to power in Tunisia by 2020, and perhaps also in Syria and Yemen in the aftermath of those civil wars. If, or when, that happens, we will find ourselves having much the same debates. Hopefully, by then, we will have better



answers for a problem that will have plagued the United States for nearly three decades.

►► Read the full article at the [The Atlantic](#) (4 October 2017)

Shadi Hamid is a contributing editor at The Atlantic and a senior fellow at the Project on U.S. Relations with the Islamic World at the Brookings Institution. He is the author of Islamic Exceptionalism: How the Struggle Over Islam Is Reshaping the World, and a co-editor of the new book Rethinking Political Islam.

Peter Mandaville is a professor of international affairs at George Mason University and a nonresident senior fellow at the Brookings Institution. He is the author, most recently, of Islam and Politics.

William McCants is a senior fellow at the Brookings Institution, where he directs the Project on U.S. Relations with the Islamic World.

European Union ... sure!



Lazy Greeks!



Canada 33; Japan 33; USA 34; New Zealand 34; Israel 36; Chile 38; S Korea 40; Mexico 43.

Guns and common sense

By John Krull

Source: https://www.nuvo.net/voices/krull-guns-and-common-sense/article_a7cfc560-a9cf-11e7-8445-bb2e9786d639.html



Oct 05 – The National Rifle Association and its foot soldiers don't let a little thing like a mass outpouring of grief cloud their vision or divert them from their mission.

That's why, just hours after the gun-related carnage in Las Vegas, Nevada, in which at least 59 people died and another 527 were injured, Indiana Rep. Jim Lucas, R-Seymour – the NRA's main mouthpiece in the Hoosier state – argued that no possible change in gun laws could have prevented the slaughter out west.

His reasoning?

He said the shooter had passed a background check. Therefore, he reasoned, no gun law would have worked.

Keep in mind that Lucas and his cronies in the gun lobby have done everything they can to gut background checks.

That alone makes his assertion that background checks are proof gun laws can't work as credible as a vandal's complaint that an automobile's design is flawed because the car won't start after he's drained the gas tank and stolen the sparkplugs.

Even if that weren't true, Lucas's rush to suppress any discussion of sensible gun laws is as predictable as sunrise and as inevitable as sunset.

His response is right out of the NRA playbook. Rather than consider ways law-abiding gun owners' rights might be protected *and* lives might be saved through common-sense regulations, they refuse to consider the question from the outset.

Lucas's technique is a prime example.

He refuses to answer all questions about guns that cause concern among Americans.

Why are citizens of the United States 20 times more likely to be killed by a gun than citizens of other developed countries?

Why do we have so many mass shootings?

Why can every other developed nation but us solve this problem?

Instead, Lucas asks a question when he has no interest in hearing the answer, much less exploring it. He's said, repeatedly, that there is no gun law he ever would consider.

He says this is because armed self-defense is both a natural right and a bulwark against government tyranny.

By that reasoning, because most governments have nuclear and biological weapons, individuals should be allowed to own them, too. That certainly would make America's streets safer, now wouldn't it?

Furthermore, if armed self-defense is a natural right for all humans, then we Americans really shouldn't be so concerned about North Korea or any other rogue state developing nuclear missiles or any other weapons of mass destruction. In doing so, they, after all, just are exercising their natural rights.

Again, permitting an unstable and delusional dictator the means to destroy people by the millions doubtless will make the world a much safer place, too.

So, if we don't buy Lucas's NRA-approved (and, doubtless, NRA-generated) argument that everyone, regardless of how demented or malevolent, is entitled to have all the deadly weapons he or she wants, then answering the man's question about laws that might make a difference isn't that tough.

For instance, we could start by asking whether it's a good idea to allow anyone – such as the 64-year-old accountant who opened fire in Vegas – to stockpile dozens of weapons, including many, many automatic weapons.

The kinds of guns that murderer used aren't for hunting or even self-defense. Those kinds of weapons are designed simply to kill many, many human beings in a hurry. Anyone who owns one of those guns – much less more than a dozen of them – plans no good.

We regulate the sale of cold medications and maintain databases of the people who buy them. Why not weapons of mass slaughter?

If we had such a database, at the very least we'd know if someone was building an arsenal and take appropriate precautions.

But that's a common-sense way we might be able to save human lives without curtailing the rights of gun owners who mean their neighbors and fellow citizens no harm.

But that assumes saving lives is the priority.

In the NRA-driven fantasy world Lucas and his friends occupy, people aren't the priority.

Guns are.

That's why the man says he won't consider any gun restriction whatsoever, regardless of how



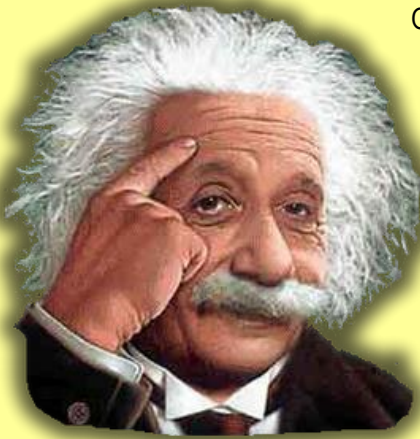
sensible, regardless of how many lives might be saved.

Jim Lucas says that's because guns don't kill. People do.

John Krull is director of Franklin College's Pulliam School of Journalism, host of "No Limits" WFYI 90.1 Indianapolis and publisher of TheStatehouseFile.com, a news website powered by Franklin College journalism students.

To BCE or not to BCE? Common era of BC and AD appears to be over

Source: <http://www.telegraph.co.uk/news/2017/10/01/bce-not-bce-common-era-bc-ad-appears/>



Oct 01 – **Schools across England are swapping BC and AD with BCE and CE over fears the terms could offend Christians, it has been claimed.**

A number of authorities have already adopted the policy, while several more are reported to be considering making the switch from the traditional to the more [politically-correct chronological](#) form compulsory.

Standing Advisory Councils for Religious Education (SACREs) from Brighton & Hove and East Sussex are among those which have recently recommended BC and AD should be removed from Religious Education classes in order to avoid offending those of other, non-Christian, faiths.

Schools in Essex already follow a syllabus which states, ["BCE and CE are now used in order to show sensitivity to those who are not Christians"](#).

East Sussex's 2017 RE syllabus states: "BCE (before the Common Era) and CE (the Common Era) were first brought into use in the sixth century and are now used in order to show sensitivity to those who are not Christians.

"Many Christians perceive BCE and CE to be an affront to Christianity. [However] BCE/CE is becoming an industry standard among historians. Pupils have to be able to recognise these terms when they come across them."

Despite taking the birth of Christ as its reference point, for centuries BC/AD played second fiddle even among Christian to local conventions such as the [foundation of Rome in 753 BC](#) or Emperor Diocletian's reforms of 284 AD.

The venerable Northumbrian monk Bede did much to popularise the counting backwards for dates 'Before Christ', though the idea took almost a millennium to gain general currency.

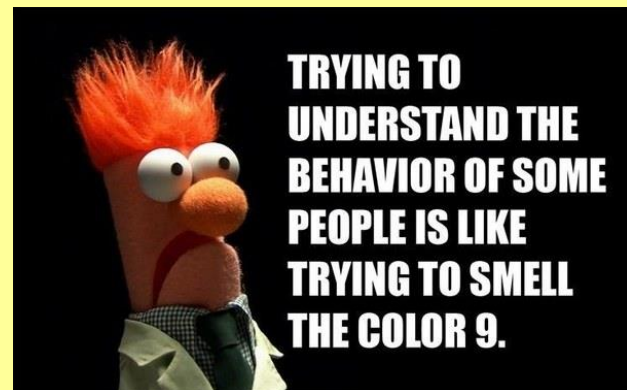
Anno aerae nostrae vulgaris - a phrase broadly consistent with ["common era"](#) - appears in an astronomical table devised by the German mathematician and astronomer Johannes Kepler in 1615.

SACREs were established in 1988 to advise local authorities' Children's Services in their statutory obligation to provide religious education in schools.

They are composed a four committees, representing the Church of England, other religious groups, teacher organisations and the local authority, and are responsible for reviewing the syllabus every five years.

Former Archbishop of Canterbury Lord Carey told The Mail on Sunday, 'I have never met a Muslim or Jewish leader who is offended by the Gregorian calendar' while leading Imam Ibrahim Mogra said: "I don't believe it causes Muslims offence."

Their remarks were echoed by a spokesman for the Board of Deputies of British Jews, who said: "I don't think anyone would mind if in mainstream schools they use BC and AD."



National Association of Standing Advisory Councils on Religious Education chair Paul Smalley said: "Individual SACREs and schools can make a judgment over which form of dating is appropriate. "NASACRE has no evidence that the use of BCE/CE has dramatically altered over several decades".

EDITOR'S COMMENT:

This box was intentionally left empty

EU Future from Germany schools...



Source: https://www.youtube.com/watch?time_continue=149&v=liZRsoFI9wc

'There is no Islamic tradition here': Politician's plan to introduce Muslim public holidays is met with furious backlash in Germany

Source: <http://www.dailymail.co.uk/news/article-4978042/German-politician-wants-Muslim-public-holidays.html>

Oct 13 – A senior German politician caused huge controversy today when he floated the idea of introducing Muslim public holidays.

Federal interior minister Thomas de Maizière said: 'I am ready to discuss whether we can introduce a Muslim holiday. It could very well be done.'

Speaking at a Christian Democratic Union Party campaign event, he pointed out that Germany celebrated several Catholic holidays such as All Saints Day and could do the same for Muslim holidays.

German interior minister Thomas de Maizière, pictured, said he is in favour of a partial burka ban which would prevent women from covering up when out in public and driving cars

He said: 'Why shouldn't we think about a Muslim public holiday in parts of the country where many Muslims live?'

de Maizière made the comments at campaign event for upcoming state elections in Lower Saxony, where Angela Merkel's CDU party is competing closely with the Social Democrats.

But the local CDU leader, Bernd Althusmann, disagreed with the idea.

He said: 'Public holidays have a long tradition in Germany, I don't see any need for a change to the current system.

Criticising the timing of the comments, he added: 'I don't think a discussion about religious holidays during election campaigning is appropriate.'

Alternative for Germany politician Beatrix von Storch tweeted: 'CDU wants Muslim holiday. This is different to the AfD: we say NO! NO! NO!'



And de Maizière's idea has been attacked by members of his own party. Wolfgang Bosbach has previously rejected the call, saying there was 'no Islamic tradition in Germany'. He pointed out that religious holidays in the country reflected the country's Christian heritage.

It is estimated that there are 4.7million Muslims in Germany making up almost six per cent of the population. Of these, 1.9 million are German citizens. Most of them are of Turkish origin and live in Berlin and other large cities.

EDITOR'S COMMENT: Watch this and you will understand the background of the article above: <https://www.youtube.com/watch?v=BAQ3yDaSoS4>

Man slams British Transport Police over recruitment workshops for minority groups

Source: <http://metro.co.uk/2017/10/11/british-transport-police-bans-white-men-from-its-recruitment-workshops-6992490/>



Oct 11 – An aspiring police officer has criticised the force for wanting to employ more women and people from ethnic minorities.

Yes, seriously.

The man accused the British Transport Police (BTP) of discrimination because the force held recruitment workshops open only to 'women and black or ethnic minority' candidates.

BTP said it hosted the events in London, Manchester and Birmingham to encourage more applications from minority groups.

But the candidate who applied for a job told Metro.co.uk: **'I am a white heterosexual male and also a member of the armed forces, how can a public service blatantly support this kind of discrimination and inequality in 2017?'**

'I am going to withdraw my application due to having been treated in such a manner.'

At the workshops, aspiring recruits receive help with application forms and mock tests, are given coaching, and have the chance to meet serving officers.



The BTP's website states: 'In line with our Positive Action initiative we are initially only offering this workshop to women and black/minority ethnic groups who are currently under-represented in the force.'

Simon Downey, director of capability and resources, said the workshops are 'designed specifically to speak directly to these groups' to encourage more people to apply.

He added that no one will face discrimination during the hiring process.

BTP wants to increase the number of women in senior posts and officers who are black or from an ethnic minority, which is currently about 10% of the workforce.

The Turkish Love-Hate Relationship with America

By Burak Bekdil

Source: <http://www.meforum.org/6964/turkish-love-hate-relationship-with-america>

Oct 10 – Turks often expose degrees of confusion when asked about their foreign policy preferences. A public opinion poll in the mid-2000s found that most Turks viewed the US as a threat to world security – but the same poll found that Turks expected the US, before every other ally, to come to Turkey's help if needed.

Conspiracy theories have always been abundant in the Turkish psyche. Schoolchildren grow up hearing maxims like "A Turk's only friend is another Turk" and "Our Ottoman ancestors had to fight seven worlds (the big powers)." According to this worldview, the world's major powers construct intricate conspiracies as they tirelessly plot to stop Turkey's rise.

In an age of rising populism, Turkish President Recep Tayyip Erdoğan has systematically fueled the common thinking that "the entire world is conspiring against us." His Islamist, anti-western, isolationist narrative is creating a vicious circle that threatens to take Turkey's foreign policy calculus hostage – not only today, but well into the future.

Until Erdoğan came to power in November 2002, most Turks would not have known or even been interested in the names of their foreign ministers. In the 1990s, I saw a group of party supporters clamor to kick the then foreign minister out of a party meeting, mistaking him for a journalist.

Erdoğan's ambitious neo-Ottoman ideology introduced foreign policy into Turks' daily lives. Coffeehouse talk changed from standard ruminations on inflation, joblessness, economic hardships, and football to pontifications about the Arab-Israeli dispute, the Arab Spring, the Syrian civil war, America, the EU, and Russia.

Two different surveys in 2011, conducted just after Erdoğan's party had won 49.5% of the national vote in a general election, found the following:

- 75% of Turks thought problematic relations between Islamic countries and the West were the West's fault
- 53% blamed poverty in Muslim countries on the West and America
- 82% had a negative opinion about Christians
- only 9% believed Arab groups had carried out the 9/11 attacks
- 41% thought the most violent religion in the world is Judaism
- 65% said they approved of Erdoğan's foreign policy

In August, the Washington-based Pew Research Center's global survey found that 72% of Turks saw America as a threat to their country's security. In Turkey, a NATO member state, the US is perceived as a greater threat than Russia or China. "America's influence is a top concern in Turkey," the survey read. "This figure [72%] is up 28 percentage points since 2013, when just 44% named US power and influence as a major threat."

Bizarrely, similar numbers of Turks view the US and ISIS as a threat to their country. Pew did not ask Turks about their perceptions of ISIS this year, but its **2015 research found that 73% of Turks had a negative opinion of ISIS and 72% had a negative opinion of America. (In that poll, 8% of Turks had a favorable opinion of ISIS while 19% had no opinion.)**

The explanations for anti-Americanism vary in different countries. For instance, in Greece, the sentiment is a largely historical phenomenon, as many blame the violent Greek civil war



on the US. In Turkey, it has a different nature. As Turkish society becomes more and more ethnically and religiously conservative and xenophobic, anti-American thinking gains ground and spreads to more segments of the society. Erdoğan's populist rhetoric only makes things worse.

"It [the presumed American hostility toward Turkey] is because we are Muslim," a schoolteacher explained to me when I asked her why she thought America was conspiring against Turkey. Her husband, a government banker, broadened the issue: "Also because we [Turkey] stand against the Jewish oppression of the Palestinians ... America doesn't like this."

Such theories, pumped up by Erdoğan and his powerful media machinery, are quite palatable to the conservative masses, making this kind of manipulation a winning game for Erdoğan. The more Turks feel "imperial" again – the more they believe they have a strong leader and government at long last – the more votes Erdoğan can garner.

In this game, Erdoğan has to show that he really cares about "my nation's foreign policy preferences" – a concern he does in fact share. The deal he offers is to make voters feel proud again in exchange for their support. All Erdoğan has to do is give the impression that he is fighting the world powers, America included. He then tells the world powers in private that they should ignore his rhetoric, which is only for domestic consumption.

"Still, since taking power in Ankara in 2002, Erdoğan's Justice and Development Party (AKP) has mainstreamed anti-Americanism," wrote Soner Cagaptay, director of the Turkish Research Program at The Washington Institute.

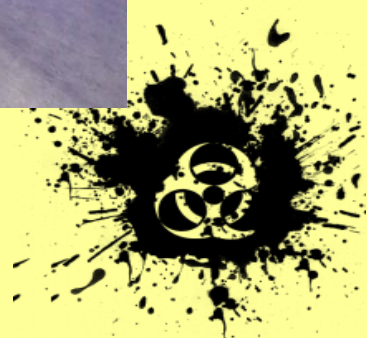
Erdoğan's generation of Islamists was anti-American largely because of the Arab-Israeli dispute, although they feared Soviet communism more than American imperialism. **Future generations of Turkish Islamists will hate America even more because they will have gone through long years of indoctrination by a beloved leader and his powerful propaganda machine.**

One of the schoolboys who today admires the "great leader" and his brave fight against "the Satan" will one day become his country's foreign minister, prime minister, or president.

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

Dubai Police hoverbike!

Source: https://www.youtube.com/watch?v=aivvwBM5h_Y

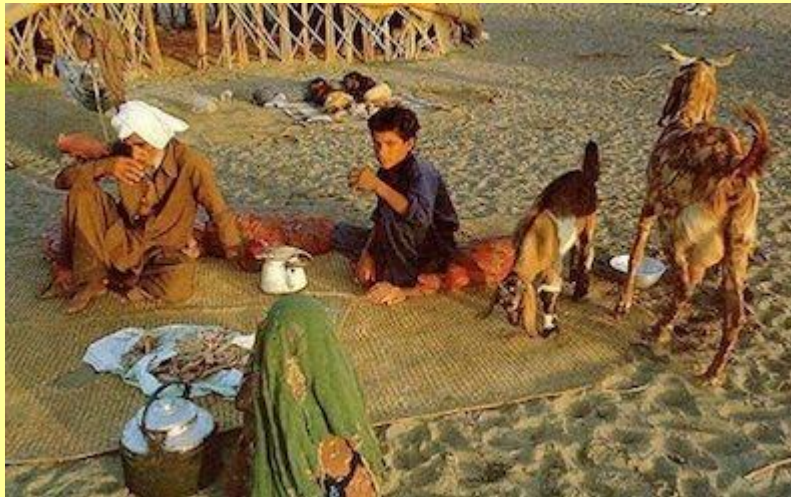


Why There Is No Peace in the Middle East

By Philip Carl Salzman

Source: <http://www.meforum.org/6965/why-there-is-no-peace-in-the-middle-east>

Oct 14 – Living as an anthropologist in a herding camp of the Yarahmadzai tribe of nomadic pastoralists in the deserts of Iranian Baluchistan clarified some of the inhibitions to peace in the Middle East. What



one sees is strong, kin-based, group loyalty defense and solidarity, and the political opposition of lineages, whether large or small.^[1] This raised the question how unity and peace could arrive in a system based on opposition.

A Baluchi nomad family in eastern Iran

Peace is not possible in the Middle East because

values and goals other than peace are more important to Middle Easterners. Most important to Middle Easterners are loyalty to kin, clan, and cult, and the honour which is won by such loyalty. These are the cultural imperatives, the primary values, held and celebrated. When conflict arises and conflict-parties form based on loyal allegiance, the conflict is regarded as appropriate and proper.

The results of absolute commitment to kin and cult groups, and the structural opposition to all others, can be seen throughout Middle Eastern history, including contemporary events, where conflict has been rife. Turks, Arabs and Iranians have launched military campaigns to suppress Kurds. Meanwhile, Christians, Yazidis, Baha'is and Jews, among others, have been, and continue to be ethnically cleansed. Arabs and Persians, and Sunnis and Shiites, each try to gain power over the other in a competition that has been one of the main underlying factors of the Iraq-Iran war, the Saddam Hussein regime, and the current catastrophe in Syria. Turks invaded Greek Orthodox Cyprus in 1974 and have occupied it since. Multiple Muslim states have invaded the minuscule Jewish state of Israel three times, and Palestinians daily celebrate the murder of Jews.

Some Middle Easterners, and some in the West, prefer to attribute the problems of the Middle East to outsiders, such as Western imperialists, but it seems odd to suggest that the local inhabitants have no agency and no responsibility for their activities in this disastrous region, high not only in conflict and brutality, but low by all world standards in human development.

If one looks to local conditions to understand local conflicts, the first thing to understand is that Arab culture, through the ages and at the present time, has been built on the foundation of Bedouin tribal culture. Most of the population of northern Arabia at the time of the emergence of Islam was Bedouin, and during the period of rapid expansion following the adoption of Islam, the Arab Muslim army consisted of Bedouin tribal units. The Bedouin, nomadic and pastoral for the most part, were formed into tribes, which are regional defense and security groups.^[2]

Bedouin tribes were organized by basing groups on descent through the male line. Close relatives in conflict activated only small groups, while distant relatives in conflict activated large groups. If, for example, members of cousin groups were in conflict, no one else was involved. But if members of tribal sections were in conflict, all cousins and larger groups in a tribal section would unite in opposition to the other tribal section. So, what group a tribesmen thought himself a member of was circumstantial, depending on who was involved in a conflict.



Relations between descent groups were always oppositional in principle, with tribes as a whole seeing themselves in opposition to other tribes. The main structural relation between groups at the same genealogical and demographic level could be said to be balanced opposition. The strongest political norm among tribesmen was loyalty to, and active support of, one's kin group, small or large. One must always support closer kin against more distant kin. Loyalty was rewarded with honour. Not supporting your kin was dishonourable. The systemic result was often a stand-off, the threat of full scale conflict with another group of the same size and determination acting as deterrence against frivolous adventures. That there

were not more conflicts than the many making up tribal history, is due to that deterrence.



Bedouin men in Abu Dhabi.

There was no group and no loyalty above the tribe or tribal confederation until the rise of Islam. With Islam, a new, higher, more encompassing level of loyalty was defined. All people were divided between Muslims and

infidels, and the world was divided between the *Dar al-Islam*, the land of believers and peace, and *Dar al-harb*, the land of unbelievers and war. Following the tribal ideology of loyalty, Muslims should unite against infidels, and would receive not only honour, but heavenly rewards.

Honour is gained in victory.^[3] Self-sacrifice in the attempt is lauded, but honour comes from winning. Having lost and being a victim is not an esteemed position in Arab society. Having lost in a political struggle results in loss of honour. This is felt deeply as a loss that should be corrected. Losing is regarded as deeply humiliating. Only the prospects of a future victory and the regaining of honour drives people forward. An example is the Arab-Israel conflict, in the course of which the despised Jews repeatedly defeated the armies of Arab states. This was not so much a material disaster for the Arabs, as it was a cultural one in which honour was lost. The only way to regain honour is to defeat and destroy Israel, the explicit goal of the Palestinians: "from the [Jordan] river to the [Mediterranean] sea." This why no agreement over land or boundaries will bring peace: peace does not restore honour.

None of this is unknown to Arab commentators, who repeatedly refer to the tribal nature of their culture and society. Of course, today, few Middle Easterners live in tents and raise camels, but villagers and urbanites share the same tribal assumptions and values. According to the Tunisian intellectual Al-Afif al-Akhdar, the Arabs cherish their "deep-culture of tribal vengefulness" and consequent "fixated, brooding, vengeful mentality."^[4] Former Tunisian President Moncef Marzouki [has said](#) that "We need an ideological revolution; our tribal mentality has destroyed our society."

Dr. Salman Masalha, an Israeli Druze literary intellectual, [argues](#):

The tribal nature of Arab societies is deeply embedded in the past, and its roots date back through Arab history to the pre-Islamic era. ... Since Arab societies are tribal in nature, the various forms of monarchies and emirates are the natural continuation of this ingrained social structure in which tribal loyalty comes before all else.

Mamoun Fandy, an Egyptian-born American scholar, [wrote](#) in the Saudi newspaper *Asharq Al-Awsat*:

The Arabs, even after the arrival of Islam, were never "ideological" people who sought to develop an intellectual vision of ourselves and the outside world. Instead, we are the people of blood relations and family ties, or "Shalal" as we call it in Egypt. ... Despite the fact that Islam was the greatest intellectual revolution in our history, we, as Arabs, have succeeded



in adapting Islam to serve the tribe, the family, and the clan. Islamic history began as an intellectual revolution, and as a history of ideas and countries; however, after the beginning of the Orthodox Caliphate, it was transformed into a somewhat tribal state. The State of Islam became the Umayyad State, and after that the Abbasid, the Fatimid, and so on and so forth. This means that we now have a history of tribes instead of a history of ideas. ... Has this tribal history, alongside tribal and family loyalties and the priority of blood relations over intellectual relations gone forever after the "Arab spring?" Of course not; what has happened is that the families and tribes have dressed themselves up in the cloak of revolutions in Yemen and in Libya, and in Egypt the opposition consists of tribes rather than concepts.

The history of the Middle East, the centuries of tribal wars, and the ongoing fissures in Arab society all testify to the Arab tribal culture and structural opposition. There may have been good reasons to stick with tribal culture and organization in pre-modern times: states and empires were despotic, exploitative, and heavily dependent on slave-labor, and tribal organization gave some people a chance to remain independent. In recent times, with the modern state model, governments in the Middle East have tried to establish states, but these have foundered on tribal loyalties and oppositions, which do not fit with constitutional states. Rulers in the region have all turned to coercion to maintain their positions, making all Muslim states in the region despotic.

Many Middle Easterners see the disasters around them, and blame outsiders: "It is the fault of the Jews"; "The British did this to us"; "The Americans are to blame." [5] Many Western academics and commentators say the same, dignifying this counter-historic theory with the label "postcolonialism."

But given that tribal dynamics were dominant in the region for a thousand years since the foundation of Islam, and thousands of years before that, blaming outsiders for regional dynamics is hardly credible. Nonetheless, "postcolonialists" will claim that pointing to regional culture as the foundation of regional dynamics is "blaming the victim." We in the West, unlike Middle Easterners, love "victims." But what if Middle Easterners are victims of the limitations and shortcomings of their own culture?

Notes

[1] Philip Carl Salzman, *Black Tents of Baluchistan*, Washington, DC: Smithsonian Institution Press, 2000.

[2] Philip Carl Salzman, *Culture and Conflict in the Middle East*, Amherst, NY: Humanity Books, 2008.

[3] Frank Henderson Stewart, *Honor*, Chicago: University of Chicago Press, 1994.; Gideon M. Kressel, *Ascendancy through Aggression*, Wiesbaden: Harrassowitz, 1996.

[4] Quoted in Barry Rubin, *The Long War for Freedom: The Arab Struggle for Democracy in the Middle East*, Hoboken, NY: Wiley, 2006, 80-81.

[5] Ayaan Hirsi Ali, *Infidel*, NY: Free Press, 2007, p. 47.

Philip Carl Salzman is a professor of anthropology at McGill University and a fellow at the Middle East Forum.

Saving NATO from Turkey

By Daniel Pipes

Source: <http://www.meforum.org/6969/saving-nato-from-turkey>

Oct 17 – The North Atlantic Treaty Organization, known as NATO, faces an existential problem. No, it's not about getting member states to fulfill agreed-upon spending levels on defense. Or finding a role after the Soviet collapse. Or standing up to Russia's Vladimir Putin. Rather, it's about Recep Tayyip Erdoğan, the Islamist, dictatorial ruler of Turkey whose policies threaten to undermine this unique alliance of 29 states that has lasted nearly 70 years.

Created in 1949, NATO's [founding principles](#) ambitiously set out the alliance goal of "safeguard[ing] the freedom, common heritage and civilization of [member states'] peoples, founded on the principles of democracy, individual liberty and the rule of law." In other words, the alliance exists to defend Western civilization.

For its first 42 years, until the USSR collapsed in 1991, this meant containing and defeating the Warsaw Pact. Today, it means containing and defeating Russia and Islamism.



Of these latter two, Islamism is the deeper and longer-lasting threat, being based not on a single leader's personality but on a highly potent ideology, one that effectively succeeded fascism and communism as the great radical utopian challenge to the West.

Some major figures in NATO appreciated this shift soon after the Soviet collapse. Already in 1995,



Secretary-General [Willy Claes](#) noted with prescience that "Fundamentalism is at least as dangerous as communism was." With the [Cold War](#) over, he said, "Islamic militancy has emerged as perhaps the single gravest threat to the NATO alliance and to Western security."

In 2004, [José María Aznar](#),

Spain's former prime minister, warned that "Islamist terrorism is a new shared threat of a global nature that places the very existence of NATO's members at risk." He advocated that NATO focus on combating "Islamic jihadism and the proliferation of weapons of mass destruction" and called for "placing the war against Islamic jihadism at the center of the Allied strategy."

But, instead of a robust NATO on the Claes-Aznar model leading the battle against Islamism, it was internally hobbled by Erdoğan's opposition. Rather than assert the fight against Islamism, the other 28 members dismayingly deferred to the Islamist within their ranks.

The 28 stay mum about the near-civil war the Turkish regime wages in southeastern Anatolia against its own Kurdish citizens. The emergence of a [private army](#) (called [SADAT](#)) under Erdoğan's exclusive control seems not to bother them.

Likewise, they appear oblivious to Ankara's unpredictably limiting access to the NATO base at Incirlik, the obstructed relations with friendly states such as Austria, Cyprus and Israel, and the vicious anti-Americanism symbolized by the [mayor of Ankara](#) hoping for more storm damage to be inflicted on the United States.

Maltreatment of NATO-member state nationals hardly bothers the NATO worthies: Not the arrest of 12 Germans (such as Deniz Yücel and Peter Steudtner) nor the attempted assassination of Turks in Germany (such as Yüksel Koç), not the seizure of Americans in Turkey as hostages (such as Andrew

Brunson and Serkan Gölge), nor repeated physical violence against Americans in the United States (such as at the Brookings Institute and at Sheridan Circle).



[The entrance to Incirlik Air Base in Turkey](#)

NATO seems unfazed that Ankara helps Iran's nuclear program, develops an Iranian oil field, and

[transfers Iranian arms to Hezbollah](#). Erdoğan's talk of joining the Moscow-Beijing dominated [Shanghai Cooperation Organization](#) ruffles few feathers, as do joint exercises with the



Russian and Chinese militaries. A Turkish purchase of a Russian missile defense system, the S-400, appears to be more an irritant than a deal-breaker. A [mutual U.S.-Turkish ban on visas](#) fazed no one. NATO faces a choice. It can, hoping that Erdoğan is no more than a colicky episode and Turkey will return to the West, continue with the present policy. **Or it can deem NATO's utility too important to sacrifice to this speculative possibility, and take assertive steps to freeze the Republic of Turkey out of NATO activities until it again behaves like an ally.** Those steps might include:

- ◆ [Removing nuclear weapons](#) from Incirlik
- ◆ Closing NATO's operations at Incirlik
- ◆ Canceling arms sales, such as the [F-35 aircraft](#)
- ◆ Excluding Turkish participation from weapons development
- ◆ Not sharing intelligence
- ◆ Not training Turkish soldiers or sailors
- ◆ Rejecting Turkish personnel for NATO positions

A unified stance against Erdoğan's hostile dictatorship permits the grand NATO alliance to rediscover its noble purpose of "safeguard[ing] the freedom, common heritage and civilization" of its peoples. By confronting Islamism, NATO will again take up the mantle it has let down of late, nothing less than defending Western civilization.

Daniel Pipes is president of the Middle East Forum.

Sending robot squads into danger zones

Source: <https://gcn.com/articles/2017/10/17/dig-it-robotics-dtra-top-layer.aspx>



Oct 17 – As the number of unmanned vehicles available for military missions continues to multiply, an obvious challenge arises: Who is going to control all those robots?

The Defense Threat Reduction Agency is addressing that need with a system that allows a single operator to control a semi-autonomous convoy of robot systems for intelligence, surveillance and reconnaissance missions. The "top layer" solution creates a mesh communication network among the robotic vehicles, enabling the convoy to instinctively follow its designated leader and providing a resilient communications network that can function in urban and subterranean environments.

Real-time mapping becomes more effective, and the group of vehicles can adapt if some are destroyed or disabled.

For the agency, such convoys bring obvious benefits when seeking to discover and dispose of explosives, possible weapons of mass destruction and other dangerous materials. But the technology, developed by Roboteam to be used with its various robot systems, has broader applications on the battlefield and in first responder situations.



Turkey Is Behaving like an Enemy Now

By Michael J. Totten

Source: <http://www.meforum.org/6970/turkey-is-behaving-like-an-enemy-now>

Oct 12 – Turkey, along with the American-Turkish relationship, is going so far off the rails so quickly right now that there's no chance you're aware of everything that's going on unless you track it professionally or get Google Alerts in your inbox.

Where to even begin? We could start, I suppose, with the fact that a Turkish court [sentenced a Wall Street Journal reporter to two years in prison](#) in absentia for "promoting a terrorist organization." Her real crime? Interviewing and quoting members of the Kurdistan Worker's Party (PKK). In other words, doing her job. The reporter, Ayla Albayrak, is in the United States now, so President Recep Tayyip Erdoğan can't get his grubby mitts on her, but let this be a lesson to all journalists who write about Turkey. *You can and will be sentenced to prison.*

Whether or not you're a journalist, Americans can be sentenced to prison just for existing in Turkey.

Last year, the government arrested and imprisoned American pastor Andrew Brunson, who has lived there for decades, on bogus terrorism charges. He is being warehoused along with thousands of other innocent people for allegedly associating themselves with Fethullah



Gülen, the Turkish cleric and former Erdoğan ally who is currently living in exile in rural Pennsylvania and blamed for the botched military coup last summer.

Lest you believe these people might actually be guilty of something, consider this: A NASA scientist is also currently jailed there. The authorities arrested him while he was visiting on vacation. The evidence against him? Having an account at a bank supposedly "linked" to Gülen, whatever the hell that's supposed to mean, and for having a one-dollar bill in his pocket, which is supposedly how Gülenists identify themselves to each other.

These are just three of the individuals gratuitously punished by the regime. There are tens of thousands more who have been purged from their jobs, imprisoned or both.



Two Americans jailed by Turkey on trumped up terrorism charges: pastor Andrew Brunson (left) and NASA scientist Serkan Golge.

If you've ever seriously wondered if political leaders who wallow in conspiracy theories are dangerous or simply exasperating, look

no farther than Erdoğan. Conspiracy theorists who manage to bend a state to their will are capable of inflicting extraordinary amounts of destruction on a virtually limitless number of people.



I have reported from police states in the past. I risked deportation for doing so, not imprisonment, even in communist countries. When it comes to the treatment of journalists, the Turkish government is more oppressive even than China's or Cuba's. Turkey has in fact [jailed more journalists than any other country in the entire world](#). Erdoğan says they're all terrorists. Probably none of them are. Being branded a terrorist in Turkey is only faintly more plausible than being fingered a witch in Salem, Massachusetts, 300 years ago.

On the off chance that you aren't quite convinced, the [director of Amnesty International in Turkey is also facing 15 years in prison on terrorism charges](#).

Meanwhile, [an employee at the US Consulate in Istanbul was arrested](#) for "facilitating the escape" of some "Gülenists." The United States government responded by refusing to issue non-immigrant visas to anybody from Turkey, and [the Turkish government responded in kind](#). So if you're an American planning on visiting Turkey any time soon on business or as a tourist, sorry. You can't.

Under current conditions, you probably shouldn't go anyway. Turkey is holding a number of Americans hostage and isn't shy about admitting that they are hostages. "Give us the pastor back," [Erdoğan himself said last month](#). "You have one pastor as well. Give him (Gülen) to us. Then we will try him (Brunson) and give him to you...The (pastor) we have is on trial. Yours is not - he is living in Pennsylvania. You can give him easily. You can give him right away."

Needless to say, this is not how a NATO ally is supposed to behave. Taking hostages is an act of war. It's what Iran does. It's what North Korea does. It's what Hezbollah does. It is not what genuine allies like the United Kingdom, France, Canada and Germany do.

Erdoğan is not going to settle down if the United States doesn't deport Gülen, which Washington refuses to do as there is scant evidence that the exile had anything to do with last year's coup attempt and reams of evidence that the old man couldn't possibly get a fair trial if he were shipped back to Ankara even with the best lawyers on earth. Erdoğan probably won't settle down even if he *does* manage to throw Gülen into a dungeon or onto the executioner's chopping block. Stalin didn't settle down after one of his goons [dispatched his rival Leon Trotsky with an ice axe in Mexico City](#), nor did the Ayatollah Khomeini settle down after the Shah Reza Pahlavi [died from cancer in the United States in 1980](#). Authoritarian conspiracy theorists are never sated. They can only be resisted until they are overthrown or in the ground.

Turkey is still in NATO. We'll see if that lasts much longer.

Michael J. Totten is a contributing editor at The Tower, a Middle East Forum writing fellow, and the author of seven books, including [Where the West Ends](#) and [Tower of the Sun](#).

EDITOR'S COMMENT: How many times they have to behave like enemies to be considered as enemies (Turkey)? How many times we have to behave like allies and friends to be considered as allies and friends (Greece)? What we have to do to get some F-35 instead of spending bloody billions to upgrade old F-16s? On the other hand the enemy behavior is rewarded with F-35 co-production? We have seen the movie so many times that is becoming boring because we know how it ends – don't you?

Why is there so little research on guns in the U.S.? 5 questions answered

By Lacey Wallace

Source: <http://www.homelandsecuritynewswire.com/dr20171019-why-is-there-so-little-research-on-guns-in-the-u-s-5-questions-answered>

Oct 19 – When [Stephen Paddock opened fire](#) 1 October on concertgoers in Las Vegas, killing 59, the city became the unfortunate host of the deadliest mass shooting in U.S. history. Investigators are still trying to piece together the events that took place that evening, and why. Like other old F1-5recent mass shootings, the events in Las Vegas were quickly followed by [demands for change](#) to gun control policy.



But which policy do we choose? Following the Las Vegas shooting, debate has focused on [bump stocks](#), accessories that allow a semiautomatic weapon to fire more rapidly. Will restrictions on them help prevent another mass shooting? Is there a better policy option?

Unfortunately, the research we need to answer these questions doesn't exist – and part of the problem is that the federal government largely doesn't support it.

Why do we need research about guns?

Gun violence is a public health issue. It's a leading cause of premature death in the United States, killing more people each year than diseases like HIV, hypertension and viral hepatitis.

While [violent crime has generally been on the decline](#) since the mid-1990s, the latest reports from the FBI suggest [crime rates may be starting to increase](#). Gun crime has been a persistent problem. According to the Centers for Disease Control and Prevention, [33,594 individuals](#) were killed by firearms in 2014 alone. That's only about 200 less than the number of [people killed in motor vehicle accidents](#). In 2015, roughly [85,000 people were injured by firearms](#), including nearly 10,000 children.

In order to prevent gun injuries and deaths, we need accurate information about how they occur and why. While police reports and [FBI data](#) can provide some detail, they don't include the thousands of cases that go unreported each year. Between 2006 and 2010, the Bureau of Justice Statistics estimated that more than a third of victims of crimes involving a firearm [did not report the crime to police](#). The [National Crime Victimization Survey](#), which collects victimization data from about 90,000 households each year, helps to fill in this gap. However, even this survey has its drawbacks. It doesn't collect data from youth younger than 12, it doesn't include murder and it doesn't help us fully understand the offender's motivations and beliefs.

Social scientists like me need more research in order to get the level of detail we need about gun crime. There's just one major roadblock: The federal government won't fund it.

How much federal money is there?

In 1996, Congress passed the [Dickey Amendment](#). The legislation stated that "none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention may be used to advocate or promote gun control." While that wording did not

ban CDC gun research outright, the legislation was accompanied by a [US\\$2.6 million budget cut](#). That amount happened to match the amount the CDC had spent on firearms research the previous year. The message was clear. From 1996 to 2013, CDC funding for gun research [dropped by 96 percent](#).

The CDC wasn't the only federal agency affected. In 2011, Congress added a similar clause to legislation that regulated funding for the National Institutes of Health. However, due to a [directive from the Obama administration](#), the NIH continued to provide funding for gun research. That push faded as the Obama administration left office.

Earlier this year, the [NIH discontinued its funding program](#) that specifically focused on firearm violence. While firearms researchers can still apply for funding through more general NIH funding opportunities, critics say that makes [funding for gun research less likely](#).

What prompted these funding restrictions?

The Dickey Amendment was passed after a [CDC-funded study](#) led by physician and epidemiologist Arthur Kellerman found that having a gun in the home increased homicide risk. After the results were published, the National Rifle Association pressured lawmakers, arguing that the CDC was [inappropriately using its funds to advocate for gun control](#).

Opposition from the NRA is serious business for lawmakers. The NRA is one of the most powerful special interest lobbying organizations in the U.S. In 2014 alone, the NRA spent more than [\\$3.3 million](#) on lobbying activities – things like meeting with politicians, drafting model legislation and advertising.

The NRA also spends additional millions to advocate or oppose political candidates. [In 2016, the NRA spent](#) nearly \$20 million on efforts opposing Hillary Clinton and nearly \$10 million on efforts supporting Donald Trump.



Not surprisingly, the NRA has successfully [blocked gun control legislation](#) in the past, including renewal of the 2004 assault weapons ban.

Can state or private sector dollars fill the gap?

Another potential option for research is to seek out funding from private agencies or philanthropists. But few of these opportunities are available.

According to Garen Wintemute, director of the [Violence Prevention Research Program](#) at the University of California, Davis Medical Center, [fewer than five private organizations are willing](#) to provide gun research funding.

Private funding is also somewhat risky for researchers. If a funder has a political leaning on gun-related issues, the researcher may be under pressure to produce the “right” results. Even just the implication that a researcher could have a conflict of interest can undermine a study’s results and perceived legitimacy.

State funding may be another option. In 2016, California announced its intent to fund the [University of California Firearm Violence Research Center](#). This is the first time a state has stepped forward to fund a research center

focused on guns. California remains the only state to take this step.

Has gun research stopped?

The lack of funding has discouraged firearms research. Many researchers are employed within academia. In this publish-or-perish environment, researchers are under pressure to publish their work in academic journals and fund it through sources beyond their home institution. Without outside funding, their research often isn’t possible. Leading firearms researcher Garen Wintemute says [“no more than a dozen active, experienced investigators](#) in the United States have focused their careers primarily on firearm violence.”

Lack of funding leaves some researchers, like myself, limited to small-scale studies with a low budget. The problem with studies like these is that they are often based on samples that are not nationally representative. That means we can’t generalize from the findings or address all the questions we might have.

Without increased funding for gun research, it will be extremely difficult for researchers to provide accurate answers to the gun policy questions currently under debate.

Lacey Wallace is Assistant Professor of Criminal Justice, Pennsylvania State University.

2 Places You Don’t Want to Go in Europe

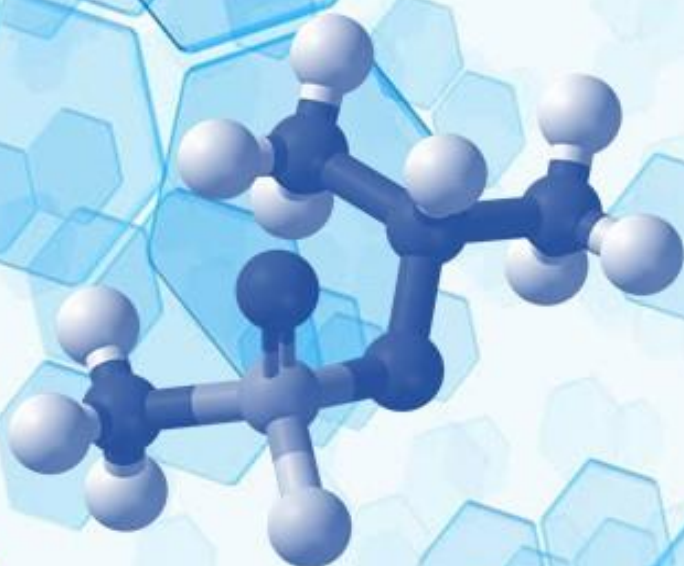
Source: <https://clarionproject.org/2-places-dont-want-go-europe/>

1. Oct 23 – “No-go zone in **Cologne**’s inner city” [screamed the headlines](#) of the German newspaper *Die Welt*, while District Mayor Andreas Hupke said to reporters, “Police have given up on the Ebertplatz area.” The local newspaper *Express* [reported](#) “Ebertplatz is degenerating into a lawless area in the middle of Cologne city.” The area is [reportedly made up](#) of young migrants from North and Sub-Sahara Africa who are dealing drugs and have formed gangs. Cologne was made famous by migrant rape gangs on [New Year’s Eve in 2015](#), where more than 1,200 women were sexually assaulted and robbed in front of the central station and other locations. According to Interior Minister of North Rhine-Westphalia state Ralf Jaeger “Most of the cases [of rape and sexual assault in Cologne] will remain unsolved.”
2. Meanwhile in **Sweden**, 20 members of the Moderate Party [requested](#) the army be sent in to restore order to the country’s most dangerous “no-go zones,” *Breitbart* reported. “The situation in our areas of exclusion has deteriorated. The gangs have taken over and the police have had to retreat. Swedish law no longer applies there,” said Moderate Party politician Mikael Cederbratt. “It is absolutely necessary to do something, because these gangs are like cancerous tumors in our country, and it is urgent. My absolute belief is that we, the nation of Sweden, must declare war on criminal gangs.” “It is the responsibility of the state to maintain the law, especially the police. But the police today do not have the numerical ability to maintain public order,” he added.





Syria 2017 – One-month-old Sahar Dofdaa is not with us anymore – she died hungry...



CHEM NEWS



From Agriculture to CBRN Missions

Source: <https://i-hls.com/archives/78764>

Sept 21 – Robotic vehicles for security purposes adapted from civilian-use models are not rare. Now, Digital Concepts Engineering is launching the X-2 Unmanned Ground Vehicle fitted with the Marionette control system.



©Army Recognition

www.armyrecognition.com

This is a CBRN detection platform it is also well suited to EOD, Search & Rescue, Perimeter patrol, communications relay, mine detection and clearing, light weapon mount and load moving tasks and is capable of manual or autonomous operation.

The platform is based on the IBEX autonomous robotic system.

X-2 is fitted with Marionette, a modular, low-latency control system which can be scaled to meet a wide variety of customer requirements and has already been integrated into a number of platforms, both wheeled and tracked from 20kg to 4.5 tonnes across military, agricultural, nuclear and civil applications including the Wheelbarrow EOD range of vehicles and the Sellafeld First Response Vehicles, according to dconcepts.co.uk.

"The X-2 is built to tackle extreme terrain whilst carrying or towing heavy loads" explains Ed Gummow, Director of Digital Concepts Engineering. "The chassis is based on our **agricultural IBEX robot** with an upgraded control system that gives us high-grade communications, video multiplexing, advanced sensor interfaces and more. It's a military system at an agricultural price."

The 300 kg vehicle is capable of traversing slopes in excess of 45° and driving through deep mud, according to janes.com.





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NERVA LG Mini Unmanned Ground Vehicle (UGV), France

Source: <http://www.army-technology.com/projects/nerva-lg-mini-unmanned-ground-vehicle-ugv/>



NERVA LG is a mini, multi-purpose unmanned ground vehicle (UGV) designed and developed by Nexter Robotics, a subsidiary of Nexter Group, for use by armed forces.

The UGV can be configured for multiple roles including CBRNe detection, reconnaissance, observation, surveillance, counter-IED (improvised explosive devices) for route clearance, smoke generator, fire-fighting, transportation, and other civil security missions. It can be integrated into [Aravis mine-resistant ambush protected vehicle](#).

The robotic system was unveiled during the EuroSatory 2012 international defence and security industry trade show held in Paris, France, and launched at DSEI 2013 Defence and Security Equipment International exhibition held in London, UK, in September 2013.

NERVA LG is the first product in the Nexter Robotics line, which also consists of NERVA-S mini robot and NERVA-HD multi-mission robot

NERVA LG design and features

The easy-to-use and fully-waterproof NERVA LG [unmanned](#) ground vehicle is protected up to IP65 standard, with an option for IP67 class.

It can be fitted with either wheels or tracks, and its lightweight, open-architecture design allows carriage of different interchangeable payloads.



The robot has a length of 350mm, width of 310mm and height of 150mm, and weighs 4.5kg. It has the ability to withstand shocks, vibrations and temperatures up to MIL-STD-810 standard.

The UGV can be operated in both manual and semi-automatic modes. In the semi-automatic mode, the robot can autonomously navigate by traversing the pre-defined waypoints. The robot has the capability to return to home automatically when the mission is completed.

It is suitable for both indoor and outdoor operations and can be used by mounted and dismounted soldiers.



Payloads compatibility

The NERVA LG robot can be fitted with up to 20 mission kits based on the operational requirements. A 360° vision, high-definition day camera mounted at the front provides panoramic view, local situation

awareness (LSA) and under-vehicle reconnaissance.

A thermal imaging / infrared camera with uncooled detector allow operations in low-light / night conditions.



Grenade launcher mounted on NERVA can fire different types of non-lethal grenade

The robot features a pusher actuator for mechanical action on suspicious objects, an audio intercom bi-directional communication system to receive operator

voice and predefined sounds.

It is compatible with payloads such as CBRN detectors, lighting system, exploration and self-mapping kits, anti-IED tool kit, non-lethal grenade, and smoke generator together with anti-intruder and position-marking devices.

Control station

The unmanned ground vehicle can be manually controlled by the operator from rugged personal computer or tablet or smart phones.

NERVA LG UGV performance

The NERVA LG robot can reach speeds up to 15km/h and has an endurance of two hours. Its operation time can be extended by installing an additional external battery. The UGV can climb stairs and traverse through obstacles. It is throwable and reversible up and downwards.

It can collect information across a distance of 1km in open terrain conditions and up to 300m in urban areas.



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North Korea could arm ISIS jihadis with deadly CHEMICAL WEAPONS in revenge for sanctions

Source: <http://www.express.co.uk/news/world/858197/world-war-3-north-korea-ISIS-chemical-weapons-sanctions-donald-trump-kim-jong-un>



Sept 24 – Hamish de Bretton-Gordon, a former commander at the UK Chemical, Biological, Radiological and Nuclear Regiment (CBRN), said the prospect of Pyongyang **arming jihadis with nerve gas is "a major concern"**.

The rogue state is **believed to have between 2,5000 and 5,000 metric tone of chemical weapons**, according to the Centre for Nonproliferation Studies, including large stocks of VX, the deadly nerve agent used to assassinate Kim Jong-un's half brother Kim Jong Nam earlier this year.

While the world frets over North Korea's burgeoning nuclear capability, Mr Bretton-Gordon said the country could bypass strict economic sanctions by selling some of its chemical weapons to ISIS in Syria. He told NBC: "The chance that North Korea might provide jihadis with some of their chemical or nuclear capability is a huge concern at the moment.

"What some people forget is that in 2006 North Korea helped Syrian President Bashar al-Assad and his regime set up their own nuclear programme which was destroyed by the Israelis.

"But only as recently as a few weeks ago, the Organization for the Prohibition of Chemical Weapons intercepted two North Korean ships heading towards northern Syria with equipment to make chemical weapons."

He added: **"We know that the jihadis have a lot of money and only last year tried to buy a highly enriched uranium from Russian criminals for \$40 million a kilogram. "So, would Kim Jong Un sell deadly VX for \$40 million a kilogram? I think absolutely they would the more that they get pushed."**

VX is banned under international law as a weapon of mass destruction, although North Korea does not recognise the measures.

In February, Kim Jong Nam was at Kuala Lumpur airport when he was attacked by two women who splashed a liquid in his face. He died on the way to hospital. Although the killing is still being investigated it is widely believed to have been carried out on Kim Jong Un's orders.

The prospect of Pyongyang selling chemical weapons to ISIS adds another dimension to the ongoing feud between Kim Jong Un and US President Donald Trump.

Mr Trump threatened to "totally destroy" North Korea if it attacked the US with nuclear weapons, but so far the question of chemical warfare is yet to arise.



The President has however already demonstrated he is willing to intervene in the event of illegal chemical weapons being used.

In April, he ordered 59 Tomahawk missiles to bomb an airbase controlled by the Syrian government in response to a chemical attack that killed at least 74 people in the northwestern town of Khan Sheikhoun.

HZS Plasma converter

Source: <https://www.hotzonesolutions.org/hotzone-technologies-product/>



Toxic waste is a serious problem for many countries, worldwide. Until the middle of 1980's waste combustion was widely considered to be the basic method of environmental protection. As a result, the industry of incineration plants and various installations was born. These traditional combustion furnaces lead to further atmospheric pollution with waste such as heavy metals containing ash, soot, sulphur and nitrogen oxides, chlorine compounds and dioxins.

This has triggered the search for alternative technologies requiring less costly purification systems – plasma technology.

A plasma waste converter is a plasma torch applied to toxic waste. A plasma torch uses a gas and powerful electrodes to create plasma, sometimes called the fourth state of matter. The plasma gas heats up by converting electricity into heat.

Temperatures more than 5000°C can thus be created. Such high temperatures normally lead to complete destruction of all known organic and many inorganic hazardous waste compounds to atoms and the simplest molecules.

Standard 20-foot shipping container, that can be transported by a trailer to desired locations

Benefits of Plasma Technologies

The main benefits of plasma technologies compared to traditional furnaces can be summarised as:

- ◆ Significant waste destruction with the simultaneous decrease of the exhaust gas volume
- ◆ Much higher degree of control of the process
- ◆ Much lower weight and dimensions of the reactor and the whole installation



- ◆ Easy and less costly maintenance
- ◆ Higher safety
- ◆ Less residual waste



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Flexibility

The MHMTU has been configured and optimised for the destruction and conversion of:


- ◆ Solid and/or liquid waste
- ◆ Medical waste
- ◆ Radioactive waste
- ◆ Industrial sludge




- ◆ Chemical waste, including: PCBs, mineral oils, plastics, heavy metals, asbestos, pesticides, highly toxic chemicals such as Chemical Warfare Agents (CWA), Toxic Industrial Materials (TIM) etc.
- ◆ Hotzone Solutions mobile system MHMTU is modular and compact: It can be delivered in parts/modules which, completely assembled, fit into a 20 feet general purpose shipping container.
- ◆ The plant can be mounted on a mobile platform and transported for use at the waste collection point. Hotzone Solutions can also provide plasma technology for large industrial waste treatment units. Customized integrated engineering projects can be developed to customer requirements and needs.



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Homeland Security Struggling to Fund Chem-Bio Defense

By Vivienne Machi

Source: <http://www.nationaldefensemagazine.org/articles/2017/9/22/homeland-security-struggling-to-fund-chem-bio-defense>

Sept 22 – The Department of Homeland Security is facing prolonged budget cuts in its chemical and biological defense portfolio, as it works to address concerns that state and local municipalities are underprepared for a potential attack.

As technologies advance, the prospect of an adversary using a biological weapon — involving biological toxins or infectious agents such as bacteria or viruses — or a chemical warfare agent to target the U.S. homeland is becoming more probable, analysts and officials said.

In terms of biosecurity, “we are much better prepared than we were” post-9/11, said Tom Inglesby, director of the Center for Health Security at the Johns Hopkins School of Public Health in Baltimore, Maryland. “But we are not where we need to be, and the progress is, in some cases, somewhat fragile.”

The world has witnessed the use of chemical weapons against hundreds of people in Syria in recent years, said Rebecca Hersman, director of the project on nuclear issues at the Center for Strategic and International Studies, a Washington, D.C.-based think tank. Earlier this year, the half-brother of North Korean leader Kim Jong Un was assassinated in Malaysia with the nerve agent VX, and the Islamic State has launched multiple chemical attacks against Iraqi and Syrian forces since 2016.

“So what you are seeing ... is a recognition at the state and local level and across DHS that chemical threats, even from a domestic perspective, may have been pushed too far off-burner,” she said.

The department’s science and technology directorate took a 28 percent budget cut when the omnibus bill for fiscal year 2017 was signed in May, and the chemical biological defense division is “taking a cut much more significant than that” in fiscal year 2018, said John Fischer, division director.

“I wish I were flat, but I’m not,” he said at the National Defense Industrial Association’s Chemical-Biological-Radiological and Nuclear Defense Conference in Wilmington, Delaware.

The directorate in May released a budget overview for congressional justification, which stated over \$58 million would be put toward chemical, biological and explosive defense research and development for 2017, assuming a continuing resolution would remain in effect for the rest of the fiscal year. Less than \$53 million was requested for 2018, according to the document. DHS did not respond to requests for an interview.

Programs to develop biosurveillance systems to collect and exploit data in the case of an attack, build more reliable chemical detectors, and develop repositories of biothreat agents that could be used for detection, response and recovery, all see budget reductions in 2018, according to the budget document.

Fischer attributed part of the reason for his directorate’s budget cuts to President Donald Trump’s stated priorities for homeland security. “The priorities are: increased border security along the southern border, hiring 15,000 more Customs and Border [Protection] agents, and increasing the number of detention facilities for undocumented immigrants,” he said. “That is consuming the budgets. Everybody else within DHS ... is contributing to those priorities.”

Fiscal tightening across the Defense Department also had an impact on military programs that develop chemical and biological countermeasures for civilian use.

The Army’s Medical Research Institute of Chemical Defense at Aberdeen Proving Ground, Maryland, has seen decreased funding since the Budget Control Act was enacted in 2011, said James Dillman, director of research.

The institute discovers and develops medical countermeasures against chemical and biochemical threats via early-stage and pre-clinical research, education and training, and consultation, Dillman said.

Budget constraints have caused the organization to “really narrow our focus” in research opportunities, he noted.

Dillman’s team is currently focused on several countermeasures that



could offer protection for the homeland. The Improved Nerve Agent Treatment System, or INATS, includes several new medications that combined, could counter a wider spectrum of nerve agents, he said.

Nerve agents — such as sarin or VX — prevent an enzyme called acetylcholinesterase from breaking down acetylcholine and stopping stimulatory signals.

“You end up with this ramped-up stimulated response to that signal, and that’s what causes ... changes in heart rate, increased secretions, difficulty breathing and convulsions,” Dillman said.

INATS is “trying to address the problem in two different ways,” he continued. “One is trying to block the receptor that has been activated by acetylcholine. And the other is to get the inhibited acetylcholinesterase enzyme back working again.”

The institute is also working on an advanced anti-convulsant system, which would be the next step of treatment for an attack involving nerve agents after medication, Dillman said.

A new way of administering antidotes for cyanide — which affects cellular processes — is also in the works.

“The current cyanide antidote is intravenous, so we’re looking to develop something ... that you could inject intramuscularly, because that would be easier to administer to a patient,” Dillman said.

That countermeasure is currently in pre-clinical study, but the institute is looking to transition it “in the near future” to an office that handles advanced development, such as the Joint Program Executive Office for Chemical and Biological Defense’s Medical Countermeasures Systems or the Biomedical Advanced Research and Development Authority, he added.

The institute is also working to create a countermeasure for mustard gas and other chemicals that target a victim’s skin, eyes and mucus membranes. It is in early-stage development, Dillman said. “Most of the treatment for mustard [gas] is really supportive care ... treating it very similarly as you would a burn.”

The United States boosted research and development for biological defense in the immediate aftermath of 9/11, after five people were killed and 17 infected by anthrax spores

sent through the mail, said Ellen Carlin, senior health and policy specialist at the EcoHealth Alliance, a New York-based nonprofit.

But that early ramp-up “has certainly declined” in the 16 years since the attack, perhaps due to “a complacency that sets in” once enough time has passed since a major incident, she added.

“We skate from one emergency to another,” she said. “We have not created an infrastructure for health security preparedness that’s actually commensurate to the need.”

Carlin is co-director of the Blue Ribbon Study Panel on Biodefense, a bipartisan group established in 2014 to assess gaps and provide recommendations to improve U.S. biodefense.

The panel’s 2015 report titled, “A National Blueprint for Biodefense: Leadership and Major Reform Needed to Optimize Efforts,” outlined 33 policy recommendations to improve the nation’s posture toward biosecurity threats, she said.

One key recommendation — to develop, implement and update a comprehensive national biodefense strategy — has moved ahead, she noted. The Fiscal Year 2016 National Defense Authorization Act included language that required four departments — DHS, Health and Human Services, Defense Department and the U.S. Agency for International Development — to create such a strategy, she said.

“The uptick of that particular recommendation is really critical and really central,” she noted. “If they get that right, a lot of the other recommendations can fall into place.”

Despite its projected budget shortfall, DHS is making new investments for chemical and biological defense to better protect major municipal infrastructures and control potential threat agents.

The budget document includes \$5 million to begin building a permanent biodetection test bed in a major subway system. DHS is looking to create and certify the test bed by the end of 2018, it added.

“Subway systems are attractive targets for potential acts of bioterrorism, particularly with aerosolized biological agents,” the document said. A DHS fiscal year 2016 field study in the New York City subway simulated a biological agent release, and confirmed predictions that “contamination will be



widespread and a major public health crisis will occur,” it continued.

Fischer said DHS is in discussions with several major cities to potentially host such a test bed. He declined to name them.

There’s a “growing concern within a number of cities in this country that a chemical-biological threat is imminent, and they need to pay a lot more attention,” he said.

New York City has expressed interest in partnering with DHS to implement the test bed, but it could be deployed in other major subway systems, the document said.

Government personnel such as the Secret Service are also requesting additional protective gear, Fischer said. Hersman said first responders should receive more training and protection as their work brings them more frequently into contact with threat agents.

DHS must also devote resources to studying how advancements in synthetic biology and genetic engineering could be misused for nefarious purposes, the document said. Three million dollars could go toward developing a system for ongoing monitoring and assessment of synthetic biology risks, based on a risk spectrum being developed by the Intelligence Advanced Research Projects Activity.

Where once a scientist would have to duplicate an infectious agent, it is now possible to synthesize viruses from scratch, Inglesby said.

“We’re beginning to find ways to create life artificially just from the genetic code,” he said. An adversary could now theoretically recreate the smallpox virus — largely eradicated in the 20th century — and weaponize it. The global level of smallpox vaccine supply is now “relatively modest,” he noted.

Synthetic biology could be an “incredible benefit for humanity and will do great things for medicine and agriculture,” Inglesby said. “But there’s also a potential downside that we need to consider.”

Fischer said a division goal is to increase chemical detection capabilities in areas that may be vulnerable to an attack.

The department could stand up a chemical defense system that operated in major cities across the country to detect potential threats, as

it has already done on the biodefense side, he noted. DHS stood up the BioWatch program in 2003 to detect the release of pathogens in the air, operating in over 30 U.S. cities, according to a 2015 Government Accountability Office report. BioWatch is run by DHS’ Office of Health Affairs, which stated in its 2018 presidential budget document that the program would remain deployed and operational. OHA requested over \$77 million in 2018 for chemical and biological readiness, to include BioWatch, about \$5 million less than what it expected to spend through 2017.

Many experts do not believe the program is “meaningfully buying down risk,” Carlin said, noting that environmental detection is a difficult technology challenge. DHS should leverage technologies from the Defense Department and industry to create a system that improves time to detection, she added. The BioWatch Gen-3 program attempted to do just that, but the program was canceled in 2014, according to the GAO report.

“If we can’t do that, the existing annual resources are probably better spent on other biodefense efforts,” she said.

Fischer said the department is also working to loosen its dependence on products originally developed for troops overseas.

DHS “depends heavily” on hardware and gadgets developed for the military that are then tailored for the civilian environment. One example is altering a chemical detection system so that it ignores harmless chemical byproducts, like diesel fumes and perfume, and focuses on the actual threat, he said.

The future permanent subway test bed would be acquired that way, he noted. His department is also “on the cusp” of developing its own acquisition lifecycle program.

“Within the chem-bio trade space within DHS, we have no lifecycle approach to anything,” he said. “We could develop all of the cool stuff that you want, but when you start talking about transitioning to a state and local [government], the process breaks down.

“The fact that we’ve finally got a success where we’re putting hardware out there ... it’s a long time coming,” he said.

Vivienne Machi is an Associate Editor for National Defense Magazine.



Nose spray treatment for cyanide poisoning

Source: <http://www.homelandsecuritynewswire.com/dr20170925-nose-spray-treatment-for-cyanide-poisoning>

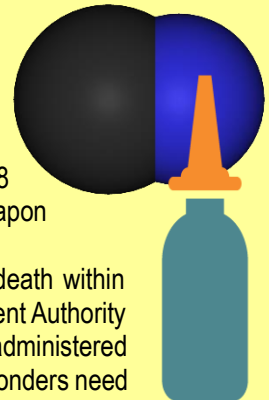
Sept 25 – **The first nose spray treatment for the life-threatening effects of cyanide poisoning will be developed** under an agreement between the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response and [Emergent BioSolutions](#) of Gaithersburg, Maryland, HHS announced 18 September. The treatment is needed because cyanide could be used as a chemical weapon against the United States, according to the agency.

"Cyanide is easily obtained, and exposure to high levels of the chemical can cause death within minutes," said Rick Bright, director of the Biomedical Advanced Research and Development Authority (BARDA), a component of ASPR. "All currently approved cyanide antidotes are administered intravenously, which takes time, training, and medical resources. To save lives, first responders need a treatment they can administer easily within seconds in the field."

OH&S [says](#) that the agency announced a 17-month, \$12.7 million agreement under which Emergent will develop an intranasal, stabilized form of isoamyl nitrite. Amyl nitrite traditionally has been used to treat angina pectoris, severe chest pain caused by an inadequate supply of oxygen-rich blood to the heart, and studies have shown amyl nitrite to be an effective treatment for cyanide poisoning, although the drug is not approved by FDA specifically for that use. The company will develop a reformulated active ingredient, isoamyl nitrite, along with an intranasal delivery device, with the goal of gaining FDA approval. The contract can be extended up to a total of approximately \$63 million over five years.

As a BARDA partner, Emergent will conduct nonclinical and clinical safety and efficacy studies; manufacturing activities; and all associated regulatory, quality assurance, management work, and administrative activities necessary prior to the initiation of a Phase 3 (large) clinical study.

This project is part of BARDA's integrated portfolio for the advanced research and development, innovation, acquisition, and manufacturing of medical countermeasures for public health emergency threats. These threats include chemical, biological, radiological, and nuclear agents, pandemic influenza, and emerging infectious diseases.



Russia to Complete Chemical Weapons Destruction by October

Source: <https://sputniknews.com/russia/201709211057594773-chemical-weapons-destruction/>

Sept 21 – Russia may finish the destruction of all its chemical weapons stockpiles by the end of September, Mikhail Babich, the chairman of the State Commission on Chemical Disarmament, said on Thursday.

"The [chemical weapons destruction program](#), authorized by the head of state, will be completed ahead of schedule, although our international obligations expire on December 31, 2018... I think that we will finalize it by the end of this month," Babich said.

Babich noted that the exact date for the completion of the program would be announced by President Vladimir Putin in the upcoming days, since he had set the task of closing this issue as soon as possible.

"We will demonstrate to the world that

Russia not only fulfills its international [obligations](#), but also understands that disarmament serves as an example for many of our foreign colleagues," Babich said.



In June, Russia's Federal Administration for the Safe Storage and Destruction of Chemical Weapons announced that Russia had already destroyed 98.9 percent of its chemical weapons stockpiles, while the rest would be eliminated at the Kizner facility in the country's Udmurtian Republic by the end of 2017.

The Risks of Maritime CBRN Terrorism – Is Shipping the Weak Link?

Source: <http://www.cbrneportal.com/the-risks-of-maritime-cbrn-terrorism-is-shipping-the-weak-link/>

Sept 2012 – On 15 February 2012 an Italian security team onboard the oil tanker MV Enrica Lexie off the coast of southern India shot two innocent local fishermen whom they suspected of being pirates. This not only led to a diplomatic row between India and Italy, but once again, sparked a debate about the security of shipping and the use of armed guards (in this case a military protection team). This debate largely focuses on Somali, and increasingly West African, piracy and the difficulties experienced in eradicating this threat. However, the security issues related to shipping are not limited to piracy; there also exists the risk of maritime terrorism, or terrorism committed in the maritime domain, which could potentially have an even bigger impact than piracy.

Experts have thought of many scenarios. Terrorists could assault ships as an “iconic” goal, or attack ships and offshore installations to damage the economy, they could target ferries to cause mass casualties or use ships as weapons to attack other ships or ports (Martin N. Murphy, Contemporary Piracy and Maritime Terrorism (2007) 55-61). Security experts have also pointed to the possibility of maritime terrorism with Chemical, Biological, Radiological or Nuclear (CBRN) agents. This report assesses the threat of maritime terrorism, with a special focus on CBRN agents, by providing an overview of the possible perpetrators of maritime terrorism and their respective objectives, and by investigating the feasibility of several scenarios.

Maritime terrorist organisations

The threat of “maritime terrorism” is far from new. As an example, the 1985 hijacking of the cruise ship MS Achille Lauro by four members of the Palestine Liberation Front (PLF) even then demonstrated the potential risks to shipping with just a few assailants. Nevertheless, one could argue that maritime terrorism is, so far, a relatively small problem. The number of past incidents is limited, even when one includes attacks against military targets (such as the al-Qaeda attack on the USS Cole, discussed below) which would not be considered terrorist attacks in the strict definition of the word. Moreover, there have until now been no maritime terrorist incidents which involved the use of CBRN materials. However some government officials and experts believe that this could change, perhaps because of improved inland security measures and the relative ease with which some scenarios involving maritime terrorism could be carried out (Greenberg et al., Maritime terrorism. RAND, 15). These officials and experts are strengthened in their conviction by the fact that terrorist organisations have conducted ambitious attacks at sea, proving that it is certainly feasible that terrorist organisations would be able to carry out more far reaching operations in the future.

At sea the most effective terrorist group has arguably been the Tigers of Tamil Eelam (LTTE), or “Tamil Tigers”, who operated a naval wing under the name of the “Sea Tigers”. This encompassed a small fleet of speed boats, which were used with considerable success in “sea guerrilla” warfare against the Sri Lankan navy. The successes of the Sea Tigers allegedly [inspired](#) al-Qaeda to attack the U.S. Navy destroyer USS Cole with a small craft loaded with explosives in the Port of Aden in Yemen in October 2000. This resulted in the death of seventeen American sailors.

Less well known, but also potentially very dangerous, was the attack claimed by al-Qaeda on the French flagged very large crude carrier Limburg, when anchored off the coast of Yemen in October 2002. The Limburg was rammed by a small boat packed with TNT. The resulting explosion blew a hole through the double hull of the ship and started a fire. One crew member was killed, twelve were injured and oil started leaking from the ship. The modern design of the Limburg and the inert nature of the gas fumes inside prevented a more dramatic [impact](#).



Also for the future, al-Qaeda is assessed to be one of the most likely candidates to be involved in maritime terrorism. Although the organisation has been weakened since 2002, al-Qaeda can still operate relatively unimpeded, especially in Yemen and has the strategic aspirations to carry out terrorist attacks at sea. As an example, Al-Qaeda in the Arabian Peninsula has declared that it wants to bring the Red Sea under “Islamic control” (Herbert-Burns, Countering piracy, STIMSON). Even though al-Qaeda is not able to truly control the Red Sea, these threats should not be ignored.

The idea that shipping is a target for Islamic fundamentalists is backed by the example of the attack of the terrorist organisation Abu Sayyaf on the ferry named SuperFerry 14 off the coast of the Philippines in 2004. The perpetrators smuggled a bomb on board disguised as a television set. The ship sunk and 63 bodies were recovered while another 53 were never found, making this the deadliest terrorist attack at sea to date. A more recent example of terrorism at sea was committed by the Abdullah Azzam Brigades (AAB), a terrorist organisation linked to the Pakistani Taliban and al-Qaeda. In July 2010 the ABB committed an attack with a speedboat packed with explosives against the Japanese oil tanker M.Star, which was navigating the Strait of Hormuz. The resulting explosion wounded only one crew member and did not bring about any structural damage to the ship. The attack was nonetheless worrisome, as ABB or other terrorist organisations were not expected to have the capabilities to mount an attack from the sea against moving ships, at night, and in an area that is extensively patrolled.

It remains to be seen if terrorist organisations would or could use CBRN weapons at sea. Or in other words, if these organisations have the intent and the capacity to do so, assuming that they indeed can lay their hands on “ready-to-use” CBRN weapons or materials. Regarding the intent, the answer is that some groups probably would use these weapons if they could get hold of them. The Japanese sect Aum Shinrikyomade use of CBRN weapons for its attack with the nerve agent Sarin on the Tokyo subway in 1995. Al-Qaeda is also known to have an interest in acquiring CBRN weapons (R. Niblett ed., America and a Changed World (2010) 231).

Scenarios of maritime CBRN terrorism

When looking at the capacity of terrorist organisations to use CBRN weapons at sea the picture is less clear. In the literature on maritime terrorism one can find many scenarios that are considered possible, even probable. This includes “nightmare” scenarios such as the detonation of a nuclear device in a shipping container or bulk carrier in a port area. The impact of such a scenario would indeed be enormous; the Council on Foreign Relations estimates that even an imperfect one kiloton nuclear bomb in Manhattan could cause hundreds of thousands of casualties.

Transporting an average nuclear weapon in a standard forty foot container is theoretically perfectly possible. France, the Soviet Union and the U.S., as examples, all made nuclear warheads for artillery shells.

Moreover, new developments in missile systems such as the Russian “Club-K” system prove that it is even possible to fire a cruise-missile from a standard size [container](#). Nonetheless, the scenario of a detonation of a nuclear device on a ship is seen by most experts as unlikely. To date, the chances that a terrorist organisation would be able to develop nuclear weapons on its own, are assessed as negligible. It is doubtful if countries with nuclear capabilities would knowingly supply terrorist groups with this technology and, security regulations in the nuclear area are [strict](#). Even if a terrorist group could obtain a nuclear weapon (by stealing for example) using it in a container, or on a vessel in general, would pose great operational challenges.

Another popular scenario debated among experts which could have devastating consequences is that of the hijacking of a ship transporting volatile chemicals, to use it as a “floating bomb” against other ships or port infrastructures. The explosion of a ship transporting, for example, liquefied natural gas (LNG) in a densely populated port area or near a cruise ship could cause mass casualties and huge economic [damage](#).

However, as in the “nuclear case”, this scenario is very difficult to carry out. To begin with, navigating a hijacked chemical tanker to its target would only be possible if the authorities in vicinity of the area did not receive a hijack alert, which seems unlikely. Secondly, igniting a



chemical tanker is far from easy and would require a very high degree of technical [competency](#).

A “dirty-bomb” in a shipping container

This leaves us with the question are there maritime CBRN terrorism scenarios that are more easily carried out? The answer is yes. An example of such a scenario is a Radiological Dispersal Device (RDD), also called a “dirty bomb”, in a container on a ship. Contrary to the earlier mentioned example of acquiring a nuclear weapon (or a biological or chemical weapon), obtaining radiological materials appears not to be particularly difficult. A RDD could consist of some radiological material from, for instance, a hospital which could be dispersed by a small amount of conventional explosives when detonated on a ship or during transport from the port. A 2005 survey showed for example that on average, nuclear experts thought that there existed a 40% chance that a dirty bomb would be used against the U.S. between 2005 and 2015. It has been argued that two small RDDs containing only five pounds of high explosives could contaminate an area of 5-10km.²² This would most likely not result in mass casualties, but the social, psychological, and economic consequences could be very substantial.

Moreover, smuggling something into a country using standard shipping containers appears relatively easy, as the experience with the smuggling of drugs and other illegal cargoes shows. Container shipping is rather anonymous, all containers look the same, and of all the containers that pass through ports around the world, currently only about two per cent are inspected (Griffiths and Michael Jenks, ‘Maritime transport and destabilizing commodity flows’, SIPRI Policy Paper 32 (2012), 47). Additionally, containers are packed and transported by many different companies often far from a port. Throughout this extensive supply chain, no official inspection of the containers takes place on a routine basis. Fraud with cargo lists is also not uncommon and the locks and seals on a container form a far from “water tight” safety [guarantee](#).

These factors in themselves however, do not make the deployment of a dirty-bomb in a port easy as such. The respective terrorist organisation would need to have specialist knowledge and protective equipment to work with radiological materials, which for instance could cause severe burns, or worse. To limit this risk the terrorist should know how to shield nuclear materials, both to protect himself and also to lessen the risk of detection. This would probably result in either a much larger device, making it difficult to transport, or in a much smaller and thus weaker source. These kinds of practical limitations may well deter many potentially interested terrorist organisations from using radiological, or any other type of CBRN weapon, at sea or in ports.

A conventional attack on a cargo ship or ferry

The probability of more conventional maritime terrorism seems to be greater, as these attacks are easier to conduct. An example of such a scenario is a terrorist attack on a cargo ship at sea, with for example small speedboats loaded with explosives. Such an attack is feasible, as the attacks directed against the Limburg and the M. Star demonstrated. Moreover, sinking a ship in a busy shipping lane like the Suez Canal or the Strait of Hormuz may be appealing to terrorists due to the likely huge media attention and serious economic consequences which would ensue. The reliance of today’s global economy on just-in-time deliveries implies that key sectors and businesses would be severely affected if disruptions in the supply chain persist for more than a few [days](#).

This is not to say that this scenario is easy to carry out. While damaging a ship is rather easy, sinking a modern ship is far more difficult. Another important aspect of this scenario which might limit terrorist interest is that the number of possible casualties is far lower than in the earlier mentioned catastrophic scenarios. Merchant ships have relatively small crew numbers and creating an environmental disaster, which could happen when a ship carrying chemicals would sink, does not seem to be a prime goal for terrorists.

On the other hand, attacking a ferry might be an appealing option for terrorists who want to find a comparatively easy way to create mass casualties, as the earlier mentioned example of the bombing of the SuperFerry 14 in the Philippines showed. These ships carry many people, are a highly visible target and sail on a fixed time schedule along predefined routes, all factors which could make ferries an attractive target for terrorists.



Conclusion

Is the threat of maritime terrorism real? IB Consultancy believes it is, but alarmism makes no sense. Multiple terrorist groups have been active at sea and have shown their ability to damage large ocean-going ships. The attacks on the Limburg and the M. Star could indicate that terrorist organisations such as al-Qaeda are trying to enlarge their capacities to strike at sea. However, if one looks at the past, the risks of maritime terrorism seem much smaller. Sinking modern cargo ships appears to be challenging. Moreover, many existing scenarios seem to be unlikely due to the enormous practical difficulties that must be overcome when executing them. This applies in particular to alarming scenarios such as a nuclear weapon in a container. Turning a chemical tanker into a “floating bomb” appears only slightly less difficult. Somewhat easier to execute would be the scenario involving a dirty-bomb in a shipping container, making this a serious threat; especially because an attack with an RDD does not have a large explosive effect in order to create enormous panic.

Training programme for CBRN emergencies at Chennai Airport

Source: http://www.business-standard.com/article/government-press-release/training-programme-for-cbrn-emergencies-at-chennai-airport-117091800695_1.html

Sept 19 – The National Disaster Management Authority (NDMA) is conducting a basic training programme to enhance the preparedness of Airport Emergency from the use of Chemical, Biological, Radiological and Nuclear material at the airports.



The training programme is being conducted in collaboration with the Airport Authority of India (AAI) and Institute of Nuclear Medicine & Allied Sciences (INMAS).

"It is one major step towards enhancing CBRN safety at our airports" said Shri R. K. Jain, Member, NDMA while highlighting the fact that handling CBRN emergencies need specialised skills and efforts.

The training programme, which started today at the Kamaraj Airport in Chennai, was inaugurated by Dr. S. Christopher, Secretary, Department of Defence Research & Development and Chairman, Defence Research and Development Organisation (DRDO).

The programme consists of lectures as well as field training, including live demonstrations of detection and decontamination, including use of Personal Protective Equipment (PPE). Apart from equipping the airport emergency handlers to handle CBRN emergencies, the training programme will also enable them to provide medical first aid and initial psycho-social support. A total of 200 personnel will be trained on various aspects of CBRN emergencies during the week-long training.

"Even a small CBRN related event can cause panic among people at the airports. It is, therefore, important that airport emergency handlers are able to respond appropriately till the arrival of highly trained and better equipped response teams," said Dr. D.N. Sharma, Member, NDMA. This is the first in a series of such training programmes that have been planned for various airports across the country.

EDITOR'S COMMENT: Just wondering what happened with the construction of the CBRN hospital in Chennai...



Weapons of Mass Destruction: A Psychological Commentary

Source: <http://commons.erau.edu/cgi/viewcontent.cgi?article=1205&context=ibpp>

This article describes a comprehensive approach to identifying psychological consequences of weapons of mass destruction, as well as psychological methods that can be employed to influence these consequences. This description should be viewed in the context of the quest to achieve political objectives that underlie military intervention and its threat.

Recommended Citation: (1998) *"Weapons of Mass Destruction: A Psychological Commentary," International Bulletin of Political Psychology: Vol. 4 : Iss. 6 , Article 4.*



Chemical Terrorism: Blackmailer Poisons Baby Food in Germany

Source: <https://www.acsh.org/news/2017/09/28/chemical-terrorism-blackmailer-poisons-baby-food-germany-11891>

Sept 28 – **The Associated Press reports that blackmailers have poisoned baby food in Germany and will continue to do so unless paid more than €10 million.**

It does not appear to be an idle threat, as authorities have found jars of baby food containing [ethylene glycol](#), a chemical used as antifreeze. According to Fisher Scientific, a chemical company, a [lethal dose of ethylene glycol](#) is 1.56 grams per kilogram of body mass. A four-month-old baby, which might be six kilograms, could be killed by roughly nine grams of ethylene glycol. It probably would be difficult to stuff a baby food jar with nine grams of ethylene glycol. A typical baby food jar is two ounces, which might contain 57 grams of food. Cramming in another nine grams of liquid may not be possible. Still, a baby could be poisoned.

What is particularly disconcerting about this story is just how easy it is to pull off acts of chemical terrorism.

Chemical Warfare: A New Strategy for Terrorists?

While the motivation for the blackmailers in Germany appears to be financial, spreading panic (in pursuit of some political goal) is the motivation for most other terrorists. And as we have learned from repeated attacks -- such as mass shootings or drivers who plow trucks into crowded tourist destinations -- it isn't difficult to become a terrorist.

The same may be true for chemical terrorism, as well. It doesn't take much effort to poison food at the grocery store, and poisoning the buffet line at a restaurant would be even easier.

The [Rajneeshee Cult](#) did just that in a small Oregon town in 1984, albeit using *Salmonella* rather than a chemical agent, poisoning 751 people. If they had used something like fentanyl, instead, they could have killed them.

Fentanyl, which is used as an anesthetic, has been [pouring into our country](#) due to the opioid epidemic. Drug dealers can cut **heroin** with it, since it is 50 times more potent than morphine and cheap to synthesize. If your local street dealer didn't cut his stash properly, it is rather easy to overdose on fentanyl. In fact, many of the opioid overdose deaths in America [may actually be due to adulteration with fentanyl](#).

Carfentanyl, which is [1,000 times more potent](#) than morphine and used as an elephant tranquilizer, is also [making its way into our country](#).

And if drug dealers can get a hold of chemicals like fentanyl and carfentanyl, terrorists can too. Thus, these synthetic opioids should be considered a terrorism threat in addition to a public health menace.

Our society functions not because of government surveillance of potential terrorists but because we trust that the overwhelming majority of our fellow humans are at least decent



enough not to kill us. Terrorism undermines that trust, and chemical warfare -- particularly if it's aimed at murdering babies -- may be an effective way to do that.

Shock Testimony: U.S. Not Ready for **Four** Major Attack Scenarios

Source: <http://www.conservativefreepress.com/congress/shock-testimony-u-s-not-ready-four-major-attack-scenarios/>

Sept 30 – Acting Director of Homeland Security Elaine Duke testified in front of a Senate panel this week, and she revealed some startling truths about the country's preparedness for some of the most destructive attacks on the horizon. According to Duke, DHS efforts to address chemical, biological, radiological, and nuclear attacks facing Americans are "inadequate."

"The Department's current approach to addressing CBRN matters is inadequate," Duke told lawmakers on Wednesday. "For nearly a decade, DHS has looked at reorganizing internally to better counter these dangers. I want to emphasize that we are overhauling homeland security to cope with changes in the threat landscape. As we continue this overhaul, it is clear that the authorities, structures, and accountability measures developed for DHS over 15 years ago are no longer sufficient."

Duke was circumspect in what she could share in a public hearing, but she said that terrorist groups around the world were once again interested in using weapons of mass destruction to inflict harm on civilian populations.

"Our intelligence professionals have seen renewed terrorist interest in WMD and are aware of concerning developments on these issues, which can be discussed further in an appropriate setting. That is one reason why the Department is eager to establish a focal point for our work to protect Americans against chemical, biological, radiological, and nuclear (CBRN) threats," she said.

So, a few comments: **One,** the fact that the Department of Homeland Security has been tossing around the idea of reorganizing for TEN YEARS gives you a sense of how the federal government operates and why it's so important for us to "drain the swamp." The levels of bureaucratic inefficiency in our national security apparatus – it's enough to boggle the mind. The Trump administration, in conjunction with Congress, needs to take drastic steps to reduce some of this incompetence and cut out the layers and layers of red tape that are now making our country less safe.

Two, Duke's comments are yet another reason why Trump needs to follow through on his campaign promise to crack down on illegal immigration. We know that he's facing enormous resistance – even within his own party – when it comes to the Wall and other immigration security measures, but that's what we elected him to do. This cannot become like healthcare or some of these other things that are falling by the wayside. This is essential to the agenda. Illegal immigration is the pathway through which these terrorists come into our country and smuggle in weapons of mass destruction **We cannot afford to wait until one of these things goes off in New York City before we get serious.**



Putin hails Russia's destruction of last chemical arms, accuses US of failing to fulfill obligations

Source: <https://www.globalsecurity.org/wmd/library/news/russia/2017/russia-170927-presstv01.htm>

Sept 27 – **Russian President Vladimir Putin hails his country's destruction of its last supplies of chemical weapons, accusing the US of failing to fulfill its own obligations in this regard.**

Putin on Wednesday described the destruction of the chemical stockpile, which was carried out before the initial deadline, as "a historic event," stressing it was "a huge step towards making the modern world more balanced and safe."

"Russia strictly complies with its international obligations, including those related to non-proliferation and reductions of weapons of mass destruction," he said in televised remarks broadcast by the Rossiya 24 TV channel.



Putin also criticized the United States for not following Russia's suit, saying Washington had put off doing so three times citing a lack of financial resources, which the Russian leader said "looked a little bit strange."

The US "unfortunately is not carrying out its obligations when it comes to the timeframe of destroying chemical weapons; they pushed back the liquidation timeframe already three times," he said.

Putin said Russia's example in delivering on its promise to destroy its chemical arsenal should encourage other nations to do the same.

"We expect the United States to carry out all of its obligations it has taken upon itself as part of international agreements just like other countries do," he added.

OPCW hails Russia's move as 'major milestone'

On Wednesday, the Organization for the Prevention of Chemical Weapons (OPCW) hailed as a "major milestone" Russia's destruction of its last toxic arms.

"The completion of the verified destruction of Russia's chemical weapons program is a major milestone in the achievement of the goals of the Chemical Weapons Convention," said OPCW Director General Ahmet Uzumcu.

He also praised Russian officials for "their professionalism and dedication," adding that experts from the organization had "verified the destruction."

The OPCW said the last of the Russian arsenal was destroyed at the Kizner chemical weapons destruction facility in the Udmurt Republic.

Six other destruction facilities had completed their work and were closed between 2005 and 2015.

Russia and the US amassed huge stocks of chemical weapons during the Cold War. The two countries agreed to destroy their chemical arsenals by April 2012 after joining the Chemical Weapons Convention, which bans the production, development, possession, sharing or use of chemical weapons, in 1997.

The two countries, however, said later they needed more time to destroy their chemical arsenals.

EDITOR'S COMMENT: Now there is only one nation [officially] possessing chemical weapons!

Cobalt's Through-Barrier Handheld Raman Technology Discussed in CBNW Xplosive Magazine Interview

Source: <https://www.cobaltlight.com/news/Cobalts-Through-Barrier-Handheld-Raman-Technology-Discussed-in-CBNW-Xplosive-Magazine-Interview>



Sept 27 – The latest edition of CBNW Xplosive magazine features an interview with Dr Robert Stokes, Product Manager - Detection at Cobalt Light Systems, talking about the



company's through-barrier Raman technology. The article discusses how Cobalt's unique SORS technology was developed, and looks at how it is deployed in applications from liquids screening at airport security to hazmat ID, EOD, CWA, search/recon, narcotics, ports/borders and policing.

The article is available on [Cobalt's website](#), or the full edition of the magazine can be accessed [here](#).

CBRN Border Security Challenges in Eastern Africa

By Dr. Ram Athavale

Source: <http://www.cbrneportal.com/cbrn-border-security-challenges-in-eastern-africa/>

Oct 02 – Eastern Africa is a region mainly comprising of the Great lakes region and Horn of Africa. Countries of the region are varying levels of development from those still embroiled in political instability and civic turmoil to others that are industrialising and developing rapidly. A number of challenges and threats exist ranging from poverty, lack of jobs, poor health facilities, fragile food security and tribal dynamics. These lead to high levels of corruption and crime rates. There are large sections of population that are susceptible to adverse propaganda and external control by terrorist organisations.

All regional countries are signatories to various international protocols and conventions like CWC (OPCW), NPT, GCINT, BTWC, UNSCR 1540, Stockholm and Basel conventions and other related treaties. Most countries have adopted IAEA regulations and guidelines. They are also bound by the Pelindaba treaty and Bamako Convention towards prevention of toxic proliferation and waste management.

Africans have been addressing the scourge of disease and the promotion of sound measures for economic growth. The countries are becoming aware of the emerging threats and are striving to mitigate the gruesome consequences of the unchecked trafficking of hazardous materials and combating violent acts of terrorism. Some progress has been made on these aspects.

Working closely with the World Health Organization (WHO), governments across the region are striving to implement collaborative disease-surveillance-and-response capacities that meet global standards. Through an innovative public/private partnership, the Intergovernmental Authority on Development (IGAD)—consisting of Djibouti, Ethiopia, Eritrea, Kenya, Somalia, Sudan, and Uganda—has launched a Capacity Building Programme against Terrorism (ICPAT) aimed at building national capacity to resist terrorism and promote regional security cooperation. Similar initiatives are in force in Western Africa and the SDAC States.

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

Dr. Ram Athavale has been a key advisor to the Government of India on CBRN Security and Incident Management, and is now deployed as a key CBRN Expert for On-Site Technical Assistance to the EU CBRN Risk Mitigation Centres of Excellence Regional Secretariat in Nairobi Kenya.

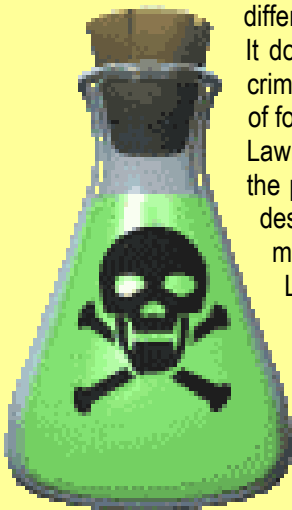
Acid Gaining Popularity Over Knives as Preferred Weapon of British Gangs

Source: <https://sputniknews.com/europe/201709251057686885-acid-gaining-popularity-british-gangs/>

Sept 25 – Acid has become a popular weapon in gang wars in Britain because it can be purchased over-the-counter from shops, thrown from a distance and hidden easily, explains Jermaine Lawlor, a former gang member who is now a youth worker in Enfield, north London.

"Acid is a weapon of choice primarily because it is easy to conceal. You can have it on you... in a bottle, which means when the police stop you they're not going to be able to detect it," Lawlor told Sky News.





"Not only is it easy to conceal, it is easily accessible. A knife is easily accessible as well, but the difference is with a knife, you have to be up close and personal with your victim," he added. It doesn't hurt that acid attack sentences are much lighter than those for some other violent crimes. Those convicted of acid attacks only have to serve up to six months in prison instead of four years for a knife crime.

Lawlor also commented that the increased use of acid is "not right," adding that "in an acid attack the person is not going to die, but their self-esteem will be destroyed, their confidence will be destroyed, and they have to live with that for the rest of their life, while the perpetrator gets six months [in prison]."

Lawlor's comments come after a 15-year-old boy was arrested on Saturday in Stratford, east London, on suspicion of grievous bodily harm, after a mass acid attack between two groups of males left six people injured, the Independent reported.

Witnesses describe how victims were fleeing and screaming "I can't see, I can't see" after the noxious liquid was thrown.

"There is no justice being served with these incidents; with a knife incident you're looking at a four-year mandatory, possibly life sentence if the person is killed," Lawlor said, urging for harsher sentences for acid attacks.

Acid crimes have doubled in London in the past three years, according to the London Metropolitan Police, and in the month of April alone, there were 45 recorded cases of the crime. In July, London police were issued with 1,000 acid attack response kits to help provide first aid to victims they encounter.

NBC-Protective Suit 'ABC-92' with Air Distribution System

Source: <http://www.army-technology.com/downloads/whitepapers/personal/nbc-protective-suit/>



Oct 05 – The 'ABC-92' is a military one-part NBC-protective suit with air distribution system, manufactured in five sizes. The suits have either a fix mounted mask at your decision or a smooth rubber sealing frame, and either fix mounted NBC-boots or fix mounted socks with a cuff, to use with any boots. The suit is closed by a gas-tight zipper from the right knee to the left shoulder of the suit.

The suit eases the strain on human heat regulation during heavy work or high ambient temperature by means of a fresh-air distribution system. Uniform air-distribution is regulated by eight outlet valves protected against fouling. This fix mounted air-distribution system brings fresh and dry air to any area of the body and is supplied by a fresh-air blower with an output of up to 250l/min.

Download this free white paper to find out more: [NBC-Protective Suit 'ABC-92' with Air Distribution System](http://www.army-technology.com/downloads/whitepapers/personal/nbc-protective-suit/)

►► Read also: <http://www.blaschke.com/page32.html>



Chemical Terror Attack During Tokyo Sports Events Not Ruled Out

Source: <https://i-hls.com/archives/78986>

Oct 05 – Tokyo Police conducted an anti-terror drill at a sports arena in central Tokyo based on a scenario of terrorists launching a chemical attack during big sports events such as the Rugby World Cup 2019 and the 2020 Tokyo Olympics. According to kyodonews.net, about 1,000 people including riot squad personnel joined the drill at Prince Chichibu Memorial Rugby Ground, located close to the main stadium for the 2020 Tokyo Olympics and Paralympics, as part of efforts to deal with terrorist attacks ahead of the events.

The drill was based on the assumption that a bomb had been planted in a nearby office building with around 800 workers and terrorists had dispersed sarin, a deadly nerve gas, over spectator seats at the stadium.



2015 chemical drill at Tokyo metro system – Hope they will do better if something real will happen during the Games. In this photo it is OBVIOUS that the planner of the drill have NEVER been inside a Level A PPE ever in his life!

A bomb disposal team moved a bag supposedly containing the explosive with a [robot](#) arm from the building to a safer place, while a special police unit tasked with countering nuclear, biological and chemical terror attacks disposed of the sarin gas and decontaminated surrounding areas.

Tokyo police have been beefing up security at “soft targets,” or civilian sites including sporting arenas, schools, movie theaters and shopping centers that draw many people but are relatively vulnerable to terror attacks without stringent security measures.

Several weeks earlier, Tokyo police staged an anti-terrorism drill at a U.S. government hotel in central Tokyo. More than 170 riot police and hotel workers participated in the exercise at the US Navy’s New Sanno Hotel in Minato Ward. In the scenario, armed terrorists hijacked a public bus, took the passengers hostage and drove through the security checkpoint onto the hotel’s grounds.

Working with hotel security, local police officers controlled the perimeter while an anti-terrorism unit and a police dog subdued the suspects, who were holding a woman at gunpoint and demanding a helicopter. The bomb squad disabled a simulated explosive device the suspects had brought into the facility, a Tokyo Metropolitan Police spokesman added, according to stripes.com. “Since there needs to be cooperation with U.S. forces, the drill aimed to improve the cooperation and ability to handle such a case,” he said.



US tried to kill Kim Jong-un with chemical agents

Source: <http://www.presstv.com/Detail/2017/10/07/537749/US-assassination-North-Korea-Kim-Jongun-biological-terrorism>

Oct 07 – **Pyongyang has reportedly foiled a plot by the US government and its main ally, South Korea, earlier this year to assassinate North Korean leader Kim Jong-un using biological and chemical agents.**

North Korea's official Korean Central News Agency (KCNA) made the claim in an article published on Friday, accusing Washington of using counter-terrorism and the so-called war on terror as a pretext to overthrow governments it deems hostile.

"In May this year, a group of heinous terrorists who infiltrated into our country on the orders of the Central Intelligence Agency (CIA) of the US and the South Korean puppet Intelligence Service with the purpose of carrying out a state-sponsored terrorism against our supreme headquarters using biological and chemical substance were caught and exposed," the KCNA wrote.

"This palpably shows the true nature of the US as the main culprit behind terrorism," it added.

The article also said the US "changes its colors" like a "chameleon" to justify toppling governments, especially in the Middle East, adding that Washington interchangeably uses counter-terrorism and the non-proliferation of weapons of mass destruction to justify its invasions of Afghanistan, Iraq and Libya.

The KCNA cited Iraq and Libya as examples of governments that halted their nuclear programs only to be later attacked by the US.

The Friday article also said North Korea's commitment to fighting terrorism and said, US meddling is "the main reason international terrorism is not yet annihilated."

Pyongyang had previously claimed in an official report that, "The US has fully revealed its criminal scenario to make no scruple of using biochemical weapons" to destroy North Korea and take over the world, accusing Washington of developing "Plan Jupiter," a biochemical operation allegedly designed to overthrow Kim.

The United States and North Korea have been at loggerheads over Pyongyang's weapons and nuclear programs and Washington's military posture against the North.

Pyongyang says it will not give up on its nuclear deterrence unless Washington ends its hostile policy toward the country and dissolves the US-led UN command in South Korea. Thousands of US soldiers are stationed in South Korea and Japan.

Tensions have recently significantly risen between North Korea and the US. The two countries have been trading threats of military action against one another, and there is a potential for a real armed conflict to erupt.

US President Donald Trump has taken a tough stance, threatening to "totally destroy" North Korea if necessary and calling the North Korean leader names. Kim has responded with threats, and name-calling, of his own.



Nerve agent VX found on shirts of women accused of North Korean murder, expert says

Source: <http://www.reuters.com/article/us-northkorea-malaysia-kim-court/nerve-agent-vx-found-on-shirts-of-women-accused-of-north-korean-murder-expert-says-idUSKBN1CA0UI>

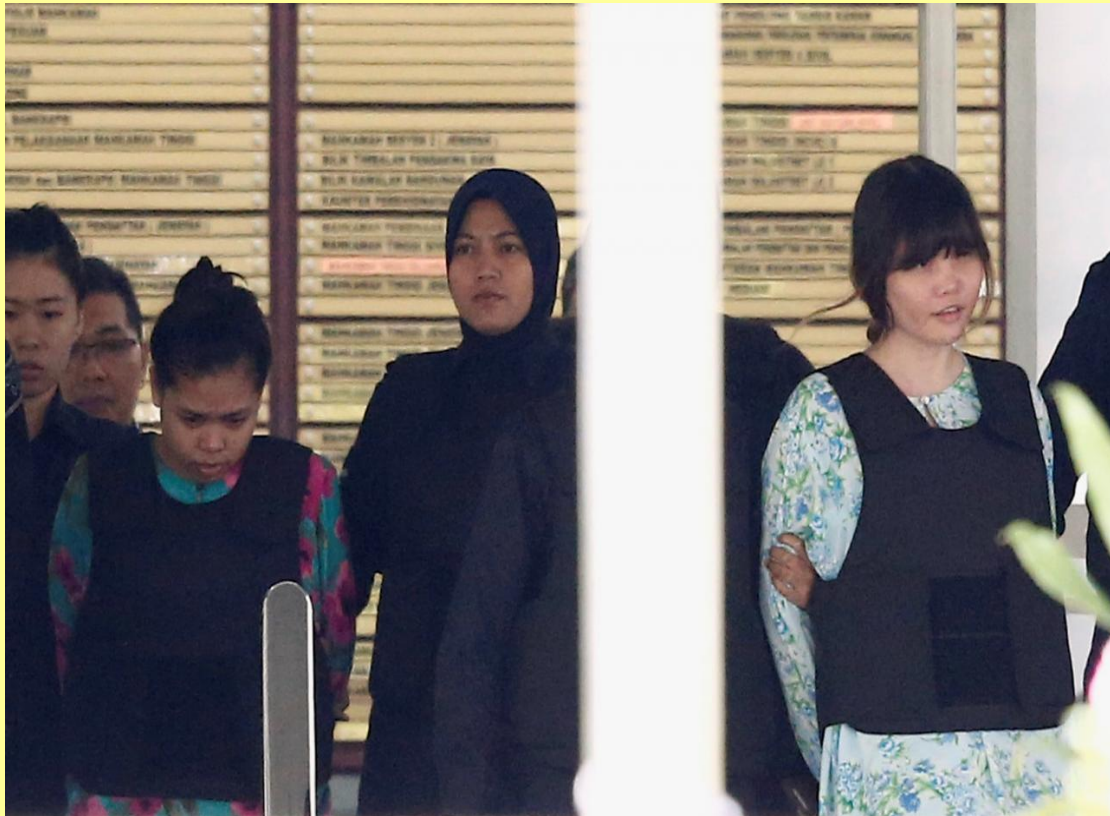
Oct 05 – Traces of a deadly nerve agent that killed the estranged half-brother of North Korean leader Kim Jong Un were found on the clothes worn by the two women accused of the sensational murder, a Malaysian court was told on Thursday.

Indonesian Siti Aisyah, 25, and Doan Thi Huong, 28, a Vietnamese, are charged with murdering Kim Jong Nam by smearing his face with VX, a chemical poison banned by the United Nations, at Kuala Lumpur airport on Feb. 13.



A chemical weapons expert with the Malaysian government said his analysis showed traces of VX, its precursors and degradation products on the sleeves of a T-shirt worn by Huong, as well as VX degradation products on Siti Aisyah's sleeveless shirt.

"The presence of precursors and VX confirms the presence of VX itself," the expert, Raja Subramaniam, told the court outside the Malaysian capital. "I also found degradation products of VX, which confirms the presence of VX."



Vietnamese Doan Thi Huong and Indonesian Siti Aisyah who are on trial for the killing of Kim Jong Nam, the estranged half-brother of North Korea's leader, are escorted as they leave the Shah Alam High Court on the outskirts of Kuala Lumpur, Malaysia. REUTERS/Lai Seng Sin

The testimony was used to back the prosecution's position that VX was used in the murder and was the sole cause of death, a scenario defense lawyers disputed this week.

In response to a prosecution question, Raja agreed that VX could be applied on a bare palm and potentially have no effect on a person if washed off quickly enough.

The lethality of VX depended on the dosage and where on the body it was applied, he added.

"The concentration required varies by a factor of 26, from the cheek, which is sensitive, to the palm, which is least sensitive, to have the same effect," Raja said.

Raja said penetration of VX into the body is highest in areas with higher concentrations of blood, such as the head, neck, eyes and ears.

On the least sensitive areas, such as the palm, where larger amounts of tissue and fat deposits block absorption, Raja said an individual would have up to 15 minutes to wash off the nerve poison with running water.

"If you decontaminate within 15 minutes, most likely no effect or delayed effect (from VX)," Raja said, citing studies on human test subjects.

The women have pleaded not guilty, saying they thought they were involved in some sort of prank for a reality TV show. They face the death penalty if convicted.



NARU re-accredited with Skills for Health Quality Mark for world class education and training

Source: <https://naru.org.uk/naru-re-accredited-skills-health-quality-mark-world-class-education-training/>



Sept 21 – The National Ambulance Resilience Unit (NARU) is once again celebrating being re-accredited with the prestigious **Skills for Health Quality Mark** for its excellence in delivering world-class training modules to thousands of frontline ambulance staff.

[The Skills for Health Quality Mark – the first for the UK's health sector](#) – provides a framework that defines and endorses superior learning and training standards that healthcare employers need to cultivate a world-class workforce.

The Quality Mark gives health sector organisations greater confidence when commissioning external training or delivering internal training and means that providers can enjoy industry-wide credibility and the knowledge that their offering meets a unique and recognised audit process. [NARU was initially accredited in June 2014, becoming the first ambulance organisation to attain this.](#)

[NARU](#) works with all NHS ambulance services to support the development of properly trained, fully equipped ambulance first responders who can deal with especially hazardous or difficult situations.

For example, the [NARU Education Centre](#) has trained every single member of each ambulance service's [Hazardous Area Response Teams](#) – the specialist ambulance staff who have responded to such high profile recent incidents as the Manchester bombing, the Westminster and London Bridge attacks, the Grenfell fire and the recent tube attacks.

NARU also provides front line and control room staff with [training materials via its online education](#) site and [documents such as command guidance and action cards](#).

NARU National Director Keith Prior said:

“NARU remains the first and only ambulance service organisation to be awarded the Skills for Health Quality Mark and I am extremely proud of the staff at the [NARU Education Centre](#) who are so committed and work tirelessly to provide the very highest standards of ambulance service education.



With the UK terrorism threat level now at Severe it is more important than ever that our specialist responders have been pre-trained in circumstances which are as realistic as possible, to give them every chance of remaining vigilant and saving as many lives as possible when something happens – and staying safe while they are doing so.”

NARU Head of Education David Bull QAM said:

“The quality mark provides organisations sending staff to us from across the NHS with sound evidence that the methodology and subjects we teach are appropriate and to the standard that the modern NHS requires.

It is particularly rigorous and the entire process starts with the submission of all of our policies, programmes and documentary evidence. This is followed by inspections, visits to teaching sessions, consultation with staff and current and previous delegates, as well as their managers. Finally, a panel sits and approves or makes recommendations for improvements.

Aside from underpinning the quality of education we constantly strive to attain this reaccreditation is testament to the hard work of the staff and the delegates at the Education Centre and I am exceptionally proud of them all.”

Managing Director of the Association of Ambulance Chief Executives (AACE) Mr Martin Flaherty OBE said:

“Once again, AACE is delighted to see NARU leading the way with its world class education and training for our specialist ambulance responders, particularly at a time when the UK is going through a hugely challenging time for the emergency services.

The work of NARU has done a great deal to bring fire and rescue, police and ambulance services to work more closely together than ever before, especially through joint training initiatives and this can only be welcomed.”

Scientists develop 'ring' which detects explosives or chemical agents - in breakthrough against terrorism

Source: <http://www.ibtimes.co.uk/scientists-develop-ring-which-detects-explosives-chemical-agents-breakthrough-against-1642769>



A first-of-its kind ring sensor can detect chemical and biological threats. American Chemical Society

Oct 11 – Researchers have designed a sensor that can be worn as a ring and can detect the presence of a wide array of harmful chemical and biological substances, including explosives and highly toxic nerve agents.



In a breakthrough against terrorism, Joseph Wang and his colleagues from the University of California say the wearable device shows considerable promise for meeting the demands of a wide range of defence and security scenarios.

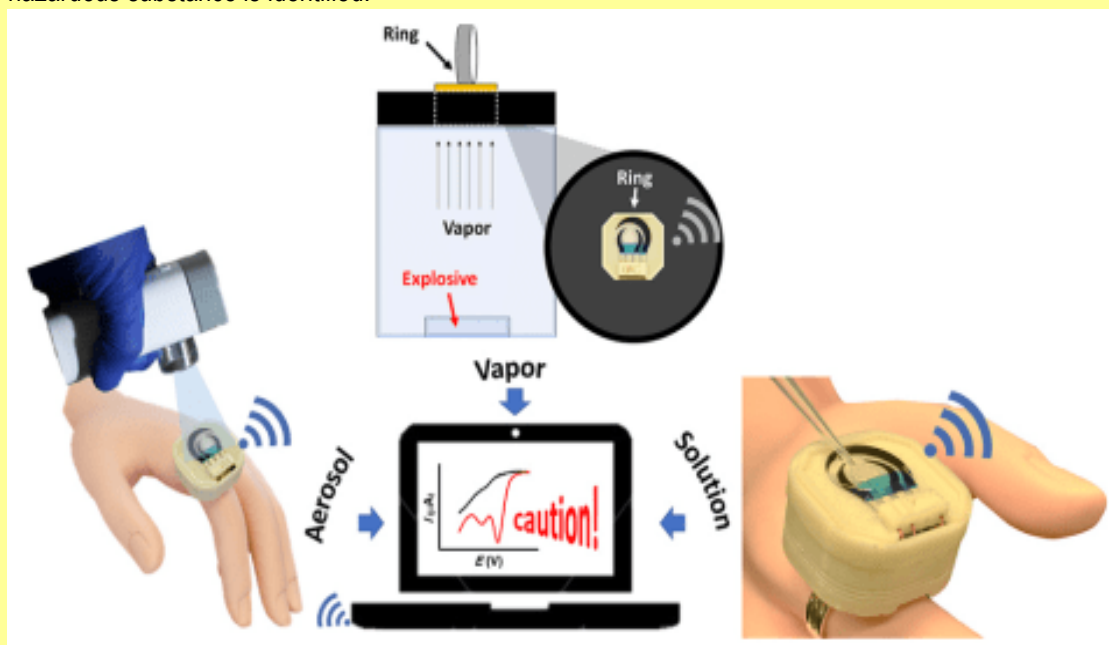
"With increasing terrorist threats and political instability, there are urgent needs for developing wearable sensing platforms for detecting chemical and biological threats," the researchers said.

In future, the ring-based sensor could also be modified for use in other areas, for example, in industries which deal with hazardous chemicals.

The first-of-its kind device is made up of two parts: an electrochemical sensor cap for detecting chemical



and biological threats, and a circuit board which processes and alerts a smartphone or laptop when a hazardous substance is identified.



To test the prototype, the team exposed the ring to explosives and organophosphate nerve agents – which prevent the nervous system from working properly - finding that it was highly



sensitive to both targets and was also very selective – minimizing the possibility of false alarms. The study detailing the detection device is published in the American Chemical Society journal ACS Sensors.

Wearable sensors are revolutionizing the world of tech because of their ability to carry out a huge range of useful functions, from monitoring people's heart rate to tracking elderly people with dementia. Some are even becoming fashionable with many sporting sleek, stylish designs.

According to global analyst firm CCS Insight, the wearable electronics market will be worth \$34 billion by 2020. Among the wearable sensors currently in development are devices which will be implemented inside wristbands, mouth guards, headbands and even tattoos.

Earlier this year, Wang also developed another device for detecting dangerous chemicals which was reported in the same journal. The disposable "lab-on-a-glove" can detect the presence of organophosphate pesticides on food produce which can be harmful to humans if ingested.

EU's £300m 'egg' building in POISON ALERT as staff taken ill by 'noxious fumes'

Source: <http://www.express.co.uk/news/world/866003/european-council-eu-building-evacuation-kitchen-staff>



Oct 13 – **A ventilation problem caused the air to be filled with toxic gases in the new Europa Building in Brussels**, the organisation has said.

The European Council said in a statement that a “technical issue” with the ventilation “producing noxious fumes **in the kitchens**, has led to a number of **kitchen staff falling ill.**”

Emergency services vehicles including police cars and ambulances were pictured outside the building as staff were escorted off the premises.

Some were evacuated to the old EU building next door. It is not known whether any of the staff were hospitalised.

The Europa building was unveiled in December 2016 as the new home of the European Council and of summit meetings for EU27 leaders.

The €321 million euro project was meant to symbolise “joy” at a time of increasing frustration with Brussels bureaucrats.

It was quickly nicknamed the “Space Egg” because of its unique design - an ovular lantern-shaped structure inside a cube made of recycled window frames from countries across the European Union.



The building was hugely criticised for its high cost at a time when member states are faced with significant spending cuts - and while Brussels was meant to be trying to cut waste.

The ventilation issues could raise questions about safety at the state-of-the-art building.

The EU says the incident will not prevent the October 19-20 summit of EU leaders from taking place.

EDITOR'S COMMENT: CBRNE means also **Can Be Really Nasty!** Next time might be...



The World's First Cordless Electrostatic Sprayer

Source: <https://victorycomplete.com/>

Electrostatics is the process of adding an electric charge inside the liquid droplets when they are sprayed. This makes the droplet electrically stronger than the surface or the item it is treating. Just like magnets, they are drawn to each other and attach when one surface is more positively charged than the other.

Features

- Electrostatic Technology Allows You To Spray Less Chemical, Cover More Surfaces In a Fraction Of The Time.
- 16.8 Volt Lithium-Ion Battery Allows 4 Hours of Continuous Run Time.
- Lightweight and Portable - 3.8lbs.
- 3 in 1 Adjustable Nozzle For Different Particle Sizes.
- Quiet — Suitable For Use In Any Environment.
- Removable Tank Holds 33.8oz. Of Liquid.
- Deluxe Carrying Case
- Great for Sanitizing, Disinfecting, Odor Control, Insect Control, Pesticides, Coatings and More!



Decontamination

Electrostatic sprayers neutralize a wide range of chemical agents, biological agents, and toxic industrial chemicals. Uses include hazmat teams, CBRNE units, clandestine labs, EMS, first responders, and outbreak responders.

Sanitation & Disinfectant

Often used with biocides and disinfectants for food processing plants, cruise ships, airplanes, cargo containers, production agriculture, hospitals, schools, daycare veterinary clinics, homes, and businesses.



Israeli Startup Develops 'Ultimate Truth Machine' – Claims Assad Wasn't Behind Chemical Attack

Source: <https://www.haaretz.com/israel-news/1.817219>



Canadian special-forces team hunts down and dismantles chemical weapons in Iraq

Source: <https://beta.theglobeandmail.com/news/politics/canadian-special-forces-team-hunts-down-and-dismantles-chemical-weapons-in-iraq/article36528217/>



Oct 10 – Canadian Special Forces have played a central role in hunting down, detecting and dismantling stockpiles of chemical weapons used by Islamic State militants in Iraq, according to sources with knowledge of the top-secret operations.

Some of these highly trained soldiers have advanced scientific degrees and used their specialized skills to decontaminate Kurdish Peshmerga fighters and Iraqi soldiers affected by mustard gas.

Canada's special forces are made up of the elite **JTF-2 counterterrorism force**, regular commandos, a special helicopter detachment and the Canadian Joint Incident Response Unit (CJIRU), which is responsible for responding to nuclear, chemical and biological attacks.

Soldiers with the CJIRU are among about 200 Canadian special forces deployed in northern Iraq focused mainly on training Kurdish fighters. Some of them recently helped in the battle to reclaim the Iraqi city of Mosul from the Islamic State, **including a small number of CJIRU soldiers whose job was to search for and destroy chemical weapons.**

Mosul was at the centre of the Islamic State's chemical-weapons production, mostly small batches of low-quality chlorine and sulphur mustard agents, but the hardline Sunni militants also had control over radioactive material at the city's university.

Sources, with knowledge of the activities of Canada's special forces in Iraq, but who were not authorized to speak on the record, have told The Globe and Mail that CJIRU soldiers detected and dismantled weaponized chemical components and hazardous material in Mosul between March and August of this year.

"It is a very, very highly capable organization that deals with very, very ugly situations," said retired lieutenant-colonel Steve Day, the former head of Canada's secret JTF-2 special-operations unit who worked alongside CJIRU soldiers.



"They have got both tactical training, so they can operate alongside special forces, but they also have technical training in their ability to handle biological, chemical or radioactive agents."

Story continues below advertisement

For security reasons, the sources would not discuss the exact nature of the operations that were conducted in eastern and western Mosul.

Major Alexandre Cadieux, who speaks for Canadian Special Operations Task Force (SOTF) in Iraq, said the military has a policy of not commenting on its special-forces activities and the role of CJIRU soldiers. "The Canadian Special Operations Forces Command does not discuss the specific composition of its task forces ... [and] does not discuss the exact threats that the SOTF detects against its personnel," Major Cadieux said in an e-mail.

The Washington Post reported in July that two caches of the highly dangerous cobalt-60 isotope used in radiotherapy-treatment machines in medical facilities was discovered on a university campus in Mosul. It is not known whether the Islamic State knew that the cobalt-60 could be used to make a dirty bomb, or whether they did, but were afraid of being exposed to the lethally high levels of radiation.

The Canadian military would not say whether CJIRU soldiers were part of the U.S. operation to retrieve the cobalt-60 radiation machines. Asked if Canada played a role in finding the radiation machines, Major Cadieux said the armed forces "will not provide information that could jeopardize, even indirectly, operations by Iraqi security forces and the [U.S.-led] coalition."

U.S. officials have confirmed that the Islamic State had gained control of small quantities of natural or low-enriched uranium from the days of Saddam Hussein's rule, as well as some relatively harmless radioactive iridium used in industrial equipment.

The Canadians, often working alongside their secretive U.S. counterparts, have highly specialized sensor equipment that allows them to sample, identify and characterize chemical and hazardous material. They are assisted in their operations by U.S. airborne sniffers that can detect radioactive and chemical agents. "They have got the ability, in very small numbers, to do the decontamination and containment of the site," Mr. Day said. "Some of the [chemical weapons] are lethal within metres, some of them are lethal within hundreds of metres and that is what these men and women are doing."

Mosul, Iraq's second-biggest city, was captured by Islamic State fighters in 2014 but government forces – with the help of U.S. and Canadian special forces – retook the city in late July in an operation that lasted six months.

Iraqi police have accused the Islamic State of using chemical weapons against their forces in Mosul. Most of these involved either the use of chlorine or sulphur mustard agents, delivered with mortars, rockets and improvised explosive devices.

The Islamic State has used chemical weapons in Iraq and Syria at least 52 times according to the IHS Conflict Monitor, a London-based research and intelligence-gathering group. A report by IHS said at least 19 of 52 attacks took place in and around Mosul.

Canada's Armed Forces established the CJIRU team in 2006. Its principal focus – working alongside the RCMP and Health Canada – is protecting Canada from a nuclear, radioactive, chemical or biological attack.

Mr. Day said only a small number of CJIRU member are sent overseas on military missions, such as Iraq. "Their number one priority is the domestic response. That domestic capability is fenced off and thou shall not touch that capability except in times of emergency," Mr. Day said.

Pakistan won't let non-state actors acquire its chemical weapons

Source: <https://dnd.com.pk/pakistan-wont-let-non-state-actors-acquire-its-chemical-weapons-un-told/134607>

Oct 19 – **The United Nations was told that Pakistan has taken steps to prevent non-state actors from obtaining and using chemical as well as biological weapons.**

"We have taken a series of measures to counter this risk," Pakistan's Permanent Representative to the United Nations in Geneva Ambassador Faruk Amil told the UN



General Assembly's Disarmament and International Security Committee while sharing international community's concern over the danger of such arms falling into the wrong hands.

The ambassador said that in this regard, Pakistan supported the Russian proposal for the elaboration of an international convention for the suppression of acts of chemical and biological terrorism in the Conference on Disarmament.

Faruk Amil, who was participating in a debate on weapons of mass destruction, said that Pakistan condemns the use of chemical weapons by anyone, anywhere.

"Those responsible for such deplorable acts must be identified and held accountable," he said.

The Pakistani envoy said that the conventions on biological and chemical weapons were two important pillars of the international security architecture. Both had made significant contributions to the goal of general and complete disarmament by prohibiting two entire categories of weapons of mass destruction, he said.

The ambassador said that Pakistan had prioritized the universalization of the Biological Weapons Convention and the balanced implementation of all its articles. However, he added, that the most sustainable method of strengthening the instrument was through multilateral negotiations aimed at concluding a legally binding protocol that also addressed verification and the implementation of all articles. Faruk Amil further said that Pakistan was also fully committed to the Chemical Weapons Convention and continues to actively and constructively participate in the work of the Organisation for the Prohibition of Chemical Weapons (OPCW).

The envoy said that Pakistan also attached high priority to provisions of the Convention relating to international cooperation and assistance as well as the peaceful uses of chemical technology.

EDITOR'S COMMENT: Fake title! OR NOT?

New early-warning intelligence system alerts civilians to impending chemical attacks

Source: <http://www.homelandsecuritynewswire.com/dr20171023-new-earlywarning-intelligence-system-alerts-civilians-to-impending-chemical-attacks>

Oct 23 – A new study by Kiran Bhaganagar, associate professor of mechanical engineering at the University of Texas at San Antonio, and her research group, Laboratory of Turbulence Sensing & Intelligence Systems, is taking a closer look at the damage caused by chemical attacks in Syria. The Syrian civil war, ongoing since 2011, has seen hundreds of people killed through the use of chemical weapons.

Chemical agents are different from explosive chemicals, which cause localized destruction through force. Sarin gas, for example, a nerve agent which has been used in many attacks in Syria, can diffuse into the atmosphere and spread for hundreds of miles.

Turbulence is also an important player in diffusing the released chemical to kilometers away from the source of release. Bhaganagar's expertise in "taming turbulence" is making a difference in predicting this very critical problem of chemical terrorism facing the world.

UTSA [says](#) that with the world moving towards smart buildings and smart cars, the concept of developing an intelligence system for chemical plume trajectory is critical for national safety against impending chemical threats. Funded by U.S. Department of Army Edgewood Chemical and Biological Center (ECBC), Bhaganagar's team is developing an early warning prediction system for these attacks. This is an intelligence system that uses a weather research forecasting model (WRF) with local sensor data to predict air-borne release chemical plume. Local turbulence and the type of the gas dictates the direction of the plume path.

Bhaganagar and her team simulated on a supercomputer the same conditions as a recent Syrian gas attack on a small town of Khan Shaykhun, in which as many as 100 people may have been killed.



The intelligence system relies on solving an intricate set of thousands of mathematical equations and processing millions of data within few minutes. This is done on supercomputing processing systems with 50,000 graphical core units working simultaneously to predict the plume path in real-time. Using this intelligence system and local conditions in Khan Sheikhoun, the team was able to predict exactly how far and high the gas would spread, and at what speed. When they compared the simulation data to the actual details of the real attack, they found that they matched. The model worked and could realistically warn potential victims of a chemical attack to flee the area.

Bhaganagar's study demonstrates that local wind and terrain conditions and atmospheric turbulence make chemical attacks even more deadly than previously understood, and proposes that analysis of the wind and the use of data-collecting drones could make for an early warning system that would allow people in potentially deadly areas to evacuate before the gas reaches them.

The challenge in developing the intelligence systems is to obtain the local wind, turbulence surface and chemical gas sensing data. Currently, the team is demonstrating using aerial drones that scan the region in the vicinity of the chemical source and get point-point sensing data. This is what is known as mobile sensing.

"We are moving from traditional single-point stationary sensors to novel concept of mobile sensing which is low cost, fast collection of sensing data and very accurate," said Bhaganagar. "This is the next step. We will deploy low-cost aerial drones to collect wind and gas concentration sensing data. We can alert people to danger within minutes."

"The human cost of this conflict is rising daily, and it doesn't have to," she said. "Through collaboration and innovation, we can save lives."

— Read more in Kiran Bhaganagar and Sudheer R. Bhimireddy. "Assessment of the plume dispersion due to chemical attack on April 4, 2017, in Syria," [Natural Hazards](#) (29 May 2017)..



About 2.1 million Americans using wells high in arsenic

Source: <http://www.homelandsecuritynewswire.com/dr20171023-about-2-1-million-americans-using-wells-high-in-arsenic>

Oct 23 – **A new study by the U.S. Geological Survey and Centers for Disease Control and Prevention estimates about 2.1 million people in the U.S. may be getting their drinking water from private domestic wells considered to have high concentrations of arsenic, presumed to be from natural sources.**

"About 44 million people in the lower 48 states use water from domestic wells," said Joe Ayotte, a USGS hydrologist and lead author of the study. "While we're confident our research will help well owners understand if they live in an area of higher risk for arsenic, the only way for them to be certain of what's in their water is to have it tested."

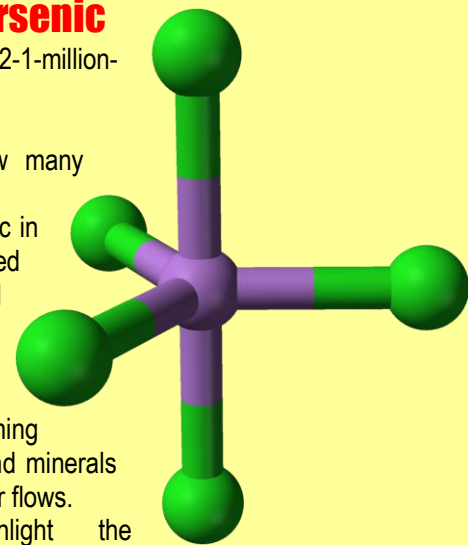
USGS says that the researchers, using a standard of 10 micrograms of arsenic per liter — the maximum contaminant level allowed for public water supplies — developed maps of the contiguous U.S. showing locations where there are likely higher levels of arsenic in

groundwater, and how many people may be using it.

Nearly all of the arsenic in the groundwater tested for this study and used to map probabilities is likely from natural sources, and is presumed to be coming primarily from rocks and minerals through which the water flows.

The findings highlight the importance of private well owners working with their local and state officials to determine the best way to test and, if necessary, treat their water supplies.

"Fortunately, in most areas of the country and with appropriate safeguards, the majority of homeowners can get good quality drinking water from private wells," said Ayotte. "But this study is a good reminder that prudent, routine testing of the water,

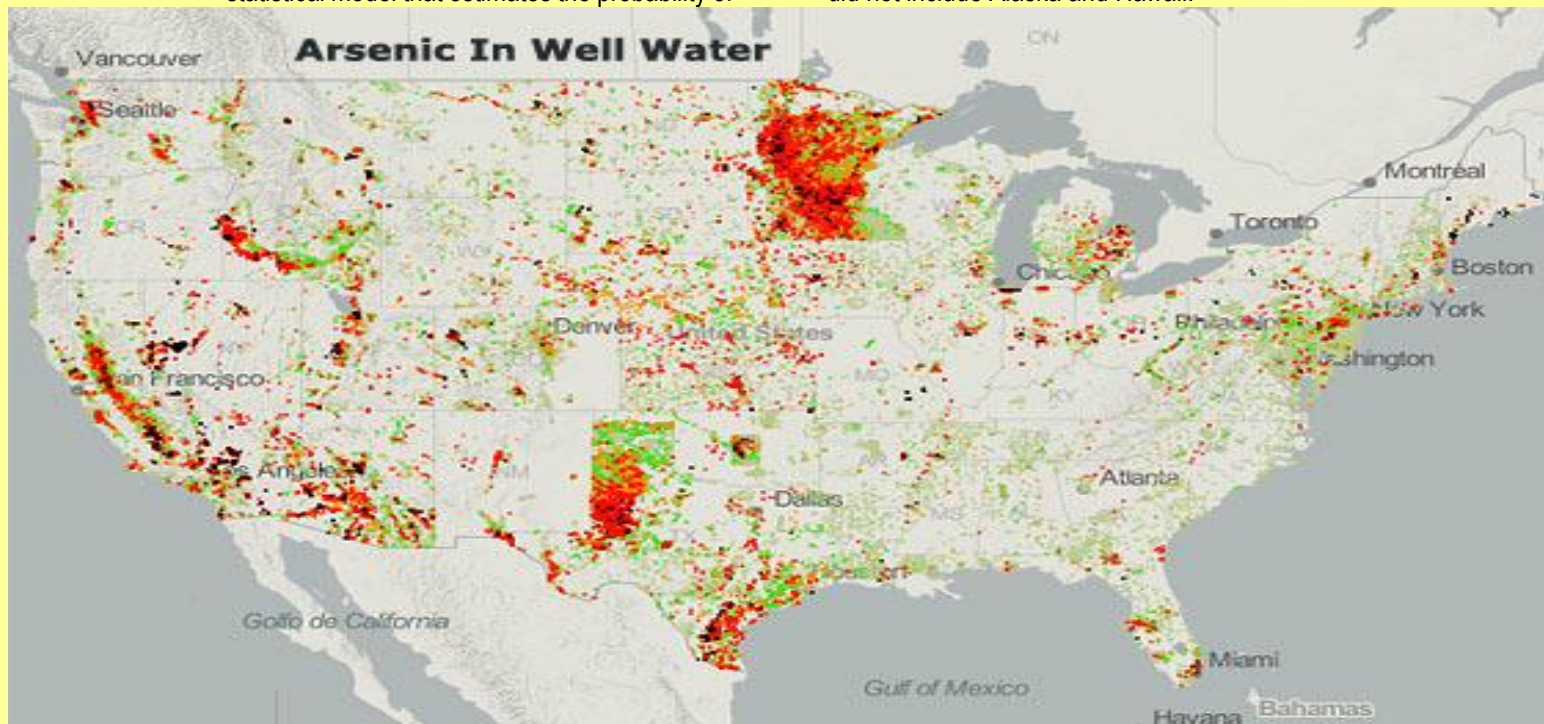


including its interaction with the water supply system, is an essential first step so homeowners and their families can confidently drink water from their faucets.”

Using water samples from more than 20,000 domestic wells, the researchers developed a statistical model that estimates the probability of

- Some of the Atlantic southeast coastal states – Florida, Virginia, North Carolina, South Carolina

“Although high-arsenic wells can occur in all 48 contiguous states, it is more prevalent in some states than in others,” said Ayotte. “The study did not include Alaska and Hawaii.”



having high arsenic in domestic wells in a specific area. They used that model in combination with information on the U.S. domestic well population to estimate the population in each county of the continental United States with potentially high concentrations of arsenic in domestic wells.

“One of our study’s basic assumptions is that the probability of high arsenic can be estimated by a statistical model. We also assume that the domestic water use population is represented by census information used in the study,” said Ayotte.

Some of the locations where it’s estimated the most people may have high-levels of arsenic in private domestic well water include:

- Much of the West – Washington, Oregon, Nevada, California, Arizona, New Mexico
- Parts of the Northeast and Midwest – Maine, Massachusetts, New Hampshire, New Jersey, Maryland, Michigan, Wisconsin, Illinois Ohio, Indiana

The researcher provided a cautionary note that while the study provides state and county estimates, they are not intended to take the place of more detailed or local information that may already be available in some areas.

Long-term exposure to arsenic in domestic wells may cause health-related problems, including an increased risk of cancer. Testing and, if necessary, treating the water is an effective way of reducing or eliminating the concern. A [CDC fact sheet](#) provides more information, as does the [CDC’s Agency for Toxic Substances and Disease Registry](#).

“Ultimately, this study should be helpful not only in assessing the likelihood of people being exposed to arsenic in domestic well water, but the results of the study may assist other researchers evaluate situations where adverse health outcomes such as cancers or adverse birth outcomes may be related to environmental factors,” said Ayotte.



USGS notes that public water supplies are regulated by the U.S. EPA, but maintenance, testing and treatment of private water supplies are the sole responsibility of the homeowner. About 44 million people in the U.S. get their

drinking water from private wells, yet surveys indicate many homeowners are unaware of some basic testing that should be done to help ensure safe drinking water in the home.

— Read more in Joseph D. Ayotte et al., “Estimating the high-arsenic domestic-well population in the conterminous United States,” *Environmental Science and Technology* (18 October 2017).



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BIO NEWS



The Invisible Threat

By Jenna McLaughlin

Source: <http://www.homelandsecuritynewswire.com/dr20170928-the-invisible-threat>

Sept 28 – In 1995, during the Monday morning rush hour in the Tokyo subway, thousands of commuters inhaled toxic nerve gas left leaking from little plastic bags. Twelve people died, and thousands more were injured in the deadliest attack in Japan since the Second World War. The attack was the work of Japanese cult Aum Shinrikyo.

Jenna McLaughlin [writes](#) in *Foreign Policy* that the cult members, many of them students of science, were unsuccessful in launching a true biological attack. They were clumsy and unfocused and the tools too complex to pull off with ease.

They were like “kids playing in a school yard,” Richard Danzig, a former U.S. Navy secretary, who interviewed several cult members and who was a co-author of a [2011 paper](#) on the incident.

McLaughlin continues:

But those efforts were in the mid-1990s, and the tools for creating bioattacks have become more accessible. Yet even as more U.S. government officials and outside experts sound the alarm over the increasing risk of bioattacks, the funding for science needed to defend against such attacks is threatened.

Many top scientific positions in the government that could help call attention to this threat remain open, and President Donald Trump’s proposed budget for 2018 would eliminate the only federal facility devoted to tracking and analyzing potential bioweapons agents including toxins, poisons, and viruses.

In the meantime, the barriers for a terrorist group or lone wolf to create a biological threat are wearing down. Today, a bioweapon factory like the Japanese terrorists built “could be constructed in a way that was vastly smaller and less visible,” said Danzig, who served on President Barack Obama’s Intelligence Advisory Board, which consulted with the intelligence community on biothreats.

“Imagine that the Unabomber was a biologist and not a mathematician. Instead of making pipe bombs, he’d make pathogens,” he said. “I think we’re a step away from those concerns.”

....

Yet even if individuals are now capable of developing bioweapons, countries with malicious programs are still a major concern. “I’ve felt for years that our greatest risk stemmed from North Korea,” Danzig said.

Danzig isn’t alone in those concerns, whether about terrorists or governments. Under Obama, the White House was interested in learning more about scientific problems, and one of the last research topics of the president’s council of advisors on science and technology was about the danger of biothreats.

But “that study came so late in the game that one cannot point to a lot of policy change that resulted from it,” John Holdren, Obama’s science advisor, told FP.

As of mid-August, that advisory council has been dissolved, and there are [no current plans](#) to revive it. As for the biothreats study it produced, its fate is unclear.

“I have some hope the recommendations will survive across and into the Trump administration,” he said, “but, again, so many of the key positions are vacant it’s hard to tell at this point.”

....

Fort Detrick’s NBACC, located about 50 miles northwest of Washington in Frederick, Maryland, is facing closure. The lab employs nearly 200 experts, who pore over nearly 15,000 samples a year, primarily for the FBI.

....



FBI spokesman Matthew Bertron [told](#) the Frederick News-Post that the lab's capabilities are "unique and unparalleled." However, when contacted by FP, the FBI declined to comment on the administration's proposed budget cuts.

"[I]f this lab were to close and its staff to be dispersed — the nation would lose a scientific treasure that would be difficult if not impossible to replace," the Frederick-News Post's editorial board [wrote](#) in May. "Even if Congress eventually keeps the lab open, it will have been badly damaged."

►► Read the full article at: [Foreign Policy](#) (21 September 2017)

Critical Illness and MERS

By Amesh A. Adalja, MD, FACP, FACEP, FIDSA

Source: http://www.upmc-cbn.org/report_archive/2017/cbnreport_09292017.html

Sept 29 – Cases of Middle East respiratory syndrome (MERS) have continued to accrue in the Arabian Peninsula over the past several years and have been imported to other nations, most notably South Korea. While some cases of MERS are minimally symptomatic, such as the 2 cases imported into the United States, some are characterized by severe symptoms and death. A new retrospective multicenter cohort study, published in *Critical Care Medicine*, focused on critically ill MERS patients in Saudi Arabia and provides important information on the characteristics of those with the most severe manifestations.

Independent Risk Factor for Death

In this study, Arabi et al. included 330 patients from 14 referral centers in Saudi Arabia who were diagnosed with severe acute respiratory infection due to MERS and compared them to 222 who had severe acute respiratory infection due to a non-MERS etiology. The study period included patients admitted between September 2012 and October 2015.

Important differences between patient cohorts included the fact that they tended to be younger, male, and healthcare workers. Clinically, they tended to be more hypoxemic with more extensive chest radiographic findings than non-MERS patients. SOFA scores were also higher. Accordingly, they were more likely to require mechanical ventilation and higher oxygen concentrations and positive end expiratory pressure. They were also more likely to receive paralytics, nitric oxide, prone position ventilation, high-frequency oscillatory ventilation, and extracorporeal membrane

oxygenation (ECMO). Vasopressor use and renal replacement therapy were used more frequently in MERS patients.

MERS survivors tended to clear the virus faster than MERS nonsurvivors. Viral coinfections were present in 5% of MERS patients—most commonly, another coronavirus, RSV, and influenza A. Bacteremia was present in 8% of MERS patients.

Mortality was 65.8% in the MERS group compared to 31.1% in the non-MERS group, and MERS was an independent risk factor for death. In MERS patients, age and renal failure were associated with death. Death from community-acquired MERS was associated with age and diabetes with complications.

MERS

This study, the largest ever on MERS patients, is an important addition to the literature on this highly significant emerging infectious disease. The severity described with MERS, when compared to patients with similar clinical syndromes not caused by MERS, is substantial and illustrates the challenges in treating severe cases of MERS. Importantly, rescue therapies such as ECMO were employed more frequently with MERS patients, and this use will be important to study in detail for evidence of benefit and feasibility of regionalization as well as application to other severe respiratory infections.

As MERS continues to spill into humans, clinical and epidemiologic data will be essential for preparedness activities, situational awareness, and resilience.



Reference

Arabi YM, Al-Omari A, Yasser M, et al. Critically ill patients with the Middle East respiratory syndrome: a multicenter retrospective cohort study. *Crit Care Med* 2017;45(10):1683-1695.

Biological Weapons and Virtual Terrorism

Source: http://www.huffingtonpost.com/entry/biological-weapons-and-virtual-terrorism_us_59d23151e4b034ae778d4c3c

Oct 02 – Biological weapons are very attractive to terrorists because they can be difficult to detect, are cost effective, and can be easy to use. Aerosols of biological agents are invisible, silent, odorless, tasteless, relatively easily dispersed, and they are 600 to 2000 times cheaper than other weapons of mass destruction. It has been estimated that the cost of a biological weapon is about 0.05 percent the cost of a conventional weapon to produce similar numbers of mass casualties per square kilometer. Production is comparatively easy, using common technology available for the production of some antibiotics, vaccines, foods, and beverages, and delivery systems such as spray devices from an airplane, boat, or car are commonly available.

Another appeal of biological agents for terrorists is the natural lead time provided by the organism's incubation period (3 to 7 days for most potential organisms), which allows terrorists to escape before an investigation by law enforcement or intelligence agencies could even begin. Apart from the use of an endemic infectious agent likely causing initial confusion because of the inability to differentiate a biological warfare attack from a natural epidemic, for some agents, the potential exists for secondary or tertiary transmission by person-to-person transmission or natural vectors. For these reasons, biological weapons have become a new weapon of choice for virtual terrorists, who seek to acquire toxic pathogens or their ingredients online.

Scientists are concerned that a technique called Clustered, Regularly Interspaced, Short Palindromic Repeat (CRISPR) is now so cheap and widely available that amateurs will start experimenting at home or in school labs. The technique works like genetic scissors to cut away DNA code and replace it with new genes. It has been hailed as one of the most significant scientific breakthroughs in recent years, but

there are fears that in the wrong hands, the procedure could unleash dangerous strains of bacteria or other organisms. Kits to make E.coli resistant to antibiotics are already for sale on the Internet.

The comparatively low cost and ease of use of the CRISPR system (which is a naturally-occurring defence mechanism used by bacteria) has made it feasible for a greater range of users beyond those who would ordinarily make use of the techniques of molecular biology. Prior to CRISPR, editing DNA required sophisticated labs, years of experience, a PhD degree, and many thousands of dollars. Today the simple do-it-yourself CRISPR kits could enable virtual terrorists targeting the food supply chain to alter the avian influenza genome and engineer a large bird flu epidemic, similar to the 2009 H1N1 epidemic in Asia that affected not only poultry, but also other mammals, including human beings.

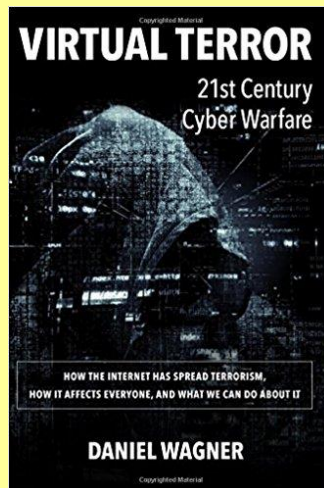
In 2002 CNN ran an exposé on Al-Qaeda's (AQ's) experiments with crude toxins and poisons, testing the lethality of cyanide creams, ricin, mustard, sarin, and botulinum. AQ associates infiltrated Turkey, Britain, Spain, Italy, France, Sweden, Germany, and other countries to begin coordinating and planning ricin and cyanide attacks via a loose association of cells. US government knowledge of the extent of the network grew from a handful of terrorists in one country to dozens of extremists in 30 countries. The Islamic State may also have access to weapons containing sarin nerve gas that remained in Syria, as well as mustard agents and nerve agent rockets from Iraq, and chemical materials leftover from Libya programs. While it is unclear how effective these agents would be after years of storage, they could still be usable. In 2015, the Blue-Ribbon Study Panel on Biodefense issued a National Blueprint for Biodefense,



calling for leadership and major reform to optimize efforts to combat the threat of bioterrorism. As if to emphasize the urgency of the threat, that same year, the annual report of the Federal Select Agent Program described 233 potential occupational exposures or releases of select biological agents and toxins outside of the primary barriers of biocontainment in the US. Since 2001, the US government allocated \$6 billion to research the threats, which pales in comparison to the amount spent on cybersecurity, airport screening, or border security. Of 46 items the Blueprint recommended for action in the first year following release of the report, partial progress had been made toward only 17 of them, and only 2 had been completed as of 2016.

A verification system could diminish the risk of terrorist acquisition of biological agents, given the ever-present possibility of deliberate acts of sabotage or terrorism. A lone actor terrorist or a disgruntled employee with

knowledge of the operations of chemical plants or laboratories — having become acquainted with safety and security procedures — could exploit existing vulnerabilities in order to smuggle deadly pathogens out of the facility. It has been estimated that up to 95 percent of incidents related to security-related breaches were the result of insiders who were already employed and/or had a security clearance.



The ability to acquire key ingredients via the Internet, and to 'hire' individuals with the scientific knowledge to make biological weapons, means that bioterrorism is, and will remain, an omnipresent risk. With the stakes as high as they are, common sense dictates that businesses and governments must combine their resources to find more effective ways to battle the scourge of Virtual Terrorism. Fully implementing the Blueprint would be an excellent place to start.

*Daniel Wagner is author of the new book "Virtual Terror", founder of Country Risk Solutions, and managing director of Risk Cooperative.

New Addition to The Smart Ambulance Model

Source: <https://i-hls.com/archives/78901>



Oct 01 – Emergency response work is physically and mentally exhausting, placing extreme demands on the paramedic both at the civilian and military settings. The critical equipment



transferred from one place to another is often quite heavy. A lighter and more focused defibrillator, a device that gives a high-energy electric shock to the heart in case of a cardiac arrest, was recently launched by Remote Diagnostic Technologies (RDT), a company expertizing in pre-hospital care.

The company's Tempus ALS monitor and defibrillator enables paramedics to carry less and do much more. Furthermore, its advanced data collection and sharing capabilities offer a clear pathway for organizations looking to realize the vision of the Smart Ambulance, according to news-medical.net.



The military-grade Tempus ALS comprises a 3.2 kg advanced vital signs monitor and 2 kg professional defibrillator that slots into the paramedic's fully-equipped grab bag. It is the lightest and most ergonomic solution on the market, minimizing the load carried by already overburdened paramedics. The compact lightweight design further allows for standardization across all vehicle types – from bikes to cars, ambulances to helicopters – offering the unprecedented flexibility of deployment.

Better user interface: The Tempus ALS incorporates a unique dual screen capability that allows the monitor and defibrillator to perform all functions independently but to automatically pair when together. This helps the user to focus solely on the critical information at hand and to better recognize and manage a deteriorating patient.

Improving situational awareness: The Tempus ALS is underpinned by the same platform that powers the Tempus Pro, the vital signs monitor of choice for the UK MOD and a large percentage of NATO militaries. Its smart data capture and sharing capabilities improve situational awareness and allow for better informed treatment decisions to be made. For example, patient data can be integrated with existing patient record systems.

"Measuring, recording and transmitting physiological data accurately is crucial, not only for life-saving pre-hospital care, but also for audit, research and clinical development," said Professor Richard Lyon MBE – Associate Medical Director, KSSAAT. "At Kent, Surrey & Sussex Air Ambulance, we have embedded the system into the core of our operation. The Tempus design allows it to be carried easily within our response pack, yet it is versatile enough to transmit data directly from scene, ambulance or even helicopter in-flight."

Firearm-related injuries account for \$2.8 billion in ER, inpatient charges each year

Source: <http://www.homelandsecuritynewswire.com/dr20171004-firearmrelated-injuries-account-for-2-8-billion-in-er-inpatient-charges-each-year>

Oct 04 – A new Johns Hopkins study of more than 704,000 people who arrived alive at a United States emergency room for treatment of a firearm-related injury between 2006 and 2014 finds decreasing incidence of such injury in

some age groups, increasing trends in others, and affirmation of the persistently high cost of gunshot wounds in dollars and human suffering.



A report on the analysis, published in the October issue of [Health Affairs](#), is designed to highlight updated trends in types of firearm injuries and the kinds of firearms commonly used over time.

"Much of the existing literature on firearm-related injuries focuses on pre-hospital statistics with limited data evaluating contemporary estimates for firearm-related injuries," says Faiz Gani, M.D., a research fellow at the Johns Hopkins Surgery Center for Outcomes Research.

Although firearm-related deaths are the third leading cause of injury-related deaths in the United States, efforts to understand national trends in incidence, prevalence and risk factors, as well as a quantifiable financial cost of firearm-related injuries, have been limited, Gani says.

Johns Hopkins Medicine [says](#) that Gani and colleagues, using the Healthcare Cost and Utilization Project Nationwide Emergency Department Sample, the largest all-payer emergency department (ED) database, analyzed data from a nationally representative sample of 704,916 patients in the U.S. who arrived at an emergency room alive for treatment of a firearm injury from 2006 to 2014. Approximately 89 percent of the patients in the study group were men, with over 49 percent of patients age 18-29 years.

The study took into consideration social, economic and geographic differences; existing illnesses, including mental health disorders; the presence of substance abuse; injury severity; intent of injury ("unintentional," "suicide," "assault," "legal" and "undetermined"); and the type of firearm used.

The research team found that firearm injuries were nine-fold higher among male than female patients (45.8 ED visits per 100,000 versus 5.5 per 100,000) and were highest among males 20 to 24 years old (152.8 per 100,000).

The average ED and inpatient charges annually were \$5,254 and \$95,887, respectively, resulting in approximately \$2.8 billion in annual ED and inpatient charges for the group studied. Gani notes that over half of patients in the study sample were uninsured or self-paying, which means they either bear the burden of the actual hospital charges, or these charges are unrecovered and add to the overall

uncompensated care provided by hospitals and health care systems.

The overall incidence of ED admissions for firearm-related injuries decreased from 27.9 visits per 100,000 in 2006 to 21.5 per 100,000 in 2013, representing a 22.9 percent decline. However, ED visits generally increased for those older than 30 years and increased overall for the entire study population in 2014 to 26.6 visits per 100,000.

The proportion of patients who arrived with a previously diagnosed mental health disorder rose over the study period (from 5.3 percent to 7.5 percent); and the proportion of patients injured by unintentional firearm-related injury increased (from 33.7-37.4 percent).

The majority of patients were injured by assault (49.5 percent) or unintentional injury (35.3 percent). Attempted suicide accounted for 5.3 percent.

Suicide attempts were twofold higher among Medicare enrollees (i.e., those over age 65) than among patients enrolled in other insurance plans. Patients who attempted suicide were also more likely to be in the highest income quartile, while those with assault-related injuries were more likely to be in the lowest income quartile. The incidence of mental health disorders was highest (40 percent) among patients injured by attempted suicide. The incidence of mental health disorders was also higher among patients injured by hunting (12.6 percent) or military grade rifles (12.5 percent).

Over the study, a total of 8.3 percent of patients died in the ED or as an inpatient after their injury. Mortality was highest among older patients age 60 years or more (23.3 percent), those who sustained more severe injuries (32.7 percent) and those injured in an attempted suicide (38.5 percent).

Gani says the study's main limitation is that it did not account for pre-hospital deaths or those who didn't go to an ED after a firearm-related injury, so it likely underestimates the overall burden of firearm-related injuries, but he believes the new data paints an updated picture of gun violence trends.

"Until people are aware of the problem's full extent, we can't have the best informed discussions to guide policy," Gani says.



— Read more in Faiz Gani et al., “Emergency Department Visits For Firearm-Related Injuries In The United States, 2006–14,” [Health Affairs](#) 36, no. 10 (October 2017): 1729-38.

App-based citizen science experiment to help predict future pandemics

Source: <http://www.homelandsecuritynewswire.com/dr20171009-appbased-citizen-science-experiment-to-help-predict-future-pandemics>



Oct 09 – The most likely and immediate threat to our species is a global pandemic of highly infectious flu. Such a pandemic could be so serious that it currently tops the U.K. government’s Risk Register.

Scientists from the University of Cambridge and London School of Hygiene and Tropical Medicine are attempting to collect a gold standard data set that can be used to predict how the next pandemic flu would spread through this country - and what can be done to stop it. They need your help.

U.K. residents can take part in the BBC Pandemic experiment simply by downloading the Pandemic app onto your smartphone via [App Store](#) or [Google Play](#) from today.

The app and results will be featured in a documentary on BBC Four in 2018, to be presented by Dr Hannah Fry and Dr. Javid Abdelmoneim.

Data gathered via the app could be key in preparing for the next pandemic outbreak. In order to better understand how an infectious disease like flu can spread, researchers need data about how we travel and interact.

Cambridge says that two experiments will be conducted through the app: the National Outbreak, which has been open to anyone in the United Kingdom from 27th September 2017; and the [Haslemere Outbreak](#), a closed local study that is only open to people in the town of Haslemere, Surrey, and runs for seventy-two hours starting on Thursday, 19 October 2017.

In the National Outbreak, the app has been tracking users’ approximate movement at regular intervals over a twenty-four hour period – with data anonymized, so the app does not know exactly where or who the user is. The app also asks some questions about users’ journeys and the people they spent time with during those twenty-four hours.

All data collected are grouped to ensure anonymity, and a research team from the University of Cambridge and the London School of Hygiene and Tropical Medicine will use it to predict how a flu pandemic might spread across the country – and determine what can be done to stop it.

Professor Julia Gog, who specializes in the mathematics of infectious diseases, and her



colleagues from Cambridge's Department of Applied Mathematics and Theoretical Physics have helped design the experiment and will be processing the data, running statistical analyses, and building and running the pandemic models.

"This will give us a chance to explore a range of different scenarios," said Professor Gog. "This could be the best data set we've ever had on the movement of people in the United Kingdom, and could help support future research projects to control infectious diseases – for a researchers like us, this is incredibly exciting."

There are flu outbreaks every year, but in the last 100 years, there have been four pandemics of a particularly deadly flu, including the Spanish Influenza outbreak which hit in 1918, killing up to 100 million people worldwide. Nearly a century later, a catastrophic flu pandemic still

tops the U.K. government's Risk Register of threats to the United Kingdom. Key to the government's response plan are mathematical models which simulate how a highly contagious disease may spread. These models help to decide how best to direct NHS resources, like vaccines and protective clothing. But the models are only as good as the data that goes into them.

Cambridge notes that the more people of all ages that take part in BBC Pandemic, the better that data will be.

By identifying the human networks and behaviors that spread a deadly flu, the app will help to make these models more accurate and, in turn, help to stem the next pandemic.

More information is available at the [BBC website](#)

Armed with a new approach, police and medics stormed through the Las Vegas gunfire, saving lives

By Lynh Bui

Source: https://www.washingtonpost.com/world/national-security/armed-with-a-new-approach-police-and-medics-stormed-through-the-las-vegas-gunfire-saving-lives/2017/10/05/3f4c255e-a9fe-11e7-850e-2bdd1236be5d_story.html

Oct 05 – **Joe Geeb** (photo) didn't know if there was one shooter, or 30.

When the call for a "mass casualty incident" blasted through the radio Sunday night, the Clark County fire captain had no idea what was happening on the Las Vegas Strip, but he immediately began thinking about how he would run toward the bullets, the mayhem and the carnage while everyone else was running away.

He quickly donned his flak vest and the helmet designed to withstand rifle fire and gunshots. Then he paused as a group of armed police officers created a protective bubble around him and other firefighters. Moving as one, the team hurled itself into the center of the chaos.

"I knew the officers had my back, and I would have had theirs," Geeb said. "We're going to go in together, and we're going to come out together."

Relationships between the nation's police and fire departments can range from friendly rivalries to downright acrimony. In Las Vegas, officials are confident that an innovative effort requiring both agencies to train together to respond to active-shooter incidents saved countless lives in the massacre that left 58 dead.

Fire departments traditionally have waited on the sidelines of shooting scenes until police declare it safe for medics to go in and treat victims. In some cases, including high-profile mass shootings, that resulted in wounded patients bleeding to death even though medics could have saved them with immediate aid.



Learning lessons from the shootings at Columbine High School outside Denver in 1999 and at a movie theater in Aurora, Colo., in 2012, Nevada's first responders decided they should work while under fire.

"We saw from the reports of how these people died and the lack of interaction with the police departments and we knew we had to fix that," Clark County Fire Chief Greg Cassell said Thursday.

Cassell said police and fire agencies in Nevada have been working together since 2010 to develop concerted responses to critical incidents, but Sunday was the first time their years of training and drills deploying "rescue task forces" played out in real life.

Sixteen such task forces raced into the concert venue the night gunman Stephen Paddock opened fire from the 32nd floor of the Mandalay Bay Resort and Casino, sending volleys of bullets down on a country music festival with 22,000 attendees, fire officials said.

Each task force included four to six armed police officers, who created a perimeter around three paramedics, said Roy Session, the deputy chief of Clark County fire operations, who deployed the teams throughout the night. The medics treated and transported the wounded to ambulances under the blanket of safety those officers provided, moving in unison with police from patient to patient.

"What we discovered in Columbine and Aurora is that people were laying and dying waiting for help," Session said. "This team was trying to avoid that."

The fire department has trained with police on skills including kicking down doors and treating patients in simulated live-fire environments, with blank rounds fired to ensure medics learn to do their lifesaving work while disrupted by the sound of gunfire.

Sgt. Branden Clarkson, of the Las Vegas Metropolitan Police Department, was one of the many officers who stood shoulder-to-shoulder with firefighters at a Clark County fire department news conference Thursday to discuss Sunday's rescue efforts. A decade ago, officials said, it would have been unusual to have even a single police officer at a fire department event.

"We have a joking relationship and a friendly rivalry, but when it comes down to it, we know we are there for each other," said Clarkson, who heads the police department's efforts related to "multi-assault counter-terrorism action capabilities."

Firefighters and medics faced several challenges Sunday as they responded to what they would later learn was the deadliest mass shooting in modern U.S. history, Cassell said.

People with gunshot wounds appeared at various hotels, but the calls were dispatched to first responders as a report of a shooter at each hotel. The calls initially generated more than 30 different possible shootings along the Strip.

"That complicated our response," Cassell said. "We're starting to think, 'Uh-oh, we're having attacks at other locations.'"

People scattered into hotels, to the tarmac of the airport and into neighborhoods, creating a response area that stretched about a mile.

"It was not in one building, it was not in one spot, it was not in one address," Cassell said. "It was spread over a massive area."

The fire department transported more than 200 people to area hospitals that night and treated victims suffering from gunshot wounds, fractures and trampling injuries from the stampede to escape the gunfire.

Some of the injured were wounded further as they were transported out. In some cases, those escaping loaded the most-injured person in a group into a truck or car first because the individual could not move. But then other people would pile on top of that person to get out of the area. Geeb and his team at one point helped 10 people who had crammed into a compact car.

"Then there was the emotional chaos," said Geeb, whose team treated dozens of people on Sunday. He said people around him kept screaming: "Where is it coming from? What's happening? Where do I go?"

No firefighter or medic was struck by gunfire or injured, except one who hurt his knee in a fall. Session said the response to Sunday's shooting was built on lessons learned from previous incidents, but training has focused on a shooter who is at ground level, not someone firing from an elevated position.

He said the department is already breaking down its response to Sunday's shooting to determine how to adjust for the future.



“Our goal is to learn from those lessons,” Session said. “Hopefully, we won’t have to use this again.” Cassell said that since Sunday’s shooting, law enforcement agencies and emergency officials from all over the world have contacted him to commend him on the department’s response and to ask for advice on how they can emulate it in the case of a similar incident.

Although Sunday’s shooting was nothing for which anyone could have ever planned, Cassell said, it was something police and fire were ready to handle. **It all came down to preparation and relationships,** Cassell said.

“We love our cops, and they love us,” Cassell said. “That paid off for us the other night”

Lynh Bui is a Prince George's County public safety reporter and former Montgomery County education reporter.

Las Vegas Faced a Massacre. Did It Have Enough Trauma Centers?

Source: <http://www.medscape.com/viewarticle/886571>

Oct 04 – Las Vegas is not only a glittering strip of casinos and hotels but a fast-growing region with more than **2 million residents — and one hospital designated as a highest-level trauma center.**

The deadly shooting Sunday that killed at least 59 and sent more than 500 people to area hospitals raised questions about whether that’s enough.

Las Vegas is not the only big city with just one such trauma center. Seattle and Nashville, among others, also are in [this category](#), according to the American Trauma Society, a professional and advocacy organization focused on improving trauma care.

Casey Nolan, a hospital consultant and managing director of Navigant Consulting in Washington, D.C., said what matters most is not the number of high-level centers, but the degrees of coordination across the area’s medical network, including the first responders. An ambulance leaves the intersection of Las Vegas Boulevard and Tropicana Ave. after a mass shooting at a country music festival. *Ethan Miller/Getty Images*

“It’s how well integrated the care is and whether there is a triage system to get patients to the right place in the right time,” he said.

What Makes Up The Network

The highest-level trauma centers are equipped and staffed around-the-clock to provide care for patients who suffer from traumatic injuries such as gunshot wounds, falls and car accidents.

The designation “trauma center” is the result of a validation process at the state or local level. Centers are categorized by Level I, II or III, for instance, in keeping with nationally accepted standards. Centers can also seek additional approval from the American College of Surgeons.

Across the country, there are [217 Level I trauma centers](#), up from 198 in 2012, according to the trauma society. These centers must see at least 1,200 trauma patients a year and have general surgeons and other specialists immediately available at the facility.

There are another 310 Level II centers that face similar staffing rules, but with fewer education and training requirements. Level III centers have emergency medical staff, but will stabilize severely injured patients and often transport them to higher-level trauma centers.

For decades, the hospital industry viewed trauma care as a money-losing proposition because of the high costs of keeping doctors and nurses on standby 24 hours a day. Trauma centers, particularly those in inner cities, tended to attract more patients without health insurance.

But in recent years, hospitals have been competing to get the designation as a way to increase profits, in part because trauma centers enhance demand for surgery and ancillary services like CT scans. In addition, a trauma designation can boost a facility’s overall reputation, Nolan added.



“Trauma had gotten a bad rap,” explained Nolan. “But in suburban locations, where more people have insurance, you can do pretty well on trauma.”

Some hospitals also began charging a fee — known as a “trauma activation” fee — to help pay for the extra staffing and equipment trauma units require.

Those fees could range from a few hundred dollars to several thousand dollars on patients’ bills, Nolan said.

Trauma Care In Las Vegas

Despite the burgeoning population of Las Vegas and surrounding Clark County, which more than doubled to 2.2 million in the past 25 years,

HCA, the national, for-profit chain that owned two of these facilities, said adding trauma centers would help ensure quicker care to patients in the growing region. The company has made adding trauma centers a strategy across the country and has met resistance from existing centers.

But opponents argued HCA was motivated by the opportunity to boost profits. The [Tampa Bay Times](#) reported last year that the hospital chain charged significantly higher “activation fees” than other hospitals.

Opponents also countered that adding trauma centers would affect University Medical Center’s ability to provide quality care and train doctors. Some experts say it could diminish the number



University Medical Center has been Las Vegas’ only Level I trauma center since 1992.

The metro area includes two other lower-level trauma centers. Sunrise Hospital & Medical Center in Las Vegas is a Level II facility and St. Rose Dominican Hospital in nearby Henderson, Nev., is a Level III.

Even the idea of expanding Las Vegas’ trauma network has stirred controversy.

Last year, a state agency rejected applications by three hospitals in the Las Vegas area to be designated as Level III trauma centers.

of patients seen at each center.

That’s because the more trauma patients a center deals with annually, the better the results, studies show.

“If you can bring all the patients to one place, then those surgeons become really good at dealing with trauma, instead of spreading it out [around a number of facilities],” said Bill Bullard, senior vice president with the Abaris Group, a California-based consulting firm that advises hospitals on emergency care.



Ian Weston, executive director of the American Trauma Society, said the trauma system worked well in Las Vegas, which is a credit to ambulances and other first responders and their ability to triage patients to hospitals across the city.

Seriously ill patients have the best outcomes when treated at a Level I trauma center, said David Callaway, a professor of emergency medicine at the Carolinas Medical Center in

Charlotte, N.C. But “when you have 500-plus casualties and 58 dead ... if all the patients went to a Level I, mortality would not be improved, because they would be completely overwhelmed,” Callaway added.

Bullard agreed.

“In theory, the more centers you have the more people you have to deal with injuries. However, no trauma system is able to handle a tragedy of this magnitude.”

Physicians' white coats with sleeves above the elbow were much less likely to have traces of infectious viruses on them than long-sleeved versions



The Critical Role of Biomedical Research in Pandemic Preparedness

By Hilary D. Marston, Catharine I. Paules and Anthony S. Fauci

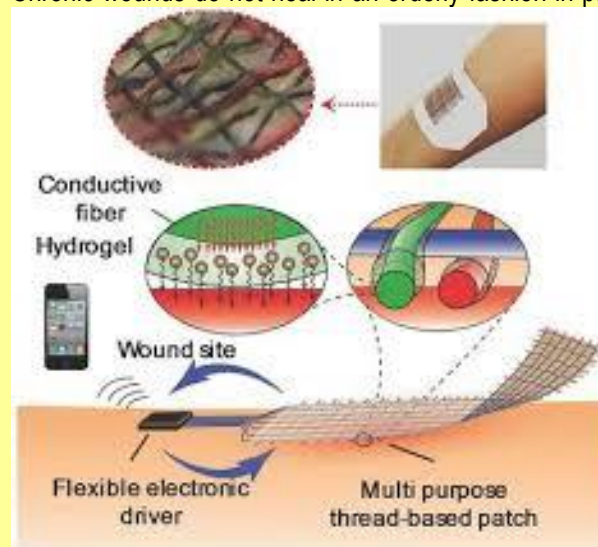
JAMA. Published online October 4, 2017

Source: <https://jamanetwork.com/journals/jama/fullarticle/2656224>

A Textile Dressing for Temporal and Dosage Controlled Drug Delivery

Source: <http://onlinelibrary.wiley.com/doi/10.1002/adfm.201702399/abstract;jsessionid=BC89BE0819CA8FFEFCDC3917392FF537.f04t02>

Chronic wounds do not heal in an orderly fashion in part due to the lack of timely release of biological factors essential for healing. Topical administration of various therapeutic factors at different stages is shown to enhance the healing rate of chronic wounds. Developing a wound dressing that can deliver biomolecules

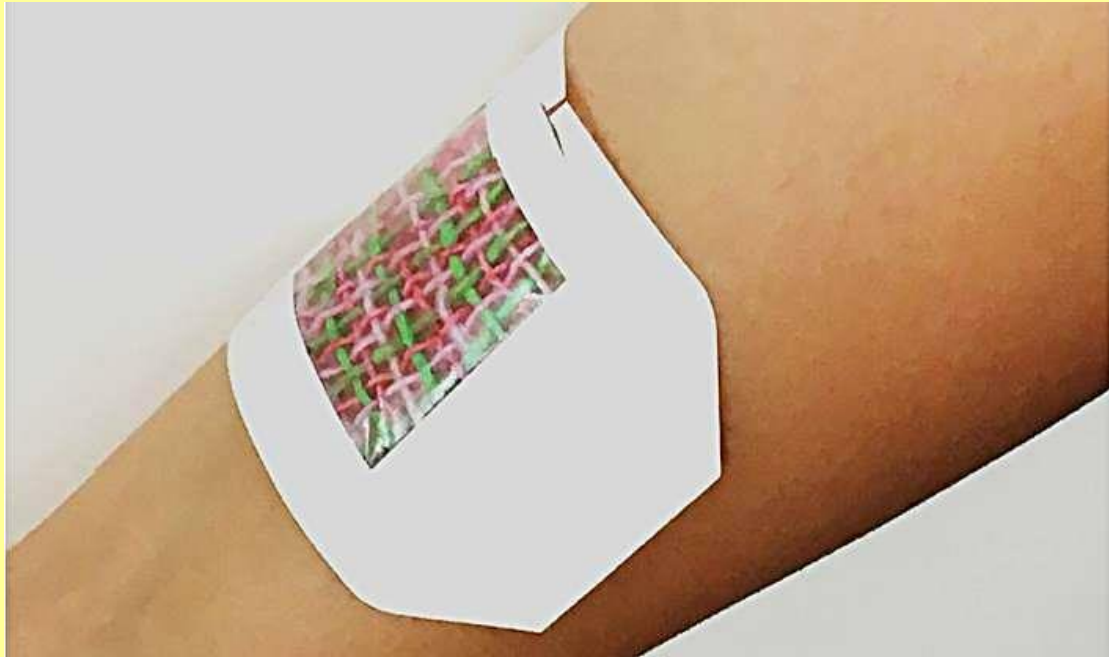


with a predetermined spatial and temporal pattern would be beneficial for effective treatment of chronic wounds. Here, an actively controlled wound dressing is fabricated using composite fibers with a core electrical heater covered by a layer of hydrogel containing thermoresponsive drug carriers. The fibers are loaded with different drugs and biological factors and are then assembled using textile processes to create a flexible and wearable wound dressing. These fibers can be

individually addressed to enable on-demand release of different drugs with a controlled



temporal profile. Here, the effectiveness of the engineered dressing for on-demand release of antibiotics



and vascular endothelial growth factor (VEGF) is demonstrated for eliminating bacterial infection and inducing angiogenesis in vitro. The effectiveness of the VEGF release on improving healing rate is also demonstrated in a murine model of diabetic wounds.

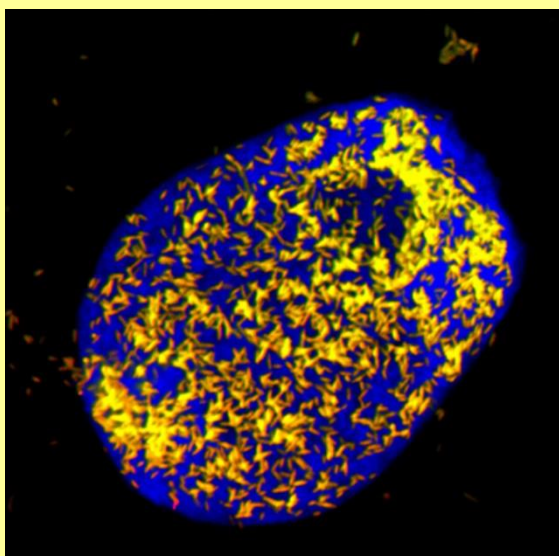
►► Video: <https://www.youtube.com/watch?v=3d6uFIRuPZY>

In situ architecture, function, and evolution of a contractile injection system

By Désirée Böck, João M. Medeiros, Han-Fei Tsao, et al

Science 18 Aug 2017: Vol. 357, Issue 6352, pp. 713-717

Source: <http://science.sciencemag.org/content/357/6352/713>



escape. Evolutionary sequence analyses predicted that T6SSs are more widespread than

Contractile injection systems mediate bacterial cell-cell interactions by a bacteriophage tail-like structure. In contrast to extracellular systems, the **type 6 secretion system (T6SS)** is defined by intracellular localization and attachment to the cytoplasmic membrane. Here we used cryo-focused ion beam milling, electron cryotomography, and functional assays to study a T6SS in *Amoebophilus asiaticus*. The in situ architecture revealed three modules, including a contractile sheath-tube, a baseplate, and an anchor. All modules showed conformational changes upon firing. Lateral baseplate interactions coordinated T6SSs in hexagonal arrays. The system mediated interactions with host membranes and may participate in phagosome



previously thought. Our insights form the basis for understanding T6SS key concepts and exploring T6SS diversity.

'Stop the Bleed' Campaign Teaches Bystanders to Help Save Lives

Source: <http://www.govtech.com/em/disaster/Stop-the-Bleed-Campaign-Teaches-Bystanders-to-Help-Save-Lives.html>



Oct 09 – As the number of mass shootings continues to climb across the United States, emergency medical workers in central Ohio are among those nationwide seeking to arm bystanders with the knowledge, equipment and confidence needed to save lives during bleeding emergencies.

"A person with a severe enough injury to an artery can bleed to death in three to five minutes, so the regular public needs to know how to stop bleeding, whether it's by applying pressure or a tourniquet" said Jodi Keller, who oversees disaster preparedness for the Central Ohio Area Trauma System.

The network of health-care professionals has been participating in the national Stop the Bleed campaign for about a year, she said. The campaign was launched by the White House in October 2015.

Hundreds of people, including nurses, teachers, police officers, social workers and the general public, have been trained in a 15-county region, Keller said.

The campaign has made bleeding-control kits containing tourniquets available at places where crowds gather, including the Columbus Zoo & Aquarium, local malls, Greater Columbus Convention Center, Hollywood Casino Columbus and John Glenn Columbus International Airport. Tourniquets also are more commonly being stocked in schools and churches.

The Stop the Bleed campaign grew out of the 2012 mass shooting at Sandy Hook Elementary School in Newtown, Connecticut, said Dr. Lenworth Jacobs, a member of the American College of Surgeons' board of regents and director of the Trauma Institute at Hartford Hospital in Connecticut.

Following the tragedy, the American College of Surgeons convened a committee with members of the medical community, emergency response groups, government agencies and others with a goal of increasing survivors in mass-casualty events involving a shooter.

The committee recommended that police be trained and equipped to provide hemorrhage control, and emergency medical services be brought closer to mass casualty scenes so responders can more quickly attend to the injured once scenes are secured. It also urged that the public be trained as immediate responders who can control bleeding.

"The person who is going to be helpful is the person right beside you," Jacobs said. "If you can keep the blood in the body until they get to the hospital, they have a very good chance of survival."



People who want to equip themselves can purchase tourniquets on Amazon.com, Keller said. Training is



available through the trauma system or any number of videos on YouTube, she said.

People also can learn about bleeding control in first-aid courses provided by the Red Cross, said Jordan Tetting, spokeswoman for the organization's Ohio Buckeye Region. Mass shootings always lead to increased inquiries about how people can brush up on lifesaving skills, she said.

"Our goal at the Red Cross is to prevent communities from having to go through that suffering and prepare our communities for instances where emergency strikes," she said. "We encourage people to be as ready as possible, to have all the appropriate tools in their back pocket."

Most of the people who die in mass shootings die from bleeding out, often as emergency workers wait until a scene is secure before they can respond, said Lt. Matt Parrish of the Columbus Division of Fire's EMS bureau. That could take 20 or 30 minutes. Bystanders, he said, have the power to respond immediately. But it's crucial that any potential helpers secure their own safety first.

He said Stop the Bleed is akin to "see something, say something," a national campaign to aid law enforcement's anti-crime and anti-terrorism efforts, because it asks citizens to be engaged.

"When you put that many people in a large venue you can't put enough EMS and law enforcement providers in that same area to manage everybody. People who are willing and able to get involved, they're going to make a difference," he said.

More people, especially law-enforcement officers and medical professionals, are carrying commercial tourniquets as a way of being prepared, Parrish said. "Right next to their Narcan kit, they should have a tourniquet. I think that's where we're at right now."

Advocates hope to raise awareness about bleeding control to the level of awareness surrounding CPR and have tourniquet kits as readily available as automated external defibrillators. Jacobs said he'd like to see tourniquets everywhere, right down to every glove compartment.

Giving people power to save lives could also have an impact on the nation's psyche amid mass shootings, he said.

"This is a huge country. There are 250 million people you want to get trained and empowered,"

Jacobs said. "It's simple to do it. It's important to do it. It saves limbs and lives."

For more information about Stop the Bleed or training opportunities, go to bleedingcontrol.org, centralohiotraumasystem.org or redcross.org.



Training bystanders to act as first responders

Source: <http://www.homelandsecuritynewswire.com/dr20171010-training-bystanders-to-act-as-first-responders>



Oct 10 – Blood loss is the leading cause of preventable death during an active shooter or intentional mass casualty event where a medical response is delayed.

To educate the public – who often find themselves on the front line in emergency situations – a team led by a trauma surgeon from Rutgers New Jersey Medical School and EMS from University Hospital are directing the largest Stop the Bleed campaign in the state, teaching laypeople basic skills of hemorrhage control for immediate, on-the-scene care.

Rutgers says that Stop the Bleed, launched in October 2015 by the federal government, is a national awareness campaign that empowers people to become trained and equipped to help in a bleeding emergency before medical assistance arrives. Adam D. Fox, an assistant professor of surgery at the medical school and Associate Medical Director of the New Jersey Trauma Center at University Hospital in Newark, initiated the program at Rutgers two years ago; since then, his team has trained over 500 first responders and members of the public.

“A person can die from blood loss within minutes, so it is imperative to stop the bleeding quickly,” he says. “Although we don’t know the data yet, the scenario in Las Vegas, where there were thousands of concert-goers, could potentially have had dramatically different outcomes if the public knew how to stop bleeding and were armed with the proper tools. People bleeding out from a leg or arm wound would have a greater chance of survival.”

Stop the Bleed was born out the Sandy Hook Elementary School shooting after a leading trauma surgeon assessed autopsy data to learn how to improve survival in mass-casualty events. A subsequent review by the American College of Surgeons and representatives from the federal government discovered a disconnect between law enforcement and emergency medical response. “Traditionally, law enforcement enters these scenes to clear the area of threat, and while doing so steps past people bleeding to death,” Fox says. “The goal of this campaign is to give people the techniques to potentially save lives within a matter of minutes when there is life-threatening bleeding from an extremity or a junctional area like the groin, armpit or neck.”

The skills are important – but not difficult – to learn, Fox says. The initiative has two missions: to educate the public through a 45-minute course that demonstrates how to use a tourniquet, perform wound packing and use direct pressure to stop bleeding and a public health



campaign to place bleeding kits that include tourniquets, pressure dressings and gauze bandages in public spaces alongside existing automated external defibrillators.

“Unfortunately, there is no legislation in the country that mandates bleeding control equipment in public spaces,” Fox says. “However, we are working with multiple agencies, including the Port Authority of New York and New Jersey to eventually make these kits available to the public. A legislative campaign is planned for after the election.”

Rutgers notes that to date, the medical school’s Stop the Bleed team, in conjunction with University Hospital, has trained municipal law enforcement, Port Authority police and customs officials at Newark Liberty International Airport, the FBI, SWAT teams, medical students and the general public.

Robert Wood Johnson Medical School is also involved with the campaign through its Emergency Medical Services and Mobile Health Service at Robert Wood Johnson University Hospital. In addition, in conjunction with Robert Wood Johnson Medical School’s division of acute care surgery, it is planning to offer courses for medical students and Rutgers undergraduates and is working with the hospital to install bleeding kits throughout the hospital, beginning with sites immediately adjacent to cardiac defibrillators, as well as other public areas.

U.S. not prepared to identify perpetrators of biological attacks

Source: <http://www.homelandsecuritynewswire.com/dr20171010-u-s-not-prepared-to-identify-perpetrators-of-biological-attacks-expert-panel>

Oct 10 – **When violent attackers use biological agents to inflict harm, not only must law enforcement attribute the crime to the correct perpetrator, they must also identify the pathogens used and their sources exactly and quickly.** That was the focus of a special meeting last week hosted by the Blue Ribbon Study Panel on Biodefense. Called *Biological Attribution: Challenges and Solutions*, the objective of the Panel meeting was to better understand the ability of the U.S. government to correctly identify pathogens and their sources; attribute the use of biological weapons with scientific and other forms of evidence; and explore the processes used for investigative, legal, policy, and political decisions involving biological attribution.

“Effective prosecution depends on the ability to quickly and accurately attribute crimes to their perpetrators,” said Ken Wainstein, meeting chair, and former Homeland Security Advisor and United States Attorney. “In the aftermath of a biological attack, we need to find out who did it, how they did it, what disease agent they used, and where they obtained it. The biological threat is real and growing, and the Nation needs this attribution capability now.”

Adds former Senate Majority Leader Tom Daschle, whose office received some of the anthrax letters in 2001, “We face some major challenges in microbial forensics and biological attribution, but we can overcome many of them. We need to do what we can to eliminate them now, before we find ourselves under attack again. We can’t afford to have another investigation drag on for years.”

In addition to Wainstein and Daschle, former Senator Joe Lieberman, who co-chairs the Blue Ribbon Study Panel on Biodefense, attended the event.

The Bipartisan Policy Center [notes](#) that the panel addressed the impact of the President’s FY 2018 budget request which would eliminate critical biological attribution and other biodefense functions of the Department of Homeland Security (DHS). The Blue Ribbon Study Panel on Biodefense in June 2017 raised serious concerns about the proposed closure of the [National Biodefense Analysis and Countermeasures Center](#) (NBACC) in Maryland.

“NBACC is the only facility in the United States with the bioforensics capability needed to assist the FBI in its investigations,” Lieberman said at the time. “Terminating funding would leave the country without a core investigative tool for biocrimes and bioterrorism.”

The Bipartisan Policy Center says that the National Bioforensics Analysis Center (NBFAC), part of the NBACC, conducts technical analyses in support of federal law enforcement investigations and attempts to coordinate multi-agency biological forensic efforts. The NBFAC has not become the resource for biological forensics the United States needs. The DHS Science and Technology Directorate (S&T), which administers the NBFAC, has



struggled to coordinate with and serve other agencies, because it is not an operational organization and because its scientific goals sometimes run at cross-purposes to those of the operational communities it could serve. As a result, agencies sometimes decline to work with or utilize NBFAC. The Federal Bureau of Investigation is by far the primary user of the NBFAC, and the facility should have been under the purview of the FBI from its inception.

The panel addressed these issues in “A National Blueprint for Biodefense, Recommendation 9: Better support and inform decisions based on biological attribution.” The panel stated that the United States has yet to fully establish biological attribution capability due to the inherent challenges associated with microbial forensic techniques and related analyses. No formal apparatus exists that uses biological attribution information to inform decisions. The Panel continues to advocate for the following action items:

- ◆ Establish a national biological attribution decision-making apparatus. The Vice President should direct the Secretary of State, Secretary of Defense, Secretary of Homeland Security, the Attorney General, and the DNI to establish and formalize this apparatus. They should inform this apparatus with: 1) standards/ burdens of proof in the U.S. criminal justice system; 2) evidence, information, and intelligence regarding the source; 3) accuracy, reliability, timeliness, credibility and defensibility of that evidence, information, and intelligence; and 4) national security considerations. This apparatus should be exercised to inform decisions and to ensure that these decisions are defensible.
- ◆ Place the Federal Bureau of Investigation in charge of the National Bioforensics Analysis Center. The FBI is the primary customer of NBFAC and has the needed credibility and influence to allow NBFAC to fulfill its role in biological forensics and attribution. Congress should amend *The Act to Enact Title 5 of the U.S. Code, “Government Organization and Employees,”* and make the FBI responsible for the NBFAC, its administration, and its activities, including interagency support and coordination. Congress should reallocate appropriations accordingly. Congress should also increase its oversight over NBFAC activities.

Biological Solutions to Security Threats

Source: <https://i-hls.com/archives/79029>

Oct 09 – **Synthetic biology could offer solutions to security threats.** A new effort is aimed at creating organic capabilities and infrastructure for the use of synthetic biology in the US DoD as a key enabler for future defense technology.

Synthetic biology, though well established in industry, is still a relatively new field of application for the DoD. This interdisciplinary field combines the understanding of how genes operate and are organized in cells with engineering principles, to modify organisms for beneficial applications in areas such as performance augmentation, sensor development and materials synthesis, to name a few.

A collaborative, \$45 million tri-service effort is changing the way the DoD exploits biological systems to meet the unique needs and challenges of defense environments. The move is based on the DoD research laboratory

expertise in chemistry, biology, computer science and material science and engineering. According to dvidshub.net, the Applied Research for the Advancement of Science and Technology Priorities (ARAP) Program on Synthetic Biology for Military Environments (SBME), funded by the Office of the Secretary of Defense, unites subject matter experts from the Air Force, Army and Navy.

“There are consumer products on the market that depend on this technology. We’re trying to grow its use in the DoD,” said Dr. Claretta Sullivan, a research scientist at the Air Force Research Laboratory’s Materials and Manufacturing Directorate, who is also the Tri-Service Program Manager for the program. “Our team is looking at ways we can reprogram cells that already exist in the environment to create environmentally friendly platforms for generating molecules and



materials beneficial for defense needs.”

The program seeks to establish a multi-functional, joint capability in synthetic biology, ultimately creating an ecosystem that ensures the U.S. military remains at the forefront in the field as it applies to defense objectives.

The three SBME task teams combine the expertise, capabilities and tools from each of the service labs into a single, focused effort to meet the aim of a task effort. For example, the Navy Laboratory is leading a tri-service task team focused on developing systems biology tools in an open systems architecture, with the goal of creating a set of collaborative tools to enable SBME applications. Another task, led by the Air Force, is working to develop and prototype a

cell-based system that is optimized for use in military environments. The Army labs are leading the effort to develop cell-free platforms for testing and delivering the genetic components.

Though this collaborative effort is less than one year old, the members are already seeing the upshots of their efforts. In addition to standardizing protocols and enterprise sharing environments, several scientific publications have resulted from collaborative efforts within the group, and a working demonstration of a complicated, responsive gene network which operates in a simulated environment is expected to be delivered by the end of the effort



HHS Sponsors Development of Antibiotic-Resistant, Anti-Biowarfare Antibiotic

Source: www.biopharminternational.com/hhs-sponsors-development-antibiotic-resistant-anti-biowarfare-antibiotic

On Oct. 6, 2017, the US Department of Health and Human Services (HHS) announced that the Biomedical Advanced Research and Development Authority (BARDA) will sponsor the next stages of development of an antibiotic for treating antibiotic-resistant bacteria, and that can potentially be used against infections cause by biowarfare agents.

Under a nine-month, \$12-million contract with Achaogen, a San Francisco, CA-based late-stage biopharmaceutical company, BARDA will support nonclinical studies, manufacturing, and preparatory activities for a Phase III clinical trial of **C-scape, an orally-administered beta-lactam/beta-lactamase inhibitor combination**, to treat complicated urinary tract infections (cUTIs).

The contract will also support the study of the drug's potential to treat infections caused by biowarfare bacteria such as the plague-causing *Yersinia pestis* and *Francisella tularensis*, which causes tularemia, a potentially serious illness. Early testing suggests that C-scape could provide protection against these agents. In addition, the contract can be extended for up to a total of three years and \$18 million to support the Phase III trial, manufacturing, nonclinical studies, and the preparation of regulatory filings for FDA approval.

“Combating antibiotic-resistant infections is fundamental to US biodefense,” explained BARDA Director Rick Bright, PhD, in an agency press release. “The long hospitalizations that may be likely after a bioterrorism attack leave Americans open to secondary drug-resistant infections, which means to be prepared for bioterrorism, we need to have products available that treat antibiotic-resistant infections.”

Integrated Lab-on-a-chip Uses Smartphone to Quickly Detect Multiple Pathogens

Source: <https://mntl.illinois.edu/news/article/23759>

Oct 09 – A multidisciplinary group that includes the University of Illinois at Urbana-Champaign and the University of Washington at Tacoma has developed a novel platform to diagnose infectious disease at the point-of-care, using a smartphone as the detection instrument in conjunction with a test kit in the format of a credit card. The group is led by Illinois Electrical and Computer Engineering Professor Brian T. Cunningham; Illinois



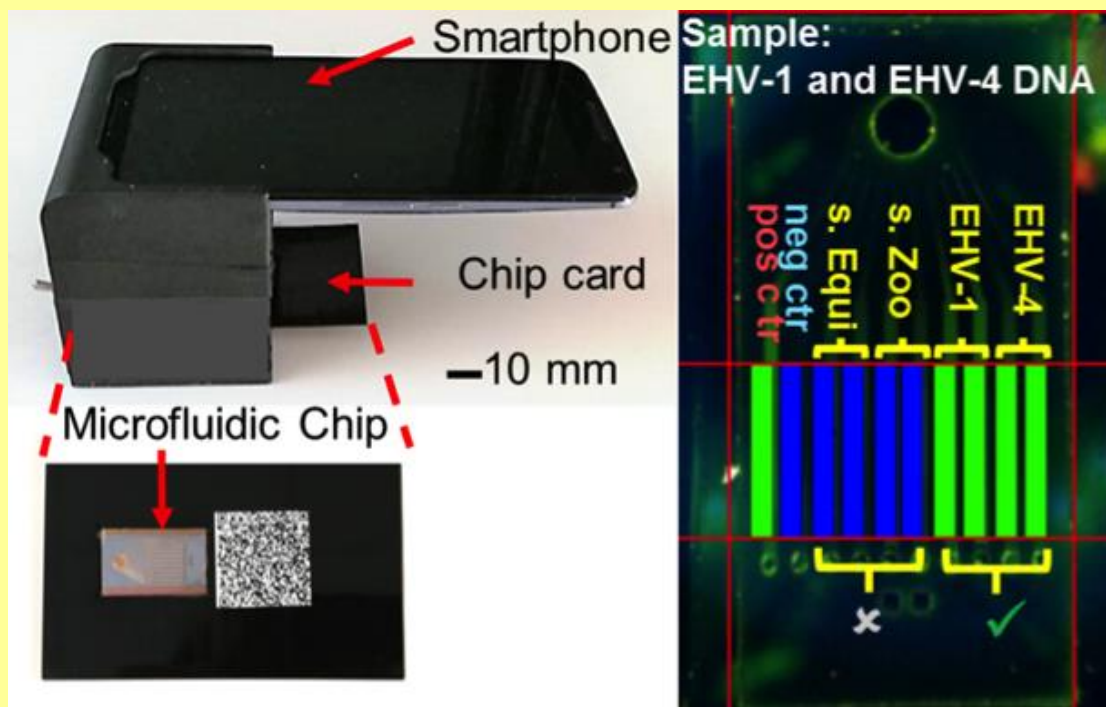
Bioengineering Professor Rashid Bashir; and, University of Washington at Tacoma Professor David L. Hirschberg, who is affiliated with Sciences and Mathematics, division of the School of Interdisciplinary Arts and Sciences.

Findings have been published in [Analytical Chemistry](#), demonstrating detection of four horse respiratory diseases, and in [Biomedical Microdevices](#), where the system was used to detect and quantify the presence of Zika, Dengue, and Chikungunya virus in a droplet of whole blood. Project collaborators include Dr. David Nash, a private practice equine expert and veterinarian in Kentucky, and Dr. Ian Brooks, a computer scientist at the National Center for Supercomputing Applications.

The low-cost, portable, smartphone-integrated system provides a promising solution to address the challenges of infectious disease diagnostics, especially in resource-limited settings or in situations where a result is needed immediately. The diagnostic tool's integration with mobile communications technology allows personalized patient care and facilitates information management for both healthcare providers and epidemiological surveillance efforts. Importantly, the system achieves detection limits comparable to those obtained by laboratory-based methods and instruments, in about 30 minutes.

A useful capability for human point-of-care (POC) diagnosis or for a mobile veterinary laboratory, is to simultaneously test for the presence of more than one pathogen with a single test protocol, which lowers cost, saves time and effort, and allows for a panel of pathogens, which may cause similar symptoms, to be identified.

Infectious diseases remain the world's top contributors to human death and disability, and with recent outbreaks of Zika virus infections, there is a keen need for simple, sensitive, and easily translatable point-of-care tests. Zika virus appeared in the international spotlight in late 2015 as evidence emerged of a possible link between an epidemic affecting Brazil and increased rates of microcephaly in newborns. Zika



has become a widespread global problem—the World Health Organization (WHO) documented last year that since June 2016, 60 nations and territories report ongoing mosquito-borne transmission. Additionally, since Zika virus infection shares symptoms with other diseases such as Dengue and Chikungunya, quick, accurate diagnosis is required to differentiate these infections and to determine the need for aggressive treatment or quarantine.

For the research effort, horses were used as an animal model for respiratory disease in man and food animals. Says Dr. David Nash "You can often more easily develop diagnostic tools

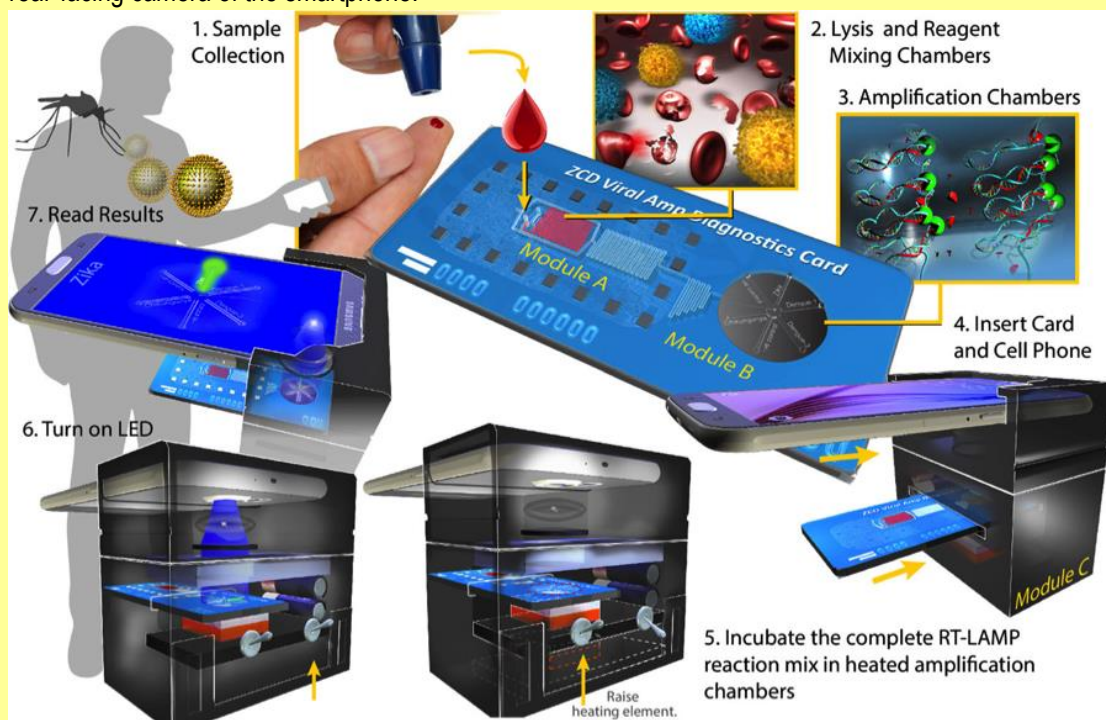


for human use by coming in to development from the animal side of things first. Many diseases show up first in animals, kind of the canary in the coal mine.”

A key project contributor, Dr. Nash comments on the financial impact of infectious disease outbreaks in horses: “It’s costly to horse owners and trainers, and disrupts the business operations of all equine sports. Consider this—on December 25, 2016 a single horse stabled at the Fair Grounds Race Course in New Orleans experienced a fever and subsequently developed neurological symptoms. The state diagnostic lab was 100 miles away and was closed for the Christmas holiday. The end result was an equine herpesvirus-1 (EHV-1) outbreak that resulted in the quarantine of over 200 horses at the racetrack and a serious financial loss for horse owners and the racetrack owner, Churchill Downs, Inc. Imagine the consequences if they ever had to postpone the Kentucky Derby due to a disease outbreak.”

The technology is intended to enable clinicians to rapidly diagnose disease in their office or in the field, resulting in earlier, more informed patient management decisions, while markedly improving the control of disease outbreaks. An important prerequisite for the widespread adoption of point-of-care tests at the patient’s side is the availability of detection instruments that are inexpensive, portable, and able to share data wirelessly over the Internet.

The system uses a commercial smartphone to acquire and interpret real-time images of an enzymatic amplification reaction that takes place in a silicon microfluidic chip that generates green fluorescence and displays a visual read-out of the test. The system is composed of an unmodified smartphone and a portable 3D-printed cradle that supports the optical and electrical components, and interfaces with the rear-facing camera of the smartphone.



The software application operating on the smartphone gathers information about the tests conducted on the microfluidic card, patient-specific information, and the results from the assays, that are then communicated to a cloud storage database.

Dr. Nash observes that, “This project is a game changer. This is the future of medicine—empowered front-line healthcare professionals. We can’t stop viruses and bacteria, but we can diagnose more quickly. We were able to demonstrate the clear benefit to humankind, as well as to animals, during the proposal phase of the project, and our results have proved our premise. Next, I want to go into the field, multiple sites, multiple geographic locations, and test in real-world situations.”

U of I graduate student and research assistant Fu Sun sees this project as fulfillment of one of her primary career objectives: “I entered graduate school with the hope to make a better



world by developing biomedical devices that can facilitate effective disease prevention, diagnosis, or treatment. This project is in line with my goal since it provides a point-of-care solution for the fast diagnosis of infectious diseases. Connected to a cloud database through a smartphone, it helps healthcare providers in the field embrace the era of big data and the Internet of Things.”

The system represents the only platform to date that can multiplex detection of viral and other nucleic acid targets on a portable point-of-care setup using one droplet of bodily fluid, including whole blood.

For Dr. Nash the experience of working with the University of Illinois team and other project collaborators was a great one, as he remarks “A diverse team was actually created here. A wicked smart group of people! I can’t envision going into a project without engineers now.”

Members of the research team include: Weili Chen, Hojeong Yu, Fu Sun, Akid Ornob, Ryan Brisbin, Anurup Ganguli, Vinay Vemuri, Piotr Strzebonski, Guangzhe Cui, Karen J. Allen, Smit A. Desai, Weiran Lin, David M. Nash, G.L. Damhorst, A. Bhuiya, David L. Hirschberg, Ian Brooks, Rashid Bashir, and Brian T. Cunningham.

Pressing, multiplying biodefense issues plague U.S., experts say

Source: <https://homelandprepnews.com/featured/24745-pressing-multiplying-biodefense-issues-plague-u-s-experts-say/>

Oct 16 – The [Blue Ribbon Study Panel on Biodefense](#), a privately funded group established in 2014 to ascertain the current biodefense capabilities of the United States and issue expert recommendations to encourage change, has grown increasingly worried about microbial forensics and biological attribution.

And according to recent statements from several experts, it’s no wonder why.

“The diffusion of technical expertise coupled with the biotechnology revolution, drastically increases the threat of bioterrorism. New technologies have decreased resources and financial requirements for entry, and increased capabilities that could be misused by a determined bioterrorist. We need core microbial forensic laboratory capabilities to enable attribution,” said Dr. Gerald W. Parker, Jr., director of Texas A&M University’s Pandemic and Biosecurity Policy Program at the Scowcroft Institute for International Affairs and associate dean for Global One Health in the College of Veterinary Medicine.

Involved in biodefense since 1982, Parker recently told the panel that he feels like he has “been at the eye of the storm witnessing evolving biological threats over my career.”

“And today, I am more concerned than ever about the risk of biological threats—whether from outbreaks, accidents or attacks—and the need to underpin no-regret attribution decisions with a sound scientific foundation in microbial forensics,” Parker said during a panel meeting held earlier this month.

Attribution to determine who was responsible for an attack, whether a crime, act of terror, or warfare is essential to hold those responsible accountable for their actions, prevent future attacks and serve as a deterrent, he said.

Attribution and the supporting microbial forensic sciences also are important to exonerate and rule out suspected perpetrators, whether a nation state, terror group or criminal that is innocent, Parker said.

“The stakes could be very high, particularly when a nation state is involved or suspected, and a rush to judgment before the science and evidence are in, should be avoided,” said Parker. “Decisions to attribute, especially a nation state, will be consequential, no-regret decisions that must be guided by a strong scientific and evidentiary foundation.”

Online biocrimes

Essentially, microbial forensics and biological attribution are used to find out who, how and what disease agent was used, and where it was obtained following a biological attack.

And as biological threats and attacks increase worldwide, the risks are heightened for the United States, a fact the Blue Ribbon Study Panel on Biodefense has belabored since 2015 when it issued its national reform blueprint, which specifically includes Recommendation 9 saying the nation lacks biological attribution capabilities due to “the inherent challenges associated with microbial forensic techniques and related analyses.”



Today the panel continues advocating for the establishment of a national biological attribution decision-making process that would be overseen by the U.S. vice president; developed by the secretaries of the departments of State, Defense and Homeland Security (DHS), as well as the Attorney General and the Director of National Intelligence; and run by the Federal Bureau of Investigation (FBI), which also would be in charge of the National Bioforensics Analysis Center (NBFAC) where biological forensics and attribution work would be handled.

The panel is also concerned about U.S. President Donald Trump's FY 2018 budget request, which would eliminate biological attribution and biodefense functions from DHS and close the National Biodefense Analysis and Countermeasures Center in Maryland, which houses the NBFAC.

"Terminating funding would leave the country without a core investigative tool for biocrimes and bioterrorism," panel co-chairman and former Sen. Joseph Lieberman said.

Specifically, the NBFAC conducts technical analyses in support of federal law enforcement investigations and attempts to coordinate multi-agency biological forensic efforts. The NBFAC currently is administered by the DHS Science and Technology Directorate, which the panel says in its blueprint has caused NBFAC to struggle to coordinate with and serve other agencies "because its scientific goals sometimes run at cross-purposes to those of the operational communities it could serve."

In addition to proposed budget cuts, the panel also is concerned about biothreats from virtual terrorists, who, like their offline counterparts, are tantalized by biological agents for several reasons: detection is tough, production is cheap, incubation periods allow ample get-away times, they're simple to unleash, and common technology to produce and deliver warfare agents are readily available. Virtual terrorists now can gather online what's needed to build deadly pathogens that may be used as weapons.

For instance, there's the Clustered, Regularly Interspaced, Short Palindromic Repeat (CRISPR) technique—a recent and significant scientific breakthrough that allows DNA code to be removed and replaced with new genes—that's been used by virtual terrorists or even unknowing amateurs who can buy a cheap, online kit to reconstruct or edit DNA in their own makeshift synthetic biology labs.

Because CRISPR techniques now are "feasible for a greater range of users," fears have increased that "in the wrong hands, the procedure could unleash dangerous strains of bacteria or other organisms," explains Daniel Wagner, managing director of risk solutions at Risk Cooperative, in an Oct. 2 Huffington Post contributed piece.

"Prior to CRISPR, editing DNA required sophisticated labs, years of experience, a PhD degree, and many thousands of dollars," Wagner writes. "Today the simple do-it-yourself CRISPR kits could enable virtual terrorists targeting the food supply chain to alter the avian influenza genome and engineer a large bird flu epidemic, similar to the 2009 H1N1 epidemic in Asia that affected not only poultry, but also other mammals, including human beings."

And to properly and fully prosecute whomever committed such an act of bioterrorism, the U.S. must be able to rapidly and accurately identify the pathogens used, who used them and how.

The Blue Ribbon Study Panel held an Oct. 3 meeting, entitled Biological Attribution: Challenges and Solutions, to learn about the existing capabilities of the U.S. government to correctly identify pathogens and their sources; attribute the use of biological weapons with scientific and other forms of evidence; and explore the processes used for investigative, legal, policy, and political decisions involving biological attribution.

Clearly, after hearing from three experts who framed the problem for the biodefense panel, the prognosis wasn't good.

In fact, panel member and meeting chairman Ken Wainstein, former U.S. Homeland Security Advisor and a partner in the litigation department at the Washington, D.C.-based Davis Polk and Wardwell LLP, called the experts' statements "very illuminating and sobering."

The nitty gritty

Specifically, the experts discussed biological threats and their potential for large-scale consequences, and how such threats and consequences have been and would be much worse because of an inability to obtain microbial forensic evidence. (The discipline of



microbial forensics is based in epidemiology and focused on the characterization, analysis and interpretation of evidence from the scene of a bio-crime or an act of bioterrorism.)

Nicolas Dunaway, chief biosecurity officer at Inspirion Biosciences, previously oversaw weapons of mass destruction (WMD) investigations for the FBI and conducted liaison and outreach with public and private entities with a nexus to chemical, radiological, biological and nuclear material.

Dunaway has unique experience in computer network intrusion and computer network exploitation operations and has developed novel approaches for large-scale data management, bioinformatic analysis, biological warfare threat identification and information technology system development. He is also a subject matter expert on biological WMD matters, specifically select agents, synthetic biology and advanced biotechnology.

In providing panel members with examples about recent events, Dunaway generalized published research he had read about a hack that was conducted on a network system for a company that produced genetic sequences. The researchers showed that by sending a sequence of a certain type, they could compromise the code of the machines and take control of those machines, Dunaway told the panel.

“So instead of the typical hacks we see today ... it demonstrates one of many, many issues we’re going to see with cyber and bio. Every time I see a cyber event, I think of an analogous bio event. I think that mindset is one we all need to start taking,” he said.

Edward H. You, a supervisory special agent in the biological countermeasures unit of the FBI Weapons of Mass Destruction Directorate, told the panel that attribution is also a major component needed in the nation’s overall biodefense strategy, regardless of whether bioterrorism events are accidental or intentional.

The FBI WMD Directorate was created in July 2006, consolidating WMD investigation and prevention efforts to create a unique combination of law enforcement authorities, intelligence analysis capabilities, and technical subject matter expertise focused on chemical, biological, radiological, nuclear and explosive matters, according to You.

In his position, You is responsible for creating programs and activities to coordinate and improve FBI and interagency efforts to identify, assess and respond to biological threats or incidents, and the efforts include expanding FBI outreach to the Life Sciences community to address biosecurity.

In a world of open-source DNA sequences, You told the panel that the potential for great discoveries in biology is nearly limitless, but so is the potential for exploitation, particularly as their associated costs decrease.

You noted that biological threat issues have historically been focused on the potential acquisition, development and use of materials such as viruses, bacteria and toxins. But new biotechnologies and the convergence of biology with the cyber/digital realm are challenging the nation’s current policies and practices to address biological threats.

“Public health, military labs, other nations ... all of the stakeholders focused on this need to be connected in one way and we have to integrate these components. It will take leadership to do that,” You said. “We’re living in a perfect storm.”

Dunaway said he has “no idea” what to predict about challenges coming over the next year, except to say that the nation must remain involved and engaged.

“I expect genetic engineering will become more targeted, more capable. Tech will become more effective and more expansive. Should we ban/allow certain types of research? In my opinion, these types of advances are inevitable. Bans will serve only to take the U.S. out of leadership in this space and we’ll have national economic ramifications in security. And if you’re not in the field, you’re not having an effect on the game,” he said.

Facing reality

Members of the Blue Ribbon Study Panel on Biodefense tried to remain positive.

“We face some major challenges in microbial forensics and biological attribution, but we can overcome many of them,” said panel co-chairman and former U.S. Senate Majority Leader Tom Daschle. “We need to do what we can to eliminate them now, before we find ourselves under attack again.”



Wainstein said that he also hopes attribution is a national budget priority, particularly to maintain operations at national research labs and at NBFAC. "There are bioterrorism cases happening all the time. These aren't just labs with the lights on and nothing's happening. That's a misconception that they're just waiting for the next attack to come," he said.

Lieberman said it's critical for the United States to address the fact that the extraordinary expansion and advances in biotech can be used for adverse purposes.

"We're dealing with a recurring human problem but inevitably governments and law have to try and intervene to protect people's security," Lieberman said. "This is an example of a problem our government has today due to partisan, ideological gridlock and rigidity and the inability to deal with budgeting in a rational way.

"It's hard to get ahead of problems because [Congress] tends to only react when there's a crisis. So what we're working on here in this particular area ... is to try to get ahead of this potential real threat before we have a crisis or a catastrophe," he said.

In December 2014, a highly pathogenic strain of avian influenza entered the United States via migrating wild birds. The ensuing outbreak resulted in the largest animal health disaster ever experienced by the United States. Federal and state governments spent \$879 million on outbreak response. The outbreak impacted twenty-one states, lasted until the middle of 2015, and led to the depopulation of more than 50 million birds on 232 farms. Subsequent trade bans impacted as many as 233,770 farms. The total cost to the U.S. economy was estimated at \$3.3 billion.

Plague total grows in Madagascar: WHO

Source: <http://www.homelandsecuritynewswire.com/dr20171018-plague-total-grows-in-madagascar-who>

Oct 1 – The World Health Organization (WHO) said in an update on Madagascar's plague outbreak that the number of infections as of Saturday has climbed to 684, an increase of 297 cases since its last update on 9 October.

Also, health officials in Seychelles are closely monitoring eleven people in hospital isolation, a step that follows the announcement late last week of a probable imported case in a man who had traveled to Madagascar.

Of Madagascar's new cases, 197 are pneumonic, putting that total at 474. Twelve more deaths have been reported, lifting that number to 57. The WHO said the latest totals reflect an overall reduction in the case-fatality rate, which over the past few days has dropped from 11.6 percent to 8.3 percent.

Outbreak nears 700 cases

Illnesses have now been reported in 35 of Madagascar's 114 districts, 8 more since the previous update, the WHO said. The hardest-hit area is Antananarivo Renivohitra District, a large urban area surrounding the country's capital.

CIDRAP [says](#) that of the 684 cases, 63 are confirmed, 271 are probable, and 350 are suspected. In addition to the 474 pneumonic

cases, 156 are bubonic, 1 is septicemic, and 54 are unspecified.

So far, eleven *Yersinia pestis* strains have been isolated, and tests show that all are sensitive to antibiotics recommended for treatment.

The WHO has said that the overall threat of disease spread within Madagascar is high, while the regional risk is moderate and the overall global risk is low.

Madagascar and its global health partners have scaled up surveillance and contact tracing, and the Pasteur Institute has sent 1,918 rapid diagnostic tests to outbreak hot spots and to the health ministry.

The International Federation of Red Cross and Red Crescent Societies (IFRC) announced today that it is deploying its first-ever plague treatment center in Madagascar. It said the 50-bed facility will include a full medical team, using national health staff to isolate and treat patients sick with plague. It is also releasing about \$1 million from its disaster relief emergency fund to scale up the local Red Cross medical treatment capacity.

Fatoumata Nafo-Traore, MD, IFRC regional director for Africa, said in a statement, "Our past experience in outbreak response had



underlined the importance of responding quickly and effectively.”

Medicine du Monde is setting up five isolation and treatment centers, and Doctors without Borders has deployed seventy people to help support the response in Toamasina, another hot

spot that is also Madagascar's main seaport. The WHO has delivered personal protective equipment (PPE) and antibiotics, and the United States Agency for International Development (USAID) has donated PPE and vehicles to help the country's health officials.

Madagascar travelers bring plague to Seychelles

Source: <http://www.homelandsecuritynewswire.com/dr20171018-madagascar-travelers-bring-plague-to-seychelles>

Oct 18 – The Seychelles Ministry of Health (MOH) yesterday reported an imported plague case in a 34-year-old man who had travelled to Madagascar and had been under passive surveillance since he arrived, according to a statement posted on the MOH Facebook page.



He had been under passive surveillance in Seychelles since 6 October and sought care for symptoms on 9 October, which resulted in immediate isolation. Jude Gedeon, MD, the country's public health commissioner, said several tests yielded normal findings, but a rapid plague test was weakly positive. Testing at the Pasteur Institute in France confirmed the positive plague findings.

The Ministry of Health Seychelles [says](#) that the man was given antibiotics, and all 42 of his direct contacts are under active surveillance, including his partner, who has symptoms, though an infection has not been confirmed. Close contacts also include a child who lives with the couple. Fifteen of the close contacts have been placed on antibiotic prophylaxis.

Air Seychelles has cancelled all flights to and from Madagascar, and members of a basketball team who were under surveillance at a center have been discharged after none of them came down with symptoms. The MOH said the imported case is separate from the basketball group.

Madagascar is battling a plague outbreak since August, so far totaling 387 cases, 45 of them fatal. Most of the illnesses are the pneumonic form of the disease. Though plague is endemic to parts of Madagascar, with outbreaks typically reported this time of year, the current outbreak is unusual due to its high case count, widespread geographic area, large percentage of pneumonic cases, and involvement of large urban areas.

Science and the Effort to Eradicate Bioweapons

Source: <http://www.unsafefoods.com/2017/10/20/science-effort-eradicate-bioweapons/>

Oct 20 – Our nation, and indeed many of the world's industrialized countries, is simultaneously fascinated yet horrified by the idea of bioweapons. Historically, novels such as *The Stand* by Stephen King, *The Cobra Event* by Richard Preston, and *Hellfire* by Chris Ryan are but a few of literary pieces that describe the terrifying possibilities of weaponized biologic agents. Cinema is no exception, with films such as "The Andromeda Strain", "Alien", "28 Days Later", and "Outbreak" that showcase the potential devastation to the human population. Given that biologically engineered



weapons are now a reality rather than science fiction, it poses the question of how science can ameliorate or even eradicate this threat.

The Deadliest of the Deadly

The list of virulent and deadly bioengineered agents is lengthy and continues to grow as strains of these agents mutate and adapt to changing environments, especially in response to a threat. The Department of the Army, Technology Division, has compiled a list of the most dangerous:

- ◆ **Botulinum** (aka botulism) is extremely potent and lethal. Modes of distribution include aerosol or water and food contamination.
- ◆ **Bacillus anthracis bacteria** causes anthrax and is categorized by the Centers for Disease Control (CDC) as a Category A agent, defined as the highest risk agent, capable of producing the greatest casualties and capable of posing the most threat to national security. Anthrax is invisible, odorless and tasteless, making it an effective bioweapon.
- ◆ **Aflatoxins**, a number of structurally associated harmful metabolites developed by certain strains of fungi, lead to cell or organ death.
- ◆ **Francisella tularemia bacterium** is extremely infectious and easy to disperse. This ease of dispersion and ability to cause illness and death make this bacterium a dangerous bioweapon. The Soviet Red Army used this particular bioweapon against German troops during World War II.
- ◆ **Yersinia pestis bacteria**, also a Category A agent, cause pneumonic plague. It can be created in a laboratory in high quantities. Plague has been used as a weapon since the 14th century.
- ◆ **Marburg Hemorrhagic Fever** (Marburg HF) includes the Ebola virus. Marburg virus is also a Category A bio-warfare agent identified by the CDC. The virus can be isolated and produced as a biological weapon.



Scientific Endeavors into Bioweapon Agents

However ominous these potentially devastating agents of destruction can be, there is a measure of optimism insofar as to the intervention of scientific research into the elimination of bioweapons, particularly in the study of genetics. In a 2017 study conducted at Duke University, researchers discovered a way to disable the molecule that makes the *Francisella tularemia* virulent. Subsequently, it was discovered how the cluster of pathogenic genes were turned on and off. Of critical importance in this study was that antibiotics were not used. As is prevalent today, differentiating strains of bacteria have become increasingly unresponsive to the overuse of antibiotic treatments used to kill them. This promising study will require replication with other deadly bacteria to determine the efficacy of gene mapping in order to eradicate the bacteria and/or ameliorate its impact on human populations.

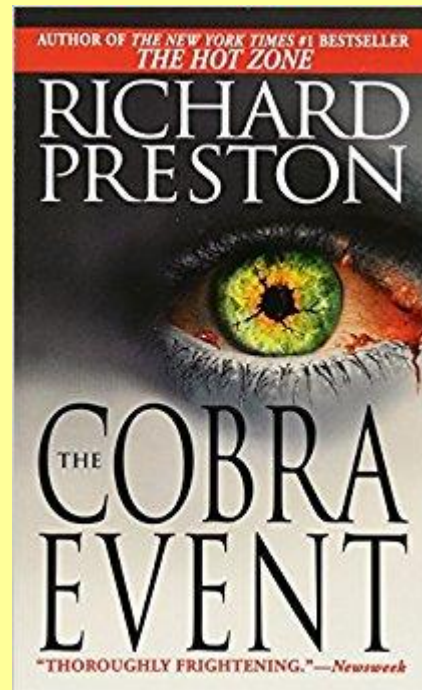
Implications of Bioweapons in Agriculture and why it is Relevant

When individuals discuss the potential threat of bioterrorism, they envision scenarios similar to the ones aforementioned in novels and films: that of bacteria and viruses introduced directly to the human population. This kind of possibility, though, is short-sighted. One should



examine the potentiality for a bioterrorism event that could eclipse a solely human-induced event in its totality of destruction on social, economic, and environmental levels. It is called anti-agricultural bioterrorism, and here are the effects of such:

- Destabilize a government by initiating food shortages or unemployment. When agriculture is naturally, or in this case, artificially disrupted, losses of plants and/or animals would probably precipitate food shortages, skyrocketing food prices, and subsequent unemployment. This would also precipitate destabilizing effects on societal and political structures and practices. This would be particularly evident in developing nations that are dependent upon a single food crop and are therefore more vulnerable to destabilization.
- As previously stated, genetic inquiry, research, and practice continues to expand in the area of bioweapons. These endeavors make genotype-specific weapons possible. Genetic intervention continues to accelerate and could potentially lead to the construction of genotype-specific biological weapons that target agricultural species.
- Resultant losses due to the efforts to contain outbreaks necessitate the destruction of all potentially exposed host organisms, including healthy ones. With crops, thousands of acres of plants would be destroyed for containment purposes.

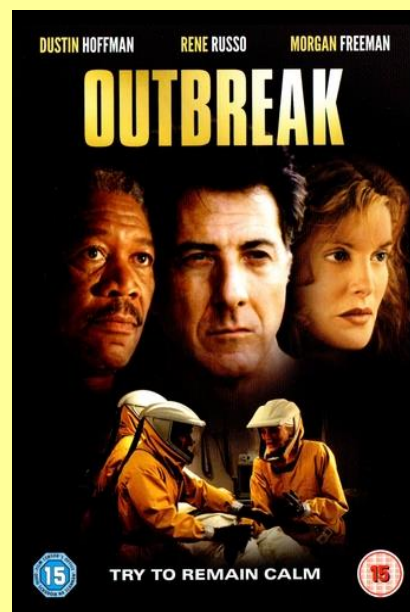


Who Could Benefit from an Agricultural Bio Attack?

Most likely, many individuals would immediately concur that terrorist organizations would be the benefactors of bioweapon usage. Terrorists are motivated by ideology that would constitute such an attack and would be willing to assume responsibility. Additionally, these groups could attempt to disguise the outbreak as natural or even the work of others.

Individuals that conduct business in the drug trade have financial stakes in agriculture because the very foundation of the drug industry is crop cultivation. Organized crime, with its prevalence in illegal drug manufacture and distribution, may indeed take an interest in engineering bio-criminal activities involving agricultural crops.

Agricultural corporations, including producers, processors, and shippers, could benefit immensely from the economic impacts, market share changes, and financial market effects of a successful biological attack. Many also employ expert plant pathologists or veterinarians and have large collections of pathogens.



Science as a Double-Edged Sword

It can be reasonably argued that scientific investigation bounces equally against both sides of the “dual-use” dilemma. What justifiably and presumably helps humanity can just as efficiently harm it, or even annihilate it. The development of the hydrogen bomb predominantly comes to mind. Genome research will unfold procedures that will provide richness to human life never before encountered, yet can morbidly open the path to sinister, inhumane practices. The ethical implications of such are more than can be explored in the course of this article, yet it can be



concluded that where there is life there is curiosity and inquiry in all forms, for worse or for better.

North Korea PLAGUE alert: Kim Jong-un could unleash BLACK DEATH in shock biowarfare attack

Source: <http://www.express.co.uk/news/world/869721/North-Korea-Kim-Jong-un-Black-Death-plague-bioterrorism-Harvard-University-World-War-3>

Oct 22 – A chilling new report claims Kim Jong-un's regime could unleash the plague, cholera and other diseases across the US and South Korea.



cultivating pathogens can stay invisible behind closed doors.

"Moreover, equipment used for BW [biological warfare] production are often dual-use for agriculture, making external monitoring and verification virtually impossible."

The rogue state's special forces could be used as "human agents" to spread the highly infectious diseases, it adds.

The terrifying document warns: "North Korea has 200,000 special forces; even a handful of those special forces armed with BW would be enough to devastate South Korea.

The document, by Harvard University's Belfer Centre, says Pyongyang may use missiles, drones or planes to spread the deadly viruses. And it warns preparation against the devastating threat of biological warfare is "urgent and necessary".

North Korea is thought to already have 13 pathogens in its weaponry, the researchers said, including anthrax, smallpox and yellow fever.

And scientists are feared to be weaponising the viruses in top-secret labs across the war-crazed rogue state.

The report states: "While nuclear programs can be monitored by the number of nuclear tests and the success of missile tests, weaponising and

"What is alarming about human vectors is that they do not need sophisticated training or technology to spread BW amongst the targets, and they are difficult to detect in advance of an attack."

The alert comes as North Korea continues to complete its huge nuclear arsenal, ramping up fears Kim could spark World War 3.

Seoul's Foreign Minister Kang Kyung-wha yesterday said she expects the North to carry out further nuclear tests "at any time".

She told Yonhap news agency: "Parts of its tunnel have been destroyed after the North conducted the sixth nuclear test.

"But it has more than one of them, so [an additional nuclear test] can be done at any time."

North Korea's Biological Weapons Program: The Known and Unknown

By Hyun-Kyung Kim, Elizabeth Philipp and Hattie Chung

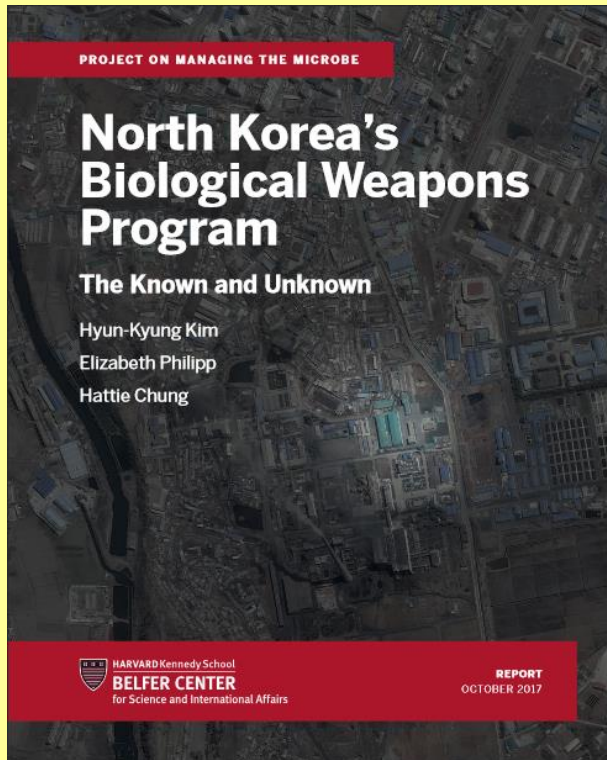
Source: <https://www.belfercenter.org/publication/north-koreas-biological-weapons-program-known-and-unknown>

October 2017 – Amidst the growing threat of North Korea's nuclear program, the assassination of Kim Jong-Un's half-brother via VX nerve agent in February 2017 brought renewed interest in North Korea's other weapons of mass destruction (WMD) programs—



chemical and biological weapons. If used on a large scale, these weapons can cause not only tens of thousands of deaths, but also create panic and paralyze societies. Nevertheless, the vividness of the nuclear threat has overshadowed other weapons programs, limiting the attention and policy input that they deserve. This paper focuses on North Korea's biological weapons (BW).

Accurately assessing the threat from North Korea's biological weapons is challenging. Whereas North



Korea has publicly declared its will to become a nuclear power many times, it has been less overt about its intention or capability for biological weapons. BW capabilities are inherently hard to detect and measure. While nuclear programs can be monitored by the number of nuclear tests and the success of missile tests, weaponizing and cultivating pathogens can stay invisible behind closed doors. Moreover, equipment used for BW production are often dual-use for agriculture, making external monitoring and verification virtually impossible. Limited information on North Korea's BW program leads to a low threat perception that may undermine preparation and response efforts.

Nonetheless, preparation against BW is urgent and necessary, which will also serve as defense against naturally occurring epidemics that increasingly threaten the 21st century. Military and public health sectors should cooperate to urgently prepare for "dual-response" mechanisms. Components of a well-established "dual-response" program should include the best possible threat assessment by military and intelligence communities, a strong public health detection and response system, a well-coordinated crisis communication strategy among multiple stakeholders, and compliance from an informed public.

In this paper, we examine the state of knowledge on North Korea's BW program. Current literature describes North Korea's BW program with mixed levels of credibility. Using publicly available information, including articles, books, governmental and non-governmental reports, as well as interviews with subject matter experts and former government officials, the authors map the known and unknowns of North Korea's BW program.

Second, we examine where policy on North Korea's BW stands. We focus our analysis on the policies of South Korea and the United States, rather than at an international level, as North Korea has had limited participation in the Biological Weapons Convention (BWC).

Lastly, we present recommendations on how to improve assessment and surveillance of North Korea's BW program, especially with new technologies, and how to improve current policies regarding North Korea's BW program.

►► Download the full report: [North Korea's Biological Weapons Program \(full\)](#)

Elizabeth Philipp is a Master in Public Policy 2018 candidate focusing on international security and WMD nonproliferation policy. She is concurrently pursuing a JD at Georgetown Law and plans to focus on international and national security law. Previously, she completed a Fulbright grant in South Korea and has researched and published on North Korea's nuclear and biological weapons programs for the DC-based Arms Control Association and the Belfer Center's Project on Managing the Microbe. She aspires to a career in public service in the federal government, and recently interned in the Department of State's Office of the Biological Policy Staff and the Mission to the International Organizations in Vienna. She is assisting the Project on Managing the Microbe.

