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Website: www.cbrne-terrorism-newsletter.com**Editor-in-Chief****BrigGEN (ret) Ioannis Galatas MD, MA, MC (Army)**

PhD cand

Consultant in Allergy & Clinical Immunology

Medical/Hospital CBRNE Planner & Instructor

Senior Asymmetric Threats Analyst

Manager, CBRN Knowledge Center @ International CBRNE Institute (BE)

Athens, Greece

➔ Contact e-mail: igalatas@yahoo.com**Editorial Team**

- **Bellanca Giada**, MD, MSc (Italy)
- **Hopmeier Michael**, BSc/MSc MechEngin (USA)
- **Kiourktsoglou George**, BSc, Dipl, MSc, MBA, PhD (cand) (UK)
- **Photiou Steve**, MD, MSc EmDisaster (Italy)
- **Tarlow Peter**, PhD Sociol (USA)

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**PUBLISHER****Mendor Editions S.A.**

3 Selinountos Street
14231 Nea Ionia
Athens, Greece
Tel: +30 210 2723094/-5
Fax: +30 210 2723698

Contact e-mail: [Valia.Kalantzi info@mendor.gr](mailto:Valia.Kalantzi@info@mendor.gr)

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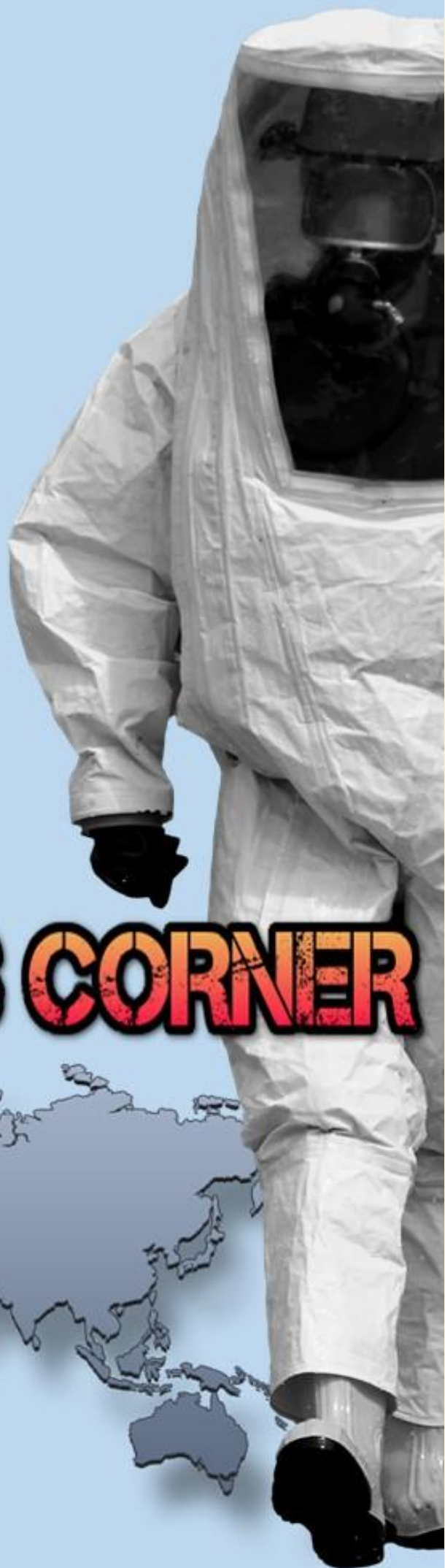


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EDITOR'S CORNER





Editorial

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

Editor-in-Chief
CBRNE-Terrorism Newsletter

Dear Colleagues,

With the exception of a church mass shooting that is not considered as terrorism (ha!) November was a rather quiet month although many bad things happened around the globe:

- ◆ Two “stan-countries” entered the geopolitical chessboard – Kurdistan and Kazakhstan – for different reasons but in both cases Russia was the moderator.
- ◆ Second generation European Muslim immigrants show less trust in the political institutions of hosting country compared to those of the first generation – a threat in the horizon?
- ◆ Firearms injuries increased over the past 20 years (USA)
- ◆ Will 2018 FIFA World Cup will be a safe one?
- ◆ Drones now drop drugs in prisons but are also loaded by IEDs (by Mexican drug cartels)
- ◆ Video showed a drone “entering” a university and started executing students – Sci-fi or not?
- ◆ Muslims in supermarket chain’s ad for Christmans – why? It is the money stupid!
- ◆ **Imagine:** one day your son or daughters delivers a letter to you explaining why he/she converted to Islam!
- ◆ British Church guidelines for teaching transgenic issues: Let boys wear tutus and high heels – in God we Trust!
- ◆ The EW part of Attica Prefecture, Greece was hit by heavy rains resulting in mega flooding that killed 20 people – can you imagine that in the year 2017 to die in the mud.
- ◆ **A dream:** to break the law in UAE and be arrested by a police officer driving a Rolls-Royce Wraith!
- ◆ **For people with open minds only:** Enjoy stories with milk and OK gesture!

“C” issues

- ◆ Many spoke about a near future chemical attack in Europe – talk a lot but preparedness still minimum.
- ◆ Weaponized drones with chemicals – another dreadful option.
- ◆ North Korea has 13 types of biological agents that is can weaponize within 10 days – another problem on top of nukes (and CWAs).
- ◆ Smallpox might come back via synthetic biology – science and freedom might not be always compatible.
- ◆ Plague in Madagascar is growing fast (>1300 cases/93 deaths) – but who cares for a far away African country – remember Ebola?
- ◆ Agroterrorism is mentioned more often than before – a bell is ringing in a deaf planet!
- ◆ Biologist/biohacker used **CRISPR to modify his DNA** in order to improve his physical strength (by removing myostatic gene) – but a gene is not a stand alone unit; synergy is important! We will hear from him soon!



“R/N” issues

- ◆ In North Korea, nuke testing mountain collapsed killing 200 workers.
- ◆ Radioactive cloud (ruthenium) over Europe – possible emitting location between Volga River and Ural Mountains.

Cyber issues

- ◆ Bad rabbit ransomware attack spreading across Europe





- ◆ Cryptoterrorism and cryptocurrencies – new words in our security vocabulary?
- ◆ **Boeing 757 was hacked** on the tarmac in controlled experiment – soon a reality?
- ◆ Hacking bluetooth smart toys – parent wake up; be alert on how is “talking” to your child!!!

Terror issues

- ◆ Many articles on how to define terrorism – we need to invent a new word for bad things; something being more “bad” than “bad”.
- ◆ Scenarios for ISIS’ remote attacks against Western targets – i.e. in Trinidad and Tobago or summer 2018 destinations.
- ◆ ISIS threatens little Prince George (UK) along with Pope and the Vatica – No! Santa is still safe!
- ◆ Manhattan truck attack – 8 dead; a dozen injured.
- ◆ Church shooting at Sutherland Springs, Texas – 26 dead; 20 injured. The 5th deadliest shooting in the United States ever. If you have visited an American church you know how easy it is to kill more (if a team attacks premises instead of a single shooter).
- ◆ Many European countries offer benefits to terror suspects and returning jihadists just to keep them happy and quiet – Yes, I know how stupid sounds to those spending a life time studying hard and working harder; next time your boy will tell you that he wants to be a jihadist instead of fireman, doctor or architect do not discourage him – he might be more clever than his working daddy!
- ◆ Child refugee who raped and murdered EU official’s daughter proved to be an adult – good news! Just hang him!
- ◆ In Greece: Notorious November 17 terrorist granted prison leave – Yes! The one with a dozen life imprisonments and no regret statement. Greece is leading the way to a more tolerant future planet!

Apart from the above, together with 3 friends we created the CBRNE Team Greece in an effort to spread the knowledge to colleagues involved in emergency response. Our first course was delivered to the 1st EMAK – the Special Unit for Countering Distors, Hellenic Fire Service. It was a very interesting weekend and we all enjoyed an interactive course. The team is composed by the Editor, LT Demitrios Stamatopoulos, MD (Air Force), Combat and CBRN Medic, Chief WO Med Stavros Paschalides (Army), Combat and CBRN Paramedic and Ioannis Retsios, Paramedic, authorized trainer at Dräger Hellas SA, Hazmat-SCBA-LiFT. Team’s moto: *“Power is gained by sharing knowledge, not hoarding it.”*

Take care First Responders and prepare for December – the last month of the year 2017 might have nasty surprises to deliver!

The Editor-in-Chief

Photo in p.7

Top left: the Editor; top-right: Chief WO Med; middle-right: LT MD; bottom-right: Dräger’s trainer. Honorary plaques were awarded by 1st EMAK’s Fire Brigade Chief LTC Kolokouris Stefanos. Thank you Sir! It was a pleasure and an honor!





CBRNE Training Course
1st Special Unit for
Countering Disasters
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Meet the National Geospatial-Intelligence Agency, the CIA's Big Brother: The Multibillion Dollar US Spy Agency You've Never Heard Of

Source: <https://www.globalresearch.ca/meet-the-national-geospatial-intelligence-agency-the-cias-big-brother-the-multibillion-dollar-us-spy-agency-youve-never-heard-of/5614654>

Iraqi Kurdistan's Crisis: A Failure of Strategy

By Aymenn Jawad al-Tamimi

Source: <http://www.meforum.org/6976/iraqi-kurdistan-crisis-a-failure-of-strategy>

Oct 22 - As the war against the Islamic State as an entity controlling territory comes to a close in Iraq, control over territories disputed between the Iraqi central government and the Iraqi Kurdistan regional



government (KRG) has come to the forefront. Forces officially affiliated with the Baghdad government, as well as militias aligned with it on this issue, have taken control of several key disputed sites, including Kirkuk city and Sinjar, which were previously held by Kurdish forces.

While it initially seemed that the aim of the operations was just to assert the boundaries that

existed prior to the Islamic State surge of 2014, there are indications the rollback may go as far as the 2003 boundaries. What is the root of this crisis? And what, if anything, should be the U.S. role?

Inevitably, much commentary has taken on a moralistic tone, lamenting a supposed U.S. abandonment of the Kurds to the Iranians and their clients, or getting into arguments about whether places like Kirkuk are actually Kurdish. The issue at hand, though, is not so much right or wrong over who should control which area as strategic failure.

The root of this crisis lies in the [miscalculation by Masoud Barzani and his Kurdistan Democratic Party \(KDP\)](#), who rule in the KRG capital of Erbil, to insist on going ahead with the unilateral independence referendum last month. It was clear from the outset why the referendum in the present circumstances was problematic.

Holding the referendum unilaterally in disputed territories, for example, was sure to provoke a wide spectrum of local Iraqi opposition transcending many sectarian boundaries, including not only Sunni and Shi'a Arabs but also many members of Iraqi minorities such as the Turkmen and Yezidis (the latter not necessarily identifying as ethnically Kurdish, despite speaking the Kurdish language).

This Iraqi domestic opposition to the referendum has been the strongest and main incentive for Iraq's prime minister, Haider al-Abadi, to take action, given his desire for political legitimacy for next year's parliamentary elections and the risk of being undermined by actors who are far closer to Iran, such as the previous prime minister Nouri al-Maliki, who became much more closely aligned with Iran from 2010 onwards.

The perceived need for Abadi to outmaneuver more pro-Iranian hardliners in Iraq is likely the main explanation for the U.S. position, which did not actively oppose the reassertion of



federal government control over places like Kirkuk, even as Iran is also exploiting the situation in a bid to dampen as far as possible the prospect of a Kurdish state, fearing a ripple effect among its own Kurdish populations.

Besides strong local Iraqi opposition, there was by no means a unanimous consensus among the KRG's various factions to hold the referendum, with the main reservations existing within the area's other main political faction historically (the Patriotic Union of Kurdistan [PUK], which is tied to the Talabani family and controlled Kirkuk city) and the [opposition Gorran movement](#). There were suspicions, for instance, that the referendum was merely being used by Barzani, whose original [legal mandate as KRG president had expired in 2015](#), to gain legitimacy to consolidate his power. Iran has exploited internal Kurdish divisions in the current crisis through ties to the PUK in particular.

In the long-run, there have been serious questions as to how viable an independent Kurdistan can actually be given the KRG's trajectory in recent years. For now, unable to survive on its own financially, the KRG has generally remained reliant on



Baghdad for funding in order to pay salaries of government workers and personnel. The calculation by Barzani has been that the region can come to sustain itself through [essentially being Turkey's economic vassal](#), relying on independently exporting oil to Turkey and using that country to gain access to the sea and wider markets. This outlook, of course, was the biggest incentive for KRG control of Kirkuk and its environs, given the oil resources there.

Yet even with the KRG's full control and development of these resources, it could never be as lucrative as Iraq's vast oil fields in the south, and global oil prices have been falling anyway as worldwide production has increased. In addition, despite the economic ties Ankara developed with the KRG, it was always clear Turkey opposed the idea of an independent Kurdish state, preferring to keep the KRG as a client region economically dependent on it while remaining officially a part of Iraq. After all, like Iran, Turkey fears a ripple effect among its own Kurdish population.

In short, facing opposition from its neighbors, financially weak and internally divided, Barzani had very little leverage on his side, and it was obvious that a unilateral independence referendum at the present time would not have been able to change that. [Contrary to what Dexter Filkins of the New Yorker writes](#), to the more sober observer it did not even seem to be the case that the dream of an independent Kurdish state was "tantalizingly within reach."

The various problems facing the KRG did not stop foreign supporters and lobbyists of the KDP from insisting the referendum was some kind of "historic opportunity" or [painting inaccurate pictures of how the KRG's economy was faring](#). These advocates only helped to reinforce this bad decision-making by telling the KDP what it wanted to hear. Indeed, they have done their clients a considerable disservice and failed in their role as advocates. Good advocates



not only support their clients' fundamental cause (in this case, an ultimately independent Kurdistan) but also advise their clients on sound strategy. It would have been far better to encourage dramatic internal political and economic reform within the KRG to give the entity a better hand for eventually negotiating over disputed territories with Baghdad, so that an actually viable independent Kurdistan could emerge from an amicable divorce with Iraq.

Unfortunately, though, much damage has already been done. Having lost many of the disputed territories, economically isolated by its neighbors and internally divided even further now, the KRG's overall position is even weaker than before.

Looking forward, what should the U.S. response be? Those who lament the supposed abandoning of the Kurds suggest the U.S. should have actively taken the KRG's side on the issue of disputed territories and supported the unilateral independence referendum. But what would such policies have actually entailed or accomplished? Airstrikes against Iraqi government forces? On the strategic level, KDP advocates often argue that a U.S.-supported independent Iraqi Kurdistan would be an effective counter-balance against Iran. There is little evidence to back up this argument. Given the area's geographical position, this Kurdish state's role in wider regional politics would be marginal, having little impact on issues like the rivalry between Iran and Saudi Arabia and the theaters where it plays out. Nor would this Kurdish state act as an obstacle to [Iran's reach towards the Mediterranean](#), or have leverage over the government in Baghdad. Even with full U.S. support in these circumstances, the prospects of realizing a viable independent Kurdistan are still dubious. An independent Kurdistan would require buy-in from at least one of its neighbors to be economically viable. It is difficult to see how that buy-in could be gained through U.S. support.



One might argue that Turkey would be the most viable candidate for U.S. outreach to encourage this buy-in, but why should Turkey listen to the U.S.? After all, the past few years have seen general U.S. disregard for Turkish concerns about military support for the Kurdish YPG in Syria against the Islamic State: the YPG, linked to the Kurdistan Workers Party, is regarded by Turkey as a terrorist organization. That is not to say the U.S. support for the YPG has necessarily been wrong, as there were no other viable ground forces in Syria to support as the Islamic State surged in 2014. Yet it must be understood that that support has had consequences for U.S.-Turkish relations, and those consequences would be relevant were the U.S. to support a unilateral pro-independence policy for Iraqi Kurdistan.



The only logical U.S. policy is to pursue a midway course between the KRG and Baghdad. There is an important U.S. interest in preventing Iraq's government from becoming totally aligned with Iran at the expense of any U.S. influence. It is impossible to remove Iranian influence in its entirety from Iraq or prevent Iraq from having friendly economic ties with Iran, but an Iraq in which Iran faces some limitation and competition with American influence is far more preferable to one totally dominated by Iran, which would be the outcome of simply throwing in the American lot with the KDP and the path it has pursued. There is also a U.S. interest in continuing to maintain ties with the KRG. Right now, therefore, the goal must be to act as a mediator between the two sides, encouraging an immediate return to negotiations over the disputed territories with a focus on taking into account the concerns of local populations in these areas, rather than giving unconditional tacit or explicit support to one side. While those words might sound like a trope and Barzani in particular is in a terrible position for negotiations, there is no viable alternative. The initial U.S. calculation with regards to the Iraqi government's retaking of Kirkuk city was understandable, but there is a risk of things going too far in the moves on disputed territories. Accordingly, the U.S. should use its leverage with Abadi, who has already done enough to bolster his legitimacy, to urge for military manpower and efforts to be redirected towards retaking the remaining border areas with Syria from the Islamic State and securing those areas to undermine the Islamic State's future insurgency prospects. More broadly, the security/internal stability angle is probably the best one to play up for the encouragement of a return to negotiations over disputed territories.

Aymenn Jawad Al-Tamimi is a research fellow at Middle East Forum's [Jihad Intel](#) project.

Kazakhstan Stepping out of Moscow's Shadow With Military Transformation, Societal Shifts



After more than a quarter-century of independence, Kazakhstan continues to transform in ways that overcome many of the country's Soviet legacies. In recent months, this Central Asian republic adopted a new military doctrine and is expanding the role of its Caspian navy. The new military doctrine, in particular, significantly shifts the rhetoric and logic of Kazakhstan's security agenda and puts emphasis on guarding against outside-imposed "hybrid war" threats. Its navy, meanwhile, is undertaking new responsibility for protecting and securing the country's valuable offshore facilities and infrastructure—a task previously carried out by the border service. Such changes are paralleled by longer-term trends in societal and demographic shifts. The proportion of ethnic Russians in Kazakhstan's overall population is dropping quickly, and may make up less than 20 percent in a decade or so, which will seriously undermine Moscow's leverage over its former Central Asian colony. At the same time, Kazakhstani society is undergoing a generational change and growing increasingly nationalistic; its evolving demands will prove an ever greater challenge for the authorities to deal with.

Below, please find the latest Jamestown analysis of this strategically important trend: [Moscow Losing Its Leverage in Kazakhstan as Astana Loses Influence Over Nationalists](#)



Russia is rapidly losing its traditional leverage in Kazakhstan. Not only is demographic change swiftly reducing the share of ethnic Russians in the population, but... [MORE](#)

[Kazakhstan's Navy to Develop Anti-Terrorism Capacities](#)

Since the collapse of the Soviet Union, in 1991, the four new countries that emerged around the northern Caspian shore—Russia, Azerbaijan, Kazakhstan and Turkmenistan—along with... [MORE](#)

[Kazakhstan Adopts New Military Doctrine](#)

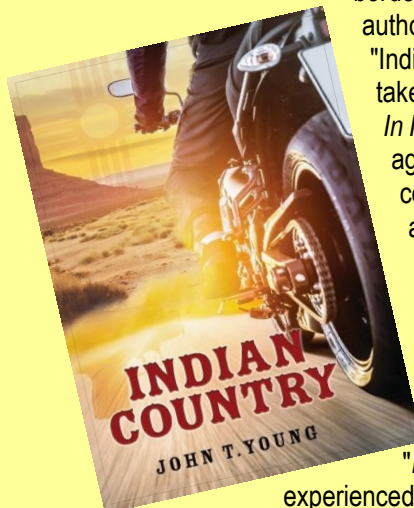
President Nursultan Nazarbayev signed a decree, on September 29, adopting Kazakhstan's new Military Doctrine. The document outlines key priorities in military security for the Central... [MORE](#)

Author's experience brings reality to his own story

By John Young

Source: <http://www.digitaljournal.com/pr/3534261>

Oct 24 – Ingram Elliott is excited to announce the release of *Indian Country*, an action-packed thriller set in the dangerous world of biker gangs and Mexican drug cartels that exploit weaknesses in the Mexican border to facilitate terrorism. This electrifying debut novel is based on the author's experience as an intelligence and law enforcement officer. The title "Indian Country" refers to a Navajo reservation where much of the action takes place and is a nod to the U.S. military term for a war zone.



In *Indian Country*, Wayne Kincaid, an Iraq war veteran and undercover DEA agent, infiltrates a dangerous biker gang with Mexican drug cartel connections. As if it couldn't be any more precarious, Kincaid's assignment takes an unexpected turn when an old enemy blows his cover.

"My inspiration for writing *Indian Country* comes from two experiences—my time as a police officer in New Mexico, where I worked on the edge of the Navajo reservation, and my time in Iraq with the U.S. government, when I helped locate and capture al-Qaeda terrorists," says Young.

"*Indian Country* offers unique insights into several worlds that are not experienced by most people," says Charlotte Piel, Acquisitions Editor at IngramElliott.

"The thrill of the book is that readers get an unconventional view of what it's like to work undercover. They also get a better understanding of life on the Navajo reservation through the eyes of three generations."

[Indian Country](#) is available today in paperback and eBook through most major retailers.

In 1969, John T. Young joined the U.S. Army and served one year in Vietnam with the Army Security Agency. After leaving the Army in 1972, he studied journalism at the University of Arizona and became a reporter at The Arizona Daily Star, covering the police beat. During the 1980s, he was a reporter for the Voice of America in Washington, D.C., and a writer for the U.S. Information Agency. He moved to Los Angeles in 1988 to study screenwriting and worked as a private investigator to support himself—and for the experience. He was also a police officer in New Mexico and a private investigator in New Mexico. After the 9/11 attacks, he joined the FBI as a counter-terrorism analyst, working at the National Counter Terrorism Center through 2004. Not content to sit behind a desk, he joined the Defense Intelligence Agency and became an Operations Officer, after lengthy training in human intelligence collection. He served in Iraq with the Joint Special Operations Command in 2006 and 2008, and subsequently worked as an instructor for U.S. Army Intelligence at Ft.



Education or Indoctrination? Islam in Our Schools

By Martin Mawyer

Source: <https://clarionproject.org/education-indoctrination-islam-schools/>

Oct 29 – There is a question that we all struggle with, and one that many people may find difficult to answer:

When does teaching the facts about Islam morph into becoming religious brainwashing, indoctrination, propaganda or evangelizing?

I don't think many parents are opposed to teaching students about the history of Islam, its achievements, its failures, its struggles and even its victories — as long as these studies are taught accurately, without political or religious motive, and are not given favorable treatment over other major religions of the world. Perhaps most of us can agree that this should be the educational standard for presenting the subject of Islam in the public schools. But does such a definition really work?

Even the most obvious attempt at evangelizing public school children into Islam can easily be explained away by some as giving students nothing more than the facts about Islam.

Muslims believe in the Five Pillars of Islam. That's a fact. Islam preaches [Allah](#) is the one true God. That's a fact. The [Quran](#) teaches that Muslims must accept Muhammad as God's messenger and prophet. That's also a fact.

These are facts, but they can also cross over from presenting the basic tenets of Islam to aggressively pushing religious indoctrination or evangelizing.

For example, let's say a public school teacher said this to his or her class: "The Bible says if you don't repent and accept Jesus Christ as your Lord and Savior, and believe He died on the cross for your sins, then you're going to spend an eternity in hell."

Would such instruction be considered teaching a fact about Christianity or, more likely, an attempt to convert children into the Christian faith?

The answer to that question would probably depend on how the teacher said it. Was it delivered mockingly, seriously, with a wink, dryly, with a fist pounding on the desk, with pointed fingers, perhaps with a smirk or rolling eyes?

Whether presenting facts about religious tenets is considered indoctrination or education is difficult to answer and brings to mind the 1964 U.S. Supreme Court decision that attempted to define what constitutes obscenity.

Justice Potter Stewart, who found it nearly impossible to define when someone's free-speech rights crossed the line into illegal obscenity basically threw up his hands and said, "I know it when I see it."

We find ourselves somewhat in the same predicament when attempting to clearly define the line between education and indoctrination when it comes to presenting the facts about the religious tenets and beliefs of Islam.

Earlier this year our organization, the Christian Action Network, exposed what we considered to be an Islamic indoctrination program funded by the Department of Education. It's called "Access Islam."

In this program, children grades 5-12 are taught the [shahada](#) (the Muslim profession of faith), asked to draw posters of the Five Pillars of Islam, told to watch a video on how to pray as a Muslim, were also asked to read Islamic scriptures, explain the meaning of those scriptures and told to explain how Muslims use those verses found in the Quran in their everyday lives.

We found these lesson plans to be clear examples of Islamic indoctrination activities that go well beyond what is legally permissible for public schools when discussing religion.

But our opponents in the media and certain educators disagreed and said the program does no more than teach children the facts about Islam.

I might add that the Department of Education has no similar program that teaches even the most basic tenets of the Christian faith.

So which is it? Is "Access Islam" an example of religious indoctrination? Or is it simply a program that gives children Islamic facts?

First, let's understand the definition of indoctrination.

Indoctrination occurs when you present opinions as fact without presenting opposing views.



Saying that Islam teaches “Allah is the one true God” is of course a fact, but the statement itself is widely disputed by billions of Christians worldwide, who believe the claim is false.

When schools present Islamic beliefs, without balancing those beliefs with opposing views from other religions or even to present secular opposition, then a line has been crossed into indoctrination.

And this is why the public schools should never be used to teach students the tenets of a religion – unless it is presented in an elective religious studies class that teaches comparative religions.

But we all know here that Islam is not being taught to school-age children in religious study classes. No. Islam is being taught in geography, history and social studies classes.

And the tenets of Islam are, in many cases and in many examples you’ll see in [our film](#) (see below), being taught as indisputable facts in these classroom settings.

If you want students in a social studies class to understand the culture of Muslims in the Middle East – and teach them how in certain areas women are forced to wear burqas, hands are chopped off for minor offenses, homosexuals are thrown off tall buildings, that Christians are forbidden to own a Bible or build a church, that’s fine. Because these are indisputable facts.

But if you want to give the religious tenets that are used to justify these human rights abuses, then present them in an elective religious studies class where opposing views to these beliefs are equally available.

By giving students a one-sided view of Islamic beliefs, I believe this is nothing more than an attempt to convert our children into Islam and not only that, but in some cases an attempt to turn our children into evangelists for Islam.

When children are asked to draw the Five Pillars of Islam to be displayed in the classroom or posted up-and-down the school hallway, this is attempt to use children to spread the message of Islam.

Clearly, having children engaged in such activity goes well beyond any argument that students are simply learning the basic facts about Islamic beliefs.

And I assure you, that if children were tasked with a project of drawing a poster of John 3:16 to be displayed in the classroom — and throughout the school — the ink would not be dry on the poster board before the courts would rule this activity unconstitutional.

There are plenty of examples in the public schools where children have not only been asked to draw posters of the Five Pillars of Islam, but have been asked to draw pictures of the Prophet Muhammad, sing an Islamic song, asked to wear Islamic clothes, draw “There is no God but Allah and Mohammed is His prophet” in calligraphy, construct a 3-D model of a mosque, design an Islamic prayer rug and even be asked to make an Muslim pamphlet to help third grade students understand and accept Islam.

But the problem of Islam in the schools go well beyond giving students the supposed facts about this religion, or getting them to become evangelists for the religion, because students are also being forced to accept as truth the disputed claims of Islam.

For example: In Union County, North Carolina children were told to write the following statements: “Islam, at heart, is a peaceful religion.” I think that can be disputed. And then there is this one: “Most Muslims have a stronger faith than the average Christian.”

Let me pause right there for a moment.

I don’t need a show of hands on this, but how many of you have seen news stories, or even watched videos, of Christians being lined up by Muslim extremists and then beheaded?

Whose faith is actually stronger in those horrible, wretched examples of Islamic butchery?

In Syria, Muslims burned six Christian men who worked at a bakery after they refused to convert to Islam. And as horrible as that sounds, an image that is absolutely frightful and terrifying, what happened next was worse.

I’ll read you the words of Alice Assaf as she told them to *The New York Post*: “After that, they caught some 250 kids and kneaded them like dough in the bakery dough machine. They were put in the dough mixer. They were kneaded. The oldest one of them was four-years-old.”

Do not tell me that Muslims have a stronger faith than the average Christian. Last year alone, 7,000 Christians were killed for their faith. Some studies have reported even greater number of Christian martyrdom.

What we are witnessing in the world today is not weakness among Christians, which is the most persecuted faith in the world. Instead, we are witnessing Christian strength, courage,



fortitude and faithfulness that is facing a religion that produces gutless cowards who will stab you, run you over with a vehicle, set you on fire, throw acid in your face, mow you down with a gun, blow you up in an airplane or with an airplane, and even feed you into a dough-making machine.

Words are cheap. And to have our Christian, public school students write, “Most Muslims have a stronger faith than the average Christian,” is to force them to engage in a lie, to degrade their own religion and to insult the thousands of Christian martyrs who are now dying every year in defense of their faith.

In LaPlata, Maryland students are told, “Allah is the same god that is worshipped in Christianity and Judaism.” This is wrong and not a fact. And in Revere, Massachusetts, children had to write this answer to the question of what is the First Pillar of Islamic belief. They wrote: “I bear witness that there is no God but Allah.”

When you require students to write, “I bear witness that there is no God but Allah,” this is forcing the students to agree with that statement.

Let’s flip the coin for a moment.

If teachers were educating students about white supremacy, would they dare have students write the white supremacist creed, “We must secure the existence of our people and a future for white children.”

Any teacher attempting to do so would be rightfully fired.

But how is this any different than making Christian students write, “I bear witness that there is no God but Allah.”

I say, there is no difference.

Perhaps the strangest, saddest and most outrageous lie being taught to students also occurred in LaPlata where students had to write that Muslim conquerors treat those whom they conquer with “tolerance, kindness and respect.”

Tell that nonsense to the Yazidis in Iraq who, in 2014, had their homes pillaged, their women raped, their men tortured and killed, and those who were left alive, forced into converting into Islam and made into slaves, or sold as slaves, at the hands of ISIS.

What part of any of this is an act of “tolerance, kindness and respect?”

These Islamic lesson plans, which we are bringing to your attention today, are not about teaching children the facts of Islam. It’s about indoctrination and brainwashing, conversion and proselytizing, lies and propaganda.

Jonathan Gruber, the architect of Obama Care, was confident Congress would pass the Affordable Care Act because he believed in “the stupidity of the American voter.”

But Obama Care didn’t really pass because of the “stupidity of the American voter,” did it?

It passed because of the stupidity of elected officials, highlighted by one of the most stupid political statements ever made by a lawmaker, Nancy Pelosi, who said, “We have to pass it to see what’s in it.”

We are not a stupid people. We are not ignorant. And we are not easily deceived.

And when educators come against our children and grandchildren in an effort to minimize and defame our Judeo-Christian beliefs, supplant our God and Savior with that of Allah and a false prophet, and try to force-feed children into accepting myth as a fact, rest assure parents will not only see it and know it, but they will also show these educators who really does have the stronger faith.

[Click here to watch a video of the event “Islam in the Schools: A National Awakening”](#)

European Muslims perceive the EU more positively than non-Muslim Europeans

Source: <http://www.homelandsecuritynewswire.com/dr20171030-european-muslims-perceive-the-eu-more-positively-than-nonmuslim-europeans>

Oct 30 – **A new study found that Muslims in Europe have a more positive view of the European Union (EU) compared to all other groups of the European population.** “On average, Muslims have a higher level of trust in EU institutions than members of other religious or non-religious groups such as Christians and those unaffiliated with any religion,”



says Prof. Dr. Bernd Schlipphak, political scientist at the Cluster of Excellence. “Of all the groups analyzed from sixteen European countries, Muslims are the only ones who, for example, rate their trust in the European Parliament higher than 5, on a scale from 1 to 10. Currently, there is a lot of discussion about the lack of acceptance of the EU among many sections of the population — yet the majority of the Muslim immigrants from the first and second generation do not belong to this group of critics.” **At the same time, the results are in contrast to EU attitudes of Muslims in Arab countries: “We were able to demonstrate in earlier studies that only a minority of the Arab population has a positive opinion of the EU.”**

WWU Munster [says](#) that according to the new study, one of the most important reasons for the favorable attitudes of the majority of European Muslims is that they are more satisfied with their living situation in the EU than other groups: “Approximately 95 percent of the Muslims interviewed are first or second generation migrants who compare their new living situation with that in their country of origin: they have a higher appreciation for their economic situation, provision of healthcare and the political system in the host country than those who did not immigrate”, explains Prof. Schlipphak. “This satisfaction leads to a higher level of trust in domestic institutions such as the parliament of the host country which, in return, is transferred onto the EU level.” In addition to being satisfied with democracy, economy and health, a higher political interest has a positive effect on trust in EU institutions, according to the study. “Religiosity, in contrast, does not have an influence on attitudes towards the EU, contrary to what we assumed.”?

“Religiosity has no influence on attitudes towards the EU”

“European Muslims do consider themselves to be more religious than other Europeans”, explains political scientist Mujtaba Isani, co-author of the study. “This religiosity, however, has neither a negative nor a positive influence on their trust in political institutions on the domestic and the EU level.” With this study, the researchers also provide a link to the debate that discusses whether the incompatibility of European and Islamic values and religiosity impedes integration. Like religiosity, neither education nor age nor gender have an influence on EU attitudes, as Prof. Schlipphak remarks. “Our study shows: Successful integration leads to higher levels of trust in political institutions on a domestic and European level. Long-term integration efforts are indispensable if we want to keep up the high level of trust among European Muslims in the EU.”

WWU Munster notes that the study is the first systematic empirical analysis of EU attitudes among European Muslims. The researchers evaluated data from the European Social Survey (ESS) from 2002 until 2014; more recent data on the topic of the study is not available. The academics compared the statements of 3,601 European Muslims with those of other religious and non-religious groups. Among the Muslims interviewed, 95 percent immigrated into the EU; 71 percent of these were first generation migrants.



“Second Generation Immigrants More Critical - Strengthen Integration”

According to political scientist Schlipphak, the study reveals social threats for the future:

“The more distant the migration experience, the lower are the levels of satisfaction.” Second generation European Muslim immigrants show less trust in the political institutions of the host country and the EU than first generation European Muslim immigrants. Discrimination is demonstrated to have a negative effect on the EU attitudes: “European Muslims, who feel discriminated against, trust the institutions of the European community to a lesser degree. This is all the more problematic since the feeling of being discriminated against is more widespread among second generation European Muslim immigrants, as shown by our analyses.” Against this background, the political science scholar recommends “to strengthen the integration of European Muslims in the long term and take a look at the problems of the second generation in particular, in order to maintain the current positive attitude of the majority.”

— Read more in Mujtaba Isani et al., “In the European Union we trust: European Muslim attitudes toward the European Union,” [European Union Politics](#) (28 August 2017).



Neuroscience—and the new weapons of the mind

By Robert Bruner and Filippa Lentzos

Source: <https://thebulletin.org/neuroscience%E2%80%94and-new-weapons-mind11229>

Oct 27 – The Netflix series *Stranger Things*, launching its second season today, centers on Eleven, a girl with psychic powers who has escaped a dark and psychologically abusive government program that seeks to harness and weaponize her powers. While *Stranger Things* is a work of science fiction, it is not as far removed from reality as it initially seems.



The series is rooted in a decades-long (but long defunct) CIA research program called MKULTRA, which involved bizarre, top-secret research on how to deliberately produce behaviors and emotions—such as fear, anxiety, or confusion. While MKULTRA is infamous for its attempts to control the mind through hypnosis and paranormal phenomena, its researchers primarily concentrated on the use of pharmaceuticals and mind-bending drugs such as hallucinogenic mushrooms, marijuana, heroin, LSD, and truth serums to make intelligence targets more cooperative in questioning and more willing to act as agents of the United States. Ultimately, the project failed because of a lack of scientific understanding of the inner workings of the brain and how to manipulate it.

But today, neuroscience appears to be breaking down previous technical barriers to the exogenous control of emotion, behavior, and ultimately the mind.

Scientific breakthroughs in the understanding of the biological basis of behavior and cognition have given rise to numerous treatments for neurological and psychiatric disorders. These treatments have

improved the quality of life for many people all over the world. But these technologies have dual-use potential. Psychiatric drugs used to treat anxiety, depression, or mania can force a person to experience those same emotions. These drugs work by returning overactive or underactive neural signaling associated with mental disease to normal levels. The same principles, however, can be used on healthy individuals to manipulate their brain chemistry and change their behavior and emotions. These drugs can be used on individuals as a form of psychological torture—or could be deployed on the battlefield to quickly incapacitate, or change the emotions of, a large group. Additionally, due to growing knowledge of the neural mechanisms active during memory formation, it may become possible to enhance or delete memories—or even, using emerging brain-stimulation techniques, transfer thoughts from one individual to another.

Psychiatric drugs and brain stimulation stand out as neurotechnologies of particular concern. But what are the on-the-ground realities of these technologies—what is the potential for converting clinical uses of behavioral neuroscience to the battlefield? Is it technically possible to alter brain chemistry in order to introduce novel emotions, cause cognitive shifts, and affect behavior?

Yes—but endeavors to biochemically or electrically control the mind for military benefit will likely fail for the same reason that similar attempts under MKULTRA failed: Neuroweapons are extremely difficult to operationalize in practice. Nonetheless, considering the increasingly unstable geopolitical situation and the ambiguous status of neuroweapons under international law, scientists (and the broader international community) must remain vigilant



about neurotechnologies as they become more refined—and as the practical barriers to their malevolent use begin to lower.

Drugs and neuro-bugs

Threat assessments regarding neuroweapons can sometimes seem alarmist, but that does not mean they are without merit. Behavior-altering drugs are readily available; in many cases, they have been rigorously tested and approved for human use. Today, these drugs are more effective and more specific in their action than ever before. Numerous classes of widely available psychiatric drugs are known to induce, as common side effects, behaviors or states of mind—such as confusion, anxiety, or depression—that have traditionally been the goal of many torture programs. They do so without leaving any cuts or bruises. For example, wakefulness-promoting drugs such as modafinil (a drug commonly prescribed for narcolepsy) are known to cause anxiety, nervousness, and confusion. The benzodiazepine class of drugs can generate depression, confusion, and memory loss as side effects of its therapeutic uses. Moreover, selective serotonin reuptake inhibitors, while commonly used to increase serotonin transmission for treatment of depression, have also been [linked](#) with pro-social behaviors and cooperation, which could be useful in an interrogation. Behavior-controlling drugs, then, may be able to replicate the emotions that torturers seek to produce to force cooperation—or they may artificially induce trust and the surrender of information.

Dietary modification also shows increasing promise for the exogenous manipulation of neurotransmitter signaling. Recent research into the effects on brain chemistry of the microbiome—the bacterial flora located in the human gut traditionally thought to aid in digestion—shows significant potential for covert alterations of neurotransmission. Intestinal bacteria play a significant role in immune system response, which may indirectly affect neurotransmitter concentration and subsequently shape behavior. By changing the diet of a person, or mouse, to alter the relative concentrations of gut microbiota, neuroscientists have been able to [produce](#) anxiety and increase and intensify the hormonal stress response in both humans and mice. A guard's complete control over his or her prisoners would therefore make it easy to covertly alter brain chemistry to increase prisoners' amenability to questioning.

If mass-produced, weaponized, and spread further afield, the same drugs that show promise as substitutes for psychological torture could be used as neurochemical weapons that alter the emotions of a nation's armed forces, or that quickly change hearts and minds within a civilian population by influencing the visceral reaction to a military campaign. The most threatening neurochemical weapons—and the most likely to be used—are hypnotic drugs that reduce alertness, sedate, and anaesthetize. Psychedelic drugs, however, which alter cognition, emotion, and behavior, also have potential for battlefield deployment because of their ability to disorient and simulate psychosis. Numerous microbes and toxins that target the nervous system also have potential to affect decisions about whether to fight or surrender and could significantly impede adversarial soldiers. For example, the parasite *Toxoplasma gondii* can cause impulsivity, agitation, and confusion, and the *Gambierdiscus toxicus* bacterium can cause nightmares and a burning sensation.

These technologies, while promising, are not fully formed. The “desirable” effects of these drugs are side effects of a main action and never are fully guaranteed. Additionally, drug dosage and an individual's medical and family history play important roles in the efficacy and final behavioral outcome of neurochemical manipulation. The problems experienced by MKULTRA drug researchers underscore the difficulty of operational deployment. The drugs used by MKULTRA researchers—to inspire trust, elicit truths, change closely held beliefs, or alter memories—had unintended effects that ran contrary to the goals of their use. For example, the truth serums scopolamine and sodium pentothal, as well as LSD, made subjects drowsy and unable to answer questions. Drugged suspects would often spew fiction as well as fact. Often, people interrogated with these drugs would become extremely susceptible to sub-verbal cues from their interrogators, and on realizing they had been drugged, would then harden themselves against the effects of the drug and against future questioning.

Today's drugs face similar challenges. They often involve unintended effects that people experience differently depending on their individual physiology and medical history. There is no such thing as a wonder drug—and just as the clinical treatment of a psychiatric disease



requires a prolonged regimen of trial and error to find a medicine that treats the symptoms of a disorder without producing unacceptable side effects, an interrogator must go through a protracted process to identify a drug that produces usable emotions. These problems are compounded when a drug is to be administered to a large group. An incapacitating neurochemical attack must be disseminated in a manner such that people of varying heights, weights, and medical histories receive the same dose. If a person receives too low a dose, he or she may not experience the desired incapacitating effects of the agent; too high a dose may result in death and limit the nonlethal benefits associated with this weapon class. This dissemination challenge has yet to be overcome.

Of stimulation and spies

Brain stimulation, with its ability to alter the electrical conduction patterns of neurons, is another technology showing increasing potential for military and intelligence applications. There are numerous stimulation approaches—some of which, such as deep brain stimulation, have already been clinically approved for the treatment of Parkinson's disease and depression. Yet the nontherapeutic uses of brain stimulation are becoming increasingly evident. A growing body of research that leverages new stimulation techniques is demonstrating a nascent ability to alter memories, control the body, and communicate ideas directly between brains.

In 2013, a [landmark paper](#) published in *Science* described how researchers used intracranial optical stimulation of hippocampal neurons to introduce a false memory of fear in a mouse. While the clinical applications are limited, this experiment demonstrated that memories could be manipulated by altering the firing patterns of key neurons. Building on this experiment, another group of researchers showed that memories can also be [transferred between animals](#). When researchers recorded the hippocampal firing patterns of a rat learning (and encoding memories of) how to perform a task, and transmitted those patterns to another rat via intracranial stimulation, they found that recipient animals could successfully perform the same task without any training. While these experiments used stimulation probes requiring surgical implantation, the emerging ability to plant memories is reminiscent of brainwashing attempts by the Soviets and Chinese during the Korean War—and presents the possibility of creating a neuroscience-enabled “Manchurian Candidate.”

It is a rather large leap, however, from manipulating the memories of rats to manipulating those of people. How specific memories are encoded in the brain is still poorly understood—and while the memories of animals have been successfully manipulated, the methods used in these experiments are not amenable to use in humans. The tasks that scientists had rats complete so they could observe the processing and storage of memories are not representative of the complex interplay of cognitive processes that contribute to a human memory, nor of how people use memories to form belief and moral systems. It would be extremely challenging to extract from one individual a specific firing pattern associated with a complex memory and transfer it, via electrical recordings, to defectors or potential spies and compel them to act against their own interests.

Of potentially greater impact are emerging stimulation approaches such as transcranial magnetic stimulation and transcranial direct current stimulation, which *noninvasively* alter neural transmission. The enhancement of memories through these two techniques is more plausible than through the more invasive brain stimulation approaches described previously. Several groups have [used the two techniques](#) to enhance short-term working memory and speed of recall. Nations have shown interest in using such techniques to enhance the cognitive capabilities of their forces (though the offensive applications are minimal).

The two techniques also ostensibly provide new approaches to linking brains together in brain-brain networks, which are showing a nascent ability to control the body and influence the mind. In a seminal [brain network experiment](#), electrical activity correlating to motor movements associated with communication (for example, mouth or tongue movements to form syllables and words) was recorded and transmitted directly into the brain of someone on the other side of the world (in this case, the sender was in India and the recipient in France). The senders successfully transmitted words to the recipient without actually speaking. Using the same technology, a group at the University of Washington [demonstrated](#) that a sender can share sensory



information with a recipient to facilitate cooperation in video game play, using a paradigm in which only the sender could see the monitor but the recipient had control of the game. The sender could communicate to the recipient when he or she needed to fire a missile at a fictional alien spaceship invading earth.

The military applications of the brain-brain networks are evident. At a relatively benign level, inter-brain communication might revolutionize command and control—but more malevolent uses of this technology are easily conjured. Brain network researchers suggest that such systems could ultimately result in one-way transmission of emotions and feelings between individuals. The unilateral flow of emotion or ideas would enable manipulation at levels never seen. If a person unwittingly became a recipient in a brain-brain network, planting thoughts would *theoretically* become quite easy.

Regardless of its burgeoning capabilities, brain stimulation is currently limited to the laboratory environment. Brain stimulation experiments involving humans, such as those described above, are by design divorced from the real world and are [not generalizable](#) to operational environments. A multitude of factors—stimulation intensity, duration, location—must be controlled to yield marginal changes in neural stimulation. Stimulation of deep brain regions still requires surgical placement of probes, further complicating military use. Moreover, the extent to which these methods affect unintended regions of the brain is currently unknown, and brain stimulation's long-term effects are likewise unknown. Both these issues could [further complicate](#) military use of brain stimulation. As with pharmaceutical manipulation of brain chemistry, it is neither easy nor currently feasible to use brain stimulation to manipulate and control human beings in a predictable fashion.

Is mind control back in vogue?

Make no mistake, neuroscience *can* be misused to alter emotions or memories, covertly implant ideas, or cause cognitive shifts. However, significant technical challenges remain—again, operationalizing neuroweapons is extremely difficult. Yet while it is unlikely that promises of mind control will be realized by neuroweapons any time soon, it would be naïve to assume that approaches to behavioral control will not become more refined over time. Obstacles to behavioral control also present themselves to psychiatrists treating disease and, as better psychiatric treatments continue to be pursued, barriers to the malignant use of neuroscience will lower. Neuroscience can be weaponized and deployed by actors willing to expend the time, money, and resources necessary.

International humanitarian and armament law represent crucially important components in governing the development and use of neuroweapons. On the surface, these legal standards prohibit neuroweapons. Their strength, however, has been weakened by ambiguities and by the defiance of state actors. For instance, because international bodies had failed to provide guidance about which specific actions constituted torture, the Bush administration was able to argue that its “enhanced interrogations” of Guantánamo Bay prisoners did not meet the severity threshold of pain or mental injury required by international law—and thus could not be considered torture under existing treaties. In the context of state attempts at behavioral control, arguments similar to those of the Bush administration could be used to explain away the use of pharmaceuticals or neurotechnology that malevolently altered the inner workings of the brain. The prohibition of neurochemical weapons under armament law is much stronger, but here too, loopholes and ambiguities exist. Chemical weapons intended for riot control are not prohibited under the Chemical Weapons Convention, for instance; this provides space for states to legally develop incapacitating weapons under the guise of developing a domestic riot control agent, and then rapidly convert neurochemical weapons for use in conflict.

Another challenge to the governance framework is the possibility that, as the technologies described here become more developed, perceptions of their utility may shift—just as barriers to the development and use of biological weapons are [decreasing](#). For example, some observers [argue](#) that not only are drugs permissible if (by simulating a state of euphoria and positive emotions) they make a person talk, but that they are a morally superior substitute for torture and “enhanced interrogation.” The allure of behavioral-control capability could change nations’ existing sociopolitical calculations about the utility of neuroscience-based weapons and drive further military and intelligence development of neuroweapons. Troublingly, these shifting perceptions—



matched with increasing geopolitical turbulence and a shift away from state-centric conflict—could make behavioral control seem ever more tempting.

An increasingly multipolar world is emerging—one in which rising powers view human rights, justice, transparency, and the use of force differently. Therefore, challenges to humanitarian and armament law will only increase. To monitor the conversion of behavioral neuroscience from benign medical treatments into malignant weapons, and to shape how neuroweapons may be perceived and used, the international community must attach the utmost importance to strengthening the normative and legal framework that is embodied in multilateral treaties and national laws and regulations. The medical standards that doctors and scientists are obliged to uphold, as well as codes of practice and research ethics, must also be strengthened in view of the potential misuse of behavioral neuroscience. The containment of neuroweapons relies on the strength of norms—from the top down and from the bottom up—against the use of torture, unconventional weapons, and the militant use of neuroscience. Both scientists and the international community must remain vigilant about preventing behavioral neuroscience from leaking into the security realm.

Robert Bruner is based in the Department of War Studies at King's College London and is interested in the science and security of emerging dual-use technology and military innovation. Filippa Lentzos is a senior research fellow at King's College London, jointly appointed in the Department of War Studies and the Department of Global Health and Social Medicine. Her research focuses on biological threat assessments and on the security and governance of emerging technologies in the life sciences.

Cost of ignoring Afghanistan's ground realities

Source: <https://tribune.com.pk/story/1550076/6-cost-ignoring-afghanistans-ground-realities/>

Nov 06 – The scene is frightening in Afghanistan. There is an exponential increase in the number of deadly attacks on the police, Army personnel and civilians. Not only that the remnants of Islamic State (IS) have targeted mosques in both the capital and in Ghor province. Training centres, police headquarters and convoys have also been attacked all over the country. Casualties have mounted.

The bloodbath has caused consternation and anger forcing former president Hamid Karzai to demand the immediate convening of a Loya Jirga or a grand national assembly to take stock of the worsening security situation and take vital decisions on how to deal with the enormous challenge the country is confronting. As grim as the situation is, it is sadly not evoking any vigorous or constructive response from all the major stakeholders. The Afghan government, ensconced in Kabul and sustained by massive infusion of external funding, is desperately seeking to protect the status quo of which they are the principal beneficiaries.

Reconciliation, as long as it does not impinge on the rulers' positions, perks and powers is welcome.

The regime would support the mainstreaming of Taliban only if the movement would agree to be assimilated in the 'systems' that are currently in vogue in the country. In other words, surrender.

The US approach is even more complex and paranoid. It is not prepared to lay down goals that are sought to be achieved. Washington is not revealing its overarching objectives in a regional perspective that it is seeking to promote. Whether the US is prepared to withdraw its forces once reconciliation is reached between the Taliban and Kabul, is not clear. Doubts persist in the absence of a clear strategy. **Many believe the Americans are in Afghanistan for a long haul to achieve the following objectives: keep a menacing eye on Pakistan's nuclear development programme; not cede space to China for establishing its hegemony in the region; establish its relevance in the context of the One Belt, One Road project of China; and derive some benefit from exploitation of Afghanistan's vast mineral reserves that are estimated in value at \$1.5 trillion.**

There are reports of the US covertly encouraging and supporting the rise of IS in Afghanistan as a counterweight to Taliban, and also to keep the pot boiling so that the military presence is seen as necessary and justified. The other goal is to weaken the Taliban by making them fight on multiple fronts.



Pakistan does not seem to have any clear policy on how best to bring about reconciliation between the Taliban and the Afghan government, which would also take care of the US concerns in the area. It has oscillated between positions of collaboration with the US to seeking convergence with Kabul on some issues that, unfortunately, ignore the objective realities.

Other than persuading some Taliban representatives (those few that Islamabad has some leverage with) to come to the negotiating table, there is no clear vision on how could a workable framework be created for resolving the conflict. The problem with all three stakeholders is that they are ignoring the ground realities in Afghanistan. Any attempt to help resolve the conflict can only succeed when it is premised on addressing the root cause of the insurgency. Peripheral measures or treating the symptoms while the fundamental cause that has brought the country to this state, would not deliver.

Contacts between Islamabad, Washington and Kabul are welcome but the problem would not go away by undertaking visits and issuing conciliatory statements. As the insurgency gains further deadly momentum, Afghans across the country are worried, angry and terribly frustrated. Hundreds of thousands have left the country — some offering themselves for recruitment in Iranian militias to fight in Syria. Unemployment has surged, drug addiction is alarming and soldiers deserting the army are a lingering headache.

No step towards normalisation would work unless the root cause, ie, the issue of the presence of foreign forces is addressed. That can only happen if the following conditions are met:

- 1) The Taliban convert their movement into a political organisation with a clear manifesto that cuts across the ethnic and sectarian divide in the country.
- 2) Kabul must not insist on mainstreaming the resistance on its own terms; the regime has to be willing to make compromises that include giving up positions of authority, which is not going to happen anytime soon.
- 3) The US has to be unequivocal on its position with regard to the withdrawal of all its forces after a consensus has been reached and an accord signed between the Taliban and the government.
- 4) Pakistan must begin to vigorously pursue the reconciliation efforts that would address the root cause, namely the eventual withdrawal of foreign forces within a stipulated period of time following an agreement between the Taliban and other pro-government forces.
- 5) China's role as a mediator must be acknowledged and respected. The Taliban would rely more on Chinese mediation realising that Beijing would not be pressured by the US.

There are no prospects for any breakthrough in the foreseeable future because none of the stakeholders are ready to confront the ground realities. The stalemate, death, destruction and the accompanying suffering and misery will, regrettably, continue. A destabilised Afghanistan will have profound implications for the Turkmenistan-Afghanistan-Pakistan-India pipeline project, Casa 1000, CPEC and many other regional programmes for socioeconomic emancipation for millions of downtrodden people of the region. The stakes are high. But peace is being obstructed by the Kabul regime's concerns for its inclusion and survival and the US's preoccupation with its regional, hegemonic agenda.

The writer is former interior secretary and former chief secretary K-P

Is gun violence contagious? The answer is mostly “no”

Source: <http://www.homelandsecuritynewswire.com/dr20171106-is-gun-violence-contagious-the-answer-is-mostly-no>

Nov 06 – **Is gun violence contagious? According to new findings from the University of Pennsylvania and the University of Oxford, the answer is mostly no. Rather, this violence is a chronic issue for particular neighborhoods and requires place-specific solutions.**

“It's been known for some time that gun violence, like many other forms of crime and other social problems, can be clustered within certain neighborhoods,” says Charles Loeffler, the Jerry Lee Assistant Professor of Criminology in the University of Pennsylvania's School of Arts & Sciences. “So when we observe that a particular part of the city has an elevated risk, how do we understand what that phenomenon actually is?”



Loeffler and Oxford statistician Seth Flaxman, who published their findings in the [Journal of Quantitative Criminology](#), turned to data from Washington, D.C., firearm-related 9-1-1 calls and acoustical sensors around the city that listen for and record the latitude and longitude of every shot fired.

University of Pennsylvania [says](#) that the researchers, starting from the baseline that gun violence does not occur randomly, ran the numbers for two hypotheses. First, they asked whether such behavior could be an epidemic, something that spreads quickly and diffuses into the surrounding environment. One incident begets the next, such as a victim retaliating against a former perpetrator.

"The alternative hypothesis," Loeffler says, "is that you have clustering of gun violence in certain neighborhoods at certain times, but it may not actually be spreading in any real sense." The researchers call this an endemic pattern.

As an example, consider an encounter in a bar: Two individuals bump into each other. One takes offense at being accidentally shoved and pulls out or quickly gains access to a gun. The same scenario might happen during a drug deal, where one party feels slighted by another. In either case, the resulting action is not retaliation, but rather an aggressive response to a commonly reoccurring stimulus.

"It may not last more than a couple minutes and may not lead to further acts of violence," Loeffler says. "It could be self-extinguishing."

For Washington, D.C., the data were compelling.

"We found that a substantial fraction of the gun violence was better characterized as this endemic, non-random clustering rather than as an epidemic, contagious, diffusing process," he says.

Effective use of this information requires implementing problem-solving tactics with a better chance for success, place-based interventions that target features of a neighborhood rather than those aimed at individuals or groups, the researchers say. For instance, the greening of vacant lots or hotspot policing that puts resources toward watching crime clusters rather than toward a generic patrol.

Right now, the researchers don't know whether the results hold up for other locales, but say they plan to find out.

"It's possible to use the statistical test that we demonstrated here to understand the nature of these two hypotheses in different cities," Loeffler says. "The reality of D.C. may be different than the nature of gun-violence problems in Chicago or Los Angeles or Philadelphia."

— Read more in Charles Loeffler and Seth Flaxman, "Is Gun Violence Contagious? A Spatiotemporal Test," [Journal of Quantitative Criminology](#) (11 August 2017): 1-19.

Severity of firearm injuries increased over the past 20 years

Source: <http://www.homelandsecuritynewswire.com/dr20171106-severity-of-firearm-injuries-increased-over-the-past-20-years>

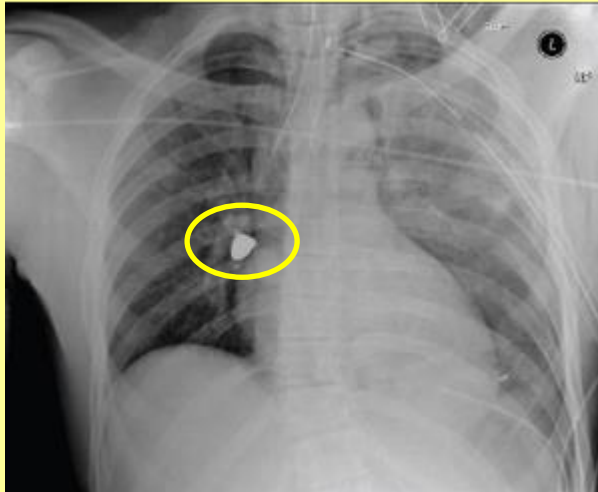
Nov 06 – New research presented today at [APHA's 2017 Annual Meeting and Expo](#) revealed that the severity of firearm injuries has increased over the past twenty years, among those hospitalized for their injuries. Researchers from Boston University School of Medicine noted that their findings have broad implications for public health beyond increased suffering on the individual level.

The study used hospitalization data from forty-four states between 1993 and 2013 to measure trends in firearm injury. Data showed firearm injury severity increased each year, and was driven by a large increase in serious open fractures and a decline in minor injuries.

The APHA [says](#) that researchers found that young adults showed a particularly large increase in serious open injuries. They also saw a large decline in minor firearm injuries in this age group. The study concluded that young adults, in particular, bear a greater burden of increasingly severe gunshot wounds. Data from this study also showed that this trend is true for both injuries from firearm assault and from unintentional injury. Both categories of firearm injury showed a decreasing number of minor injuries and an increasing number of serious open fractures. The study also showed that injuries from suicide attempts with a firearm increased in severity.

[Projectile seated in chest \(left\)](#)





Projectile seated in chest (left)

“The combination of increasing severity of gun injuries and better medical care that results in more gun injury survivors indicates a growing burden on the health care system. The acute medical care that allows people with gun injuries to survive does not mean that they have completely recovered,” said Yi Zuo, MPH, study author and statistical data analyst at the Center for Clinical Translational Epidemiology and Comparative Effectiveness Research at Boston University School of Medicine.

“The majority of patients with gun injuries will live compromised lives with repeated emergency and hospitalization visits, psychological problems and social challenges. Simply put, our study demonstrates not only the additional public health burden due to non-fatal gun injuries, but also the direct burden of continued and multiple challenges to the individual.”



7yo sneaks past Swiss airport security & boards plane without ticket

Source: <https://www.rt.com/news/408465-child-sneaks-plane-geneva/>



Nov 01 – A seven-year-old girl boarded a plane on her own after breezing through security without a ticket at Geneva Airport. Prior to that, the little runaway had travelled solo on a train to her destination.

The child apparently got lost near Geneva’s central railway station on Sunday. Her parents immediately called the police, but the girl had already set off on her adventure without attracting the attention of adult commuters.

She boarded a train to get to the airport, where she made two attempts to board a plane. At first, she was turned back as she tried to follow the flight crew and ran away when she was spotted, pretending to re-join her parents, according to a [statement](#) by airport spokesperson Bertrand Staempfli.

At the second attempt, the girl managed to board the aircraft by slipping through a passage “only accessible to a child of that size” and took her place on the plane without being noticed,



the spokesperson said. The seven-year old was spotted at the last moment by a staff member, as her route had been tracked by airport security on CCTV cameras.

The aircraft that the little girl had boarded was reportedly an EasyJet flight destined for Ajaccio in France. Local media [reports](#) that the child has autism have not been confirmed.

The airport spokesperson called the incident an “unprecedented event” and said that measures have been implemented to avoid such incidents in future. *“We must acknowledge that the current system is efficient for adults and accompanied children but that it must take better account of the weaknesses that could let a child slip through, as this unprecedented and regrettable incident has shown,”* Staempfli stated.

EDITOR’ COMMENT: You might say that it happens to the best families but IRA spokesman said after trying to kill late Margaret Thatcher: “You have to be luck all the times; we have to be lucky only ONCE!”

The Pro-Islamic West: Born 500 Years Ago

By Raymond Ibrahim

Source: <http://www.meforum.org/6995/the-pro-islamic-west-born-500-years-ago>

Nov 01 – Five-hundred years ago yesterday, on October 31, 1517, a Catholic monk named Martin Luther nailed his 95 theses to the door of a German church, thereby launching what would come to be known as the Protestant Reformation. Whatever else can be said of him, Luther unwittingly initiated something else that is often overlooked. “The Reformation produced one logical if unexpected result,” explains European

historian Franco Cardini: “a definite boost to the positive evaluation of Islam, and therefore to the birth and development of an often conventional and mannered pro-Islamic stance” in the West.



[The Middle East, as known to Europe during the Reformation](#)

Thus, although Luther maintained the traditional Christian view of Islam—denouncing the Koran as a “cursed, shameful, desperate” book filled with “dreadful abominations”—he condemned the concept of crusading, which had been essential

for the survival of some European Christians, such as those of Spain: since its conquest by Islam in the eighth century, the Iberian Peninsula had faced wave after wave of Islamic incursions emanating from North Africa (especially at the hands of the Almoravids and the Almohads, whose jihadi zeal and barbarous means far surpassed anything ISIS can come up with).

Nor was Luther merely against crusading “over there” (e.g., to liberate the Holy Sepulchre in Jerusalem, etc.). In 1517, the same year that he nailed his theses, history’s greatest jihadi empire—that of the Ottoman Turks—absorbed the vast domains of the Mameluke sultanate in the Middle East and North Africa and, having already conquered much of the Balkans, prepared to renew the jihad into the heart of Europe.

Against this, Luther originally preached passivity—going so far as [to say](#) that, although the Muslim sultan “rages most intensely by murdering Christians in the body ... he, after all, does nothing by this but fill heaven with saints.” When the Turks marched to and besieged the walls of Vienna in 1529, rebellious Lutheran soldiers were heard to cry out that the “Unbaptized Turk” (meaning the sultan) was preferable to the “Baptized Turk.”



By portraying the Catholic pope as an 'Antichrist' figure worse than the Turkish sultan—an office held by Muslim leaders who had been responsible for the slaughter and enslavement of hundreds of thousands of Christians in the name of jihad—men such as Luther and John Calvin, who held that Islamic prophet Muhammad and the Pope were "[the two horns of Antichrist](#)," ushered in a sort of relativism that prevails to this day in the West; one which instinctively cites (often distorted) episodes from Catholic history to relativize and minimize ongoing Muslim atrocities.

To be sure, the Catholic Church responded with its own invective "and frequently tried to discredit Protestant doctrine by likening it to Islam—Muhammad was an early Protestant and the Protestants were latter day Saracens," explains Bernard Lewis. Cardini elaborates:

The Reformation generated more vehement and coherent arguments between Christians, the ultimate effect of which was to favor the Muslims. It became customary amongst Catholics and Protestants for each to censure the "vices" of the other's religion and to emphasize that the infidel [Muslims] exemplified the corresponding "virtue," which naturally would have been much better suited to the Christians.... In fact, the arguments between Catholics and Protestants frequently led to a competition as to which of the two could hurt the adversary more by heaping praise upon the infidel.

All the while, Muslims sat back and laughed—to the exasperation of sensible men such as Erasmus: "While we have been endlessly fighting among ourselves," argued the Renaissance humanist, "the Turks have vastly extended their empire or, rather, their reign of terror." Incidentally, of "Luther's contention that those who make war on the Turks rebel against God, who is punishing our sins [Catholicism] through



them [the Muslims]," Erasmus countered that "if it is not lawful to resist the Turks, because God is punishing the sins of his people through them, it is no more lawful to call in a doctor during illness, because God also sends diseases to purge his people of their sins."

John Sigismund of Hungary, paying homage to Suleiman the Magnificent

Be that as it may, what began with Luther was bequeathed to subsequent Protestant

leaders. This was only expected; as the early Protestants and Muslims had the same common enemy—Catholic Christendom, particularly in the guise of the Holy Roman Empire—the principle that "the enemy of my enemy is my friend" came into dramatic play. By 1535, "It was one of the bitterest truths," writes historian Roger Crowley, "that the Catholic King [Charles V] would spend more time, money, and energy fighting the French and the Protestants than he ever devoted to the war with [Sultan] Suleiman" (Little wonder many Islamic conquests of European territory occurred under the "Magnificent One's" reign.)

Similarly, Queen Elizabeth I of England made common cause with the Muslim Barbary pirates—who eventually enslaved some 1.3 million Europeans, including not a few from Ireland and Iceland—against Catholic Spain, prompting that nation's papal nuncio to lament that "there is no evil that is not devised by that woman, who, it is perfectly plain, succored Mulocco [Abd al-Malek] with arms, and especially with artillery."

In 1683, when the Turks came again for Vienna—enslaving and eventually slaughtering some 30,000 Christians in the process—their chief non-Muslim allies were two Protestant



counts: the Lutheran Hungarian, Imre Thokoly, and the Calvinist Transylvanian, Prince Apafi. In fact, the Muslim pretext for marching onto Vienna was to provide military aid to Thokoly, who was then in rebellion against the Austrian Empire. Telling fellow Muslim commanders that "they ought to take advantage of the disorders of the Christians by the siege of the place [Vienna], the conquest of which would assure that of all Hungary, and open 'em a passage to the greatest victories," Grand Vizier Kara Mustafa mobilized arguably the largest Muslim army ever to invade Europe. Before setting off to the relief of Vienna, and cognizant of Thokoly's mischievous role, the Polish king, John Sobieski, wrote to the latter "that if he burnt one straw in the territories of his allies, or in his own, he would go and burn him and all his family in his house."



Princes Imre Thokoly (left) and Michael Apafi supported the Ottoman siege of Vienna

That the Protestant Reformation unwittingly benefited Islam should not be interpreted as an attack

on the Reformation or a defense of Catholicism. Nor does it say anything about the theological merits, or *truths*, of either. (I am, for the record, neither Protestant nor Catholic, and don't have a horse in the race, as it were.) Rather, the point here is that the actions of *fallible men*, of both religious persuasions, had unforeseen consequences. And, if the historic rifts within Christendom—beginning at Chalcedon in 451, when Orthodoxy (not Catholicism or Protestantism) broke apart—always worked to Islam's advantage, it should come as no surprise that the greatest of all Christian Sunderings also had the greatest impact.

In short, "The Reformation produced one logical if unexpected result: a definite boost to the positive evaluation of Islam, and therefore to the birth and development of an often conventional and mannered pro-Islamic stance." This "mannered" and "pro-Islamic stance" persists and continues to haunt the West to this day. After all, it's not for nothing that naïve and favorable views of Islam—to say nothing of passive responses to Muslim aggression and an all-consuming fear of being seen as "crusading" against Islam—are especially ingrained in and compromise the security of historically Protestant nations, including the U.K., Scandinavia, Germany, Australia, and the U.S.

Of course, that these views have less to do with anything *intrinsic* to Protestant theology and more to do with a number of historic forces that have culminated into a sort of uncritical or mindless tolerance for anything and everything in the West—including unabashed Islamic terrorism—is evident in one ironic fact: today it is the Catholic pope—a role traditionally filled by Islam's greatest and most vociferous opponents—who exhibits an unparalleled determination to [empower Muslims and whitewash the image of Islam](#).

Raymond Ibrahim is a Judith Friedman Rosen Fellow at the Middle East Forum.

Qatar aims to host safe World Cup

Source: <http://www.gulf-times.com/story/570283/Qatar-aims-to-host-safe-World-Cup-al-Dosari>

Nov 02 – Falah al-Dosari, general director of Project Stadia at Interpol, has stressed that State of Qatar aims to organise a unique World Cup edition while leaving a lasting legacy for law enforcement agencies all over the world.

Speaking during the opening session of the first Major Event Safety and Security Conference, al-Dosari said that Interpol is working with Qatar to provide the best policing



practices and arrangements for the 2022 FIFA Qatar so as to leave a lasting legacy for world law enforcement agencies.

Qatar is keen to show the 2022 World Cup in the best possible image, he said, noting that the showpiece is a unique opportunity for the country to showcase its abilities at the international stage.



He stressed the close co-operation between Qatar and Interpol, highlighting Qatar's hosting of the Interpol general assembly in 2010, indicating the importance of this co-operation in the

framework of Qatar's preparations for the 2022 World Cup.

Al-Dosari noted that this partnership with Qatar aims to develop capabilities in order to support Interpol's 192 member states in hosting major sports events, adding that this partnership resulted in the establishment of Project Stadia in 2012. "Project Stadia has achieved a lot since it started, including collecting data from major sporting events around the world to be available to all member states to benefit from then when organising major sporting



events," he said, adding that the project has received considerable support from Brazil and learned from its experience in organising the 2014 World Cup and the 2016 Olympic Games in Rio de Janeiro.

He also noted that Qatar had the opportunity to review the security arrangements for events in Qatar when it hosted the 2015 World Handball Championships.

Al-Dosari said that security challenges that accompany major events such as the World Cup are various and diverse, including cybersecurity, organised and emerging crime, and terrorism, adding that the international community must address these challenges in order to ensure the safety and security of all participants in the events.



These challenges, he added, can be devastating for many countries and constitute a major obstacle to hosting major events because of the costs of security and the expenses that host countries shoulder. He stressed that Interpol always stands with countries that have ambitions to host major events in order to help them overcome challenges.

Drones Dropping Drugs, Contraband Into NorCal Prisons

Source: <http://sanfrancisco.cbslocal.com/2017/11/07/drones-dropping-drugs-contraband-into-norcal-prisons/>

Nov 07 – Drones are becoming a growing concern among jail guards in Northern California. That's because people may try to use them to smuggle in drugs.

Right now there's no law banning drones flying over prisons, but Santa Clara County is worried about them making drug deliveries at the Elmwood Correctional Facility in Milpitas.

Jail guards figured drones have been delivering contraband at the sprawling 62-acre complex for some time but they did not have proof until now.

A month ago a small drone crashed inside the jail perimeter. Investigators said they found a package of meth on board.



Santa Clara County Supervisor Cindy Chavez learned about the drug drop on a recent tour and now wants the county to look into banning drone flights over the jail. She says she's not anti-drone.

"No," she laughs. "I'm anti methamphetamines being dropped into our jail. And I'm anti having knives and other weapons dropped into our jail."

KPIX 5 wanted to see just how easy it is to pull off something like that and found it is easy to modify a drone for contraband deliveries.

After watching a few YouTube videos and gathering up some basic materials, it took KPIX less than 10 minutes to prep some fake contraband for flight.

In no time the package was mounted

onto Skydrone 5 and was flying at an altitude of 400 feet above the ground, going 20 mph.

Some models can be controlled from miles away.

Chaves doesn't think an ordinance is will stop somebody who really wants to get drugs into the jail.

"I do not, but I do think that we can have procedures for addressing that, and that's what we're going to be asking the staff to take a look at," she said.

Mickey Osterreicher with National Press Photographer's Association is one of the country's leading authorities on drone laws. He says the FAA's federal laws preempt any local ordinances.

However, any ban that Santa Clara County passes would likely stand, until someone challenged it in court. Osterreicher says the county could always modify an existing law, instead of writing one from scratch.

"I think if they look at whatever law they have against bringing contraband into a prison, I think they could probably modify those regulations somewhat, rather than create a technology specific one that specifically talks about the use of drones," he says.





Yemen 2017... shame on us ... ALL!



How Often Should You Do a Risk Analysis? More Often Than You Think

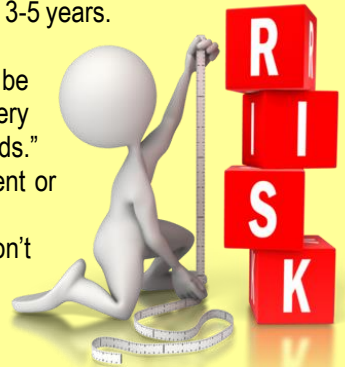
By Daniel Young

Source: <http://www.circadianrisk.com/2017/11/02/how-often-should-you-do-a-risk-analysis-more-often-than-you-think/>

Nov 02 – After more than a decade in security consulting, I've come to realize that most companies are doing risk assessments all wrong. Chances are, your clients are hiring you only once every 3-5 years. And chances are, you're okay with it.

Some regulations, like the [NSW Regulations 2001](#), state that risk assessments should be done every five years. The [Health and Safety Executive](#) recommends assessing risk "every time there are new machines, substances and procedures, which could lead to new hazards." That assumes risk is pretty static. But risk isn't static, and it doesn't take new equipment or policies for risk to change—it changes daily.

If your clients are waiting years between risk assessments, they're taking on risks they don't know about.



How Often?

When it comes to risk, 3-5 years is a lifetime. The whole world can change in just a couple years. For example:

- ◆ Presidential administrations can come and go every four years.
- ◆ Game-changing technologies can embed themselves into the culture in just a couple years.
- ◆ Hurricanes can destroy an entire region over the course of two or three months.
- ◆ The economy can go from boom to bust in just weeks.
- ◆ A restaurant can burn down due to a greasy vent in one day.

Each of those scenarios could impact a company's risk. And thousands of scenarios are playing out every day. So it doesn't take long for your client's risk profile to change, and change dramatically.

How often do your clients need a risk assessment, then? Every two years? Annually? More often than that? Yes.

At Circadian Risk, we recommend that many companies analyze their risk on a weekly basis. Here's why.

Aren't Weekly Risk Assessments Overkill?

Risk isn't static. It changes daily. A packed concert on Friday night carries higher risk than an empty arena eight hours earlier. Or think of all the dramatic fluctuations that occur over just three days every Thanksgiving—congested highways, empty workplaces, crowded shopping centers, and more.

Risk also changes every time a significant event happens in an organization's life. A single layoff can boost the chances that you'll have a violent incident the next day.

Since risk changes daily, a risk analysis can quickly go out of date. But weekly assessments can help your clients make important manageable adjustments as risk changes.

Does every organization need a weekly risk assessment? Probably not. But the closer your clients can get to weekly assessments, the better.

So who needs it weekly, then? Your risk analysis will tell you. That sounds like a paradox (or maybe a copout), but it's actually a great place to start. If your risk assessment is affected by constantly changing conditions, you should do more assessments, more often. Also, organizations that fit either of these profiles should be doing weekly assessments:

- Large corporations that frequently have a lot of visitors onsite
- Organizations with a constant potential for threats because of the work they do





How to Do Weekly Risk Assessments

In an ideal scenario, your client will have a designated staff person monitoring safety full-time. This person is responsible for understanding risk, and they can work with you to continually perform assessments and make corrective actions. Hospitals often have a safety officer who can do inspections every week. In some companies, such as restaurant chains, you might have managers that do weekly inspections. But even if there isn't a full-time safety officer, you can make it easier on your clients by recommending some basic process and strategy changes. Start with these:

- ◆ **Break it down by department.** Spread weekly assessments out across departments, so that each department is doing a risk analysis only twice per year. This makes it easy for departments to correct items within six months, and the organization itself is staying on top of risk weekly.
- ◆ **Train security guards to do assessments.** There's no reason they can't check doors, eyewash stations, and other items while they're on their daily rounds.
- ◆ **Assign manageable tasks.** Bite-size corrective actions make it easy to tackle a long list of issues without getting overwhelmed. Give them specific, defined tasks that are easy to understand. List the problem, the recommendation, who's responsible for it, and a due date. Prioritize each corrective action. When they see how much they can accomplish, your clients will be more open to regular assessments.
- ◆ **Use visualizations.** [Pictures provide an emotional context](#) for each item or incident. In early 2018, Circadian Risk software will add floor plan visualizations to show all of your client's problems in a single picture. When your clients see all of the red dots on their floor plans, they'll say, "Wow, we have a lot more problems than I thought." It's a powerful driver to invest into recurring assessments.

Right now, weekly assessments may be expensive for many companies. But as technology continues to change, you'll be able to easily do things on a weekly basis that you've never been able to do before. And at a very low cost to your clients.

That's where Circadian Risk is taking the risk assessment industry.

The Tool That Makes Weekly Assessments Possible

Circadian Risk is your go-to partner for comprehensive and actionable risk assessments. Our software makes it easy to do weekly risk assessments. The mobile app generates automatic reports from the data you capture during your inspection. There's virtually no writing to do, and you can [cut your report time by 80%](#).

It's the only solution that lets you:

- Create effective, comprehensive reports in record time
- Tag every vulnerability, risk, and compliance issue on the premises
- Track and assign improvements with a detailed corrective action plan
- Analyze risk over time



Daniel Young is the Founder and CEO at Circadian Risk Inc. He was a Regional Bioterrorism Coordinator, Security Account Manager, and has been a security and risk expert for over 10 years.

The ultra-lethal drones of the future

Source: <http://nypost.com/2014/05/17/evolution-of-the-drone/>

Why Would Muslims Be in a Christmas Ad?

Source: <https://clarionproject.org/muslims-christmas-ad/>



A frame from Tesco's 2017 Christmas ad (Photo: video screenshot)

Nov 13 – **A Christmas ad for a large supermarket chain in the UK that includes a Muslim family garnered strong reactions in the country.**

The ad follows a diverse cross section of Brits – from same sex couples to Muslims — preparing for the holiday by cooking a turkey and opening bon-bons. The scene in question features Muslim women in hijabs greeting each other with gifts as they arrive at someone's house for a celebration.

Supermarket giant Tesco who put out the ad responded by saying said it was meant to show how people “come together at Christmas...Everyone is welcome at Tesco this Christmas and we're proud to celebrate the many ways our customers come together over the festive season.”

The Twitter-sphere [#EveryonesWelcome](#) abounded with reactions to the ad ranging from support, incredulity, anger and bigotry – including quite a few complaints that if “everyone's welcome” at Tesco, they should provide a [halal](#) turkey option!

Speaking on his LBC radio show, anti-extremist Muslim activist Maajid Nawaz [had harsh criticism](#) for the complaints he deemed bigoted.

“Your real agenda here is you just want a white, nativist, non-Muslim Britain. You want to hark back to that nostalgic sense you have of a country before immigration,” he said. “That's the only conclusion I can come to because you're not happy either way. If Muslims refuse to integrate, you complain. If Muslims integrate, you complain. That tells me there's an ax to grind and you're grinding it.”



Nawaz explained (as did other Twitter responders) that his Muslim family (including his father who “prayed five times a day”) celebrated Christmas every year, complete with a tree and presents. He described how, as a child, the day was one his “best moments of the year” and how his “integrated family” taught him to celebrate Christmas.

“Just think of one thing. What would Jesus do in this situation? Would he ban people from celebrating Christmas with him?” Nawaz asked.

“The only conclusion I can come to is that this is driven, and fueled, by a rising anti-Muslim sentiment that wants no Muslim presence in this country and will take any opportunity to decry and bemoan a semblance of a Muslim presence in this country,” he continued.

The tweets he was railing against included sentiments such as:

- “Everyone’s welcome at Tesco except Christians’ Yet ANOTHER ‘politically correct’ Christmas advert. How about just 1 bloody time you PANDER TO THE MAJORITY.”
- “Dear Tesco. Poxy Muslim appeasement on your advert.”
- “@Tesco why is there Muslims in your new Christmas advert? A Christian holiday.”
- “I’m so offended by @Tesco Christmas advert showing contempt for Christianity I’m no longer shopping there. I’m cutting up my points card too!”

A quick survey of the ad by this author got diverse reactions, including:

- “Wouldn’t true Christians *want* others to celebrate Christmas?”
- “As a non-Christian, I’m offended by the ad. Seems like proselytizing. Why is Tesco assuming that everyone celebrates Christmas?”
- “Does *everything* have to be so PC?”
- “Muslims celebrate Christmas? I’m confused. I thought they were forbidden from [even saying](#) ‘Merry Christmas’ to Christians.”

The famous British humor

School Assignment: Write to Your Family Saying You’ve Converted to Islam

Source: <https://clarionproject.org/school-assignment-write-family-saying-youve-converted-islam/>

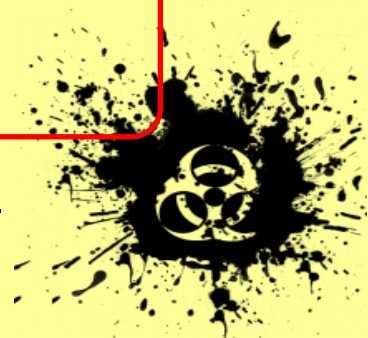
Convert to Islam Homework – Poll Result and Your Comments

Source: <https://clarionproject.org/convert-islam-homework-poll-result-comments/>

Results

- 1.1% Allow them to complete the assignment
- 2.6% Allow them to complete the assignment but explain to your child why it is problematic
- 10.7% Complain to the head teacher about the assignment
- 14.2% Prevent your child from completing the assignment and write a quick note to their teacher explaining why
- 29.6% Remove your child from the school
- **41.8%** Speak with other parents and create a unified protest against the teacher/curriculum

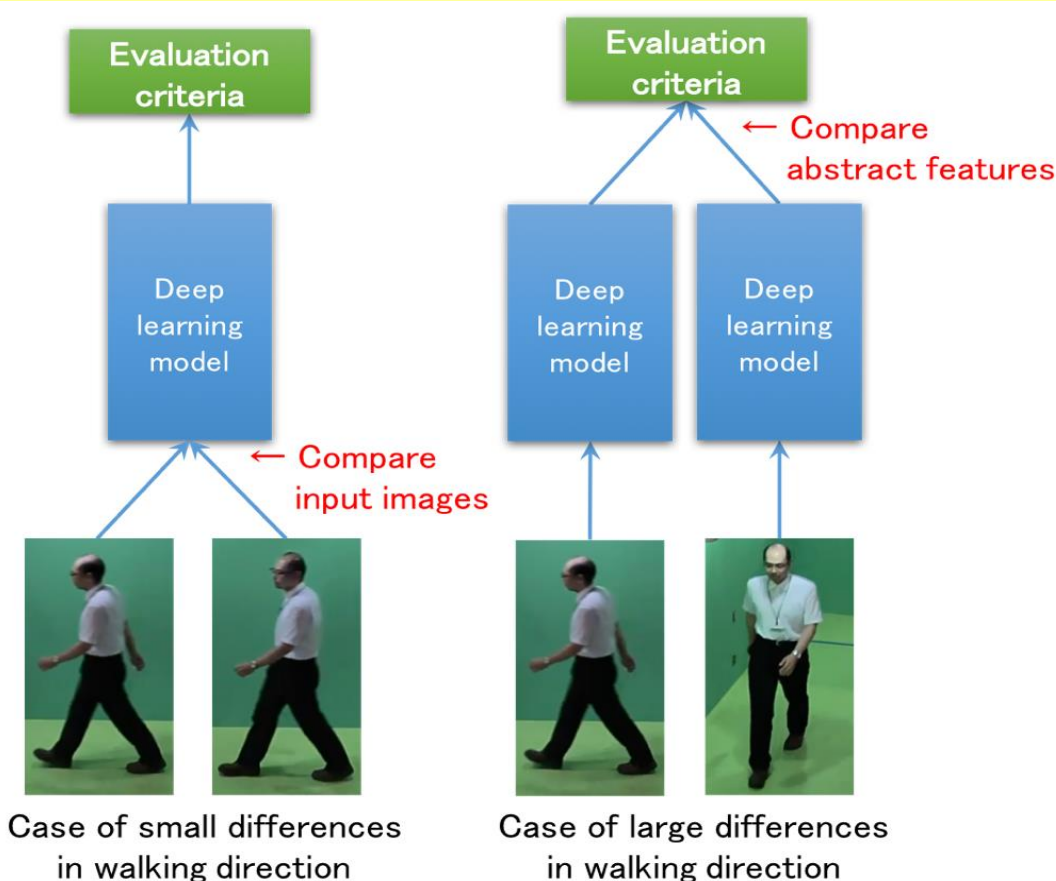
►► Read more at source’s URL.



A better way to identify gait differences

Source: <http://www.homelandsecuritynewswire.com/dr20171110-a-better-way-to-identify-gait-differences>

Nov 10 – Biometric-based person recognition methods have been extensively explored for various applications, such as access control, surveillance, and forensics. Biometric verification involves any means by which a person can be uniquely identified through biological traits such as facial features, fingerprints, hand geometry, and gait, which is a person's manner of walking.



Gait is a practical trait for video-based surveillance and forensics because it can be captured at a distance on video. In fact, gait recognition has been already used in practical cases in criminal investigations.

However, gait recognition is susceptible to intra-subject variations, such as view angle, clothing, walking speed, shoes, and carrying status. Such hindering factors have prompted many researchers to explore new approaches with regard to these variations.

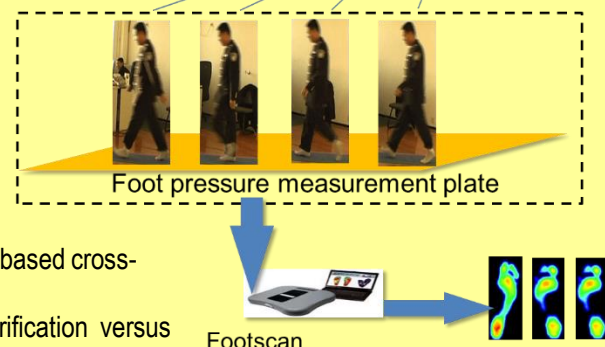
Osaka-u says that



research harnessing the capabilities of deep learning frameworks to improve gait recognition methods has been geared to convolutional neural network (CNN) frameworks, which take into account computer vision, pattern recognition, and biometrics. A convolutional signal means combining any two of these signals to form a third that provides more information.

An advantage of a CNN-based approach is that network architectures can easily be designed for better performance by changing inputs, outputs, and loss functions. Nevertheless, a team of Osaka University-centered researchers noticed that existing CNN-based cross-view gait recognition fails to address two important aspects.

"Current CNN-based approaches are missing the aspects on verification versus identification, and the trade-off between spatial displacement, that is, when the subject moves from one location to another," study lead author Noriko Takemura explains. Considering these two aspects, the researchers designed input/output architectures for CNN-based cross-view gait recognition. They employed a Siamese network for verification,



where an input is a pair of gait features for matching, and an output is genuine (the same subjects) or imposter (different subjects) probability.

Notably, the Siamese network architectures are insensitive to spatial displacement, as the difference between a matching pair is calculated at the last layer after passing through the convolution and max pooling layers, which reduces the gait image dimensionality and allows for assumptions to be made about hidden features. They can therefore be expected to have higher performance under considerable view differences. The researchers also used CNN architectures where the difference between a matching pair is calculated at the input level to make them more sensitive to spatial displacement.

“We conducted experiments for cross-view gait recognition and confirmed that the proposed architectures outperformed the state-of-the-art benchmarks in accordance with their suitable situations of verification/identification tasks and view differences,” coauthor Yasushi Makihara says.

As spatial displacement is caused not only by view difference but also walking speed difference, carrying status difference, clothing difference, and other factors, the researchers plan to further evaluate their proposed method for gait recognition with spatial displacement caused by other covariates.

— Read more in Noriko Takemura et al., “On Input/Output Architectures for Convolutional Neural Network-Based Cross-View Gait Recognition,” *IEEE Transactions on Circuits and Systems for Video Technology* (9 October 2017).

2016 Hate Crime Statistics Released

Source: <https://www.fbi.gov/news/stories/2016-hate-crime-statistics?>

Nov 13 – Today, the FBI’s Uniform Crime Reporting (UCR) Program released Hate Crime Statistics, 2016, its latest annual compilation of bias-motivated incidents reported throughout the U.S.

The newest report—which provides information about the offenses, victims, offenders, and locations of hate crimes—reveals that for 2016, law enforcement agencies reported 6,121 criminal incidents that were motivated by bias toward race, ethnicity, ancestry, religion, sexual orientation, disability, gender, or gender identity.

As part of the 2016 report, participants in UCR’s Hate Crime Statistics Program included 15,254 law enforcement agencies. These agencies provided from one to 12 months’ worth of data about bias-motivated crime, and of those agencies, 1,776 reported one or more incidents. The remaining agencies reported no hate crimes occurred within their jurisdictions.

Of the 6,121 criminal incidents reported, 6,063 were single-bias incidents (there were also 58 multiple-bias incidents). Of the single-bias incidents:

- 57.5 percent were motivated by a race, ethnicity or ancestry bias;
- 21.0 percent were motivated by a religious bias;
- 17.7 percent were motivated by a sexual orientation bias;
- The remaining incidents were motivated by a gender identity, disability, or gender bias.

Where were these crimes committed?

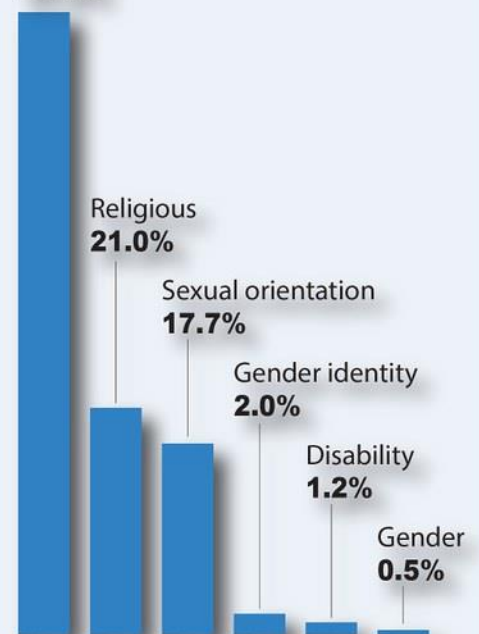
The two largest percentages of hate crime incidents took place in or near residences (27.3 percent) and on or near some type of roadway (18.4 percent). The remaining incidents were perpetrated at a variety of other locations, including schools and houses of worship, commercial and government buildings, restaurants and nightclubs, parking lots and garages, playgrounds and parks, and even medical facilities.

In short, hate crimes can and do happen just about anywhere.

Bias Motivations

Analysis of the 6,063 single-bias incidents reported in 2016 revealed the following biases:

Race/Ethnicity/Ancestry
57.5%



Hate Crime Statistics, 2016



What about the victims of these crimes?

Hate crime victims can be individuals, businesses, government entities, religious organizations, or society as whole, and they can be committed against persons, property, or society. In 2016, law enforcement reported a total of 7,615 victims of hate crimes.

Of the 7,615 overall victims, 4,720 were victims of crimes against persons (both adults and juveniles), 2,813 were victims of crimes against property, and 82 were victims of hate crimes categorized as crimes against society (e.g., weapons violations, drug offenses, gambling).

Going forward

The FBI, through its UCR Program, will continue to collect and disseminate information on hate crime—as a means to educate and increase awareness of these types of crimes for the public as well as for law enforcement, government, community leaders, civic organizations, and researchers around the country. The Bureau will also continue to combat hate crimes that fall under federal jurisdiction—the number one investigative priority under our Civil Rights Program—and offer operational assistance to our local and state law enforcement partners during their hate crime investigations.

►► Full report: [Hate Crime Statistics, 2016](#)

Artificially Intelligent Drones Become Terrifying Killing Machines in Dystopian Short Film

Source: <https://gizmodo.com/artificially-intelligent-drones-become-terrifying-killi-1820392537>



Nov 12 – In preparation for this week's [UN Convention on Conventional Weapons](#) in Geneva, Switzerland, the [Future of Life Institute](#) has released a disturbing sci-fi short that shows what might happen if we fail to place an international moratorium on autonomous killing machines.

Currently, drones employed by the US military require humans to stay in the loop, but with pending advances in artificial intelligence, it'll soon be possible to remove the human factor and have autonomous machines to do the killing. A growing chorus of concerned citizens, many of whom work in AI, say this should never be allowed to happen because this new breed of weapon would make it easier to wage war, cheapen life, and empower terrorists.

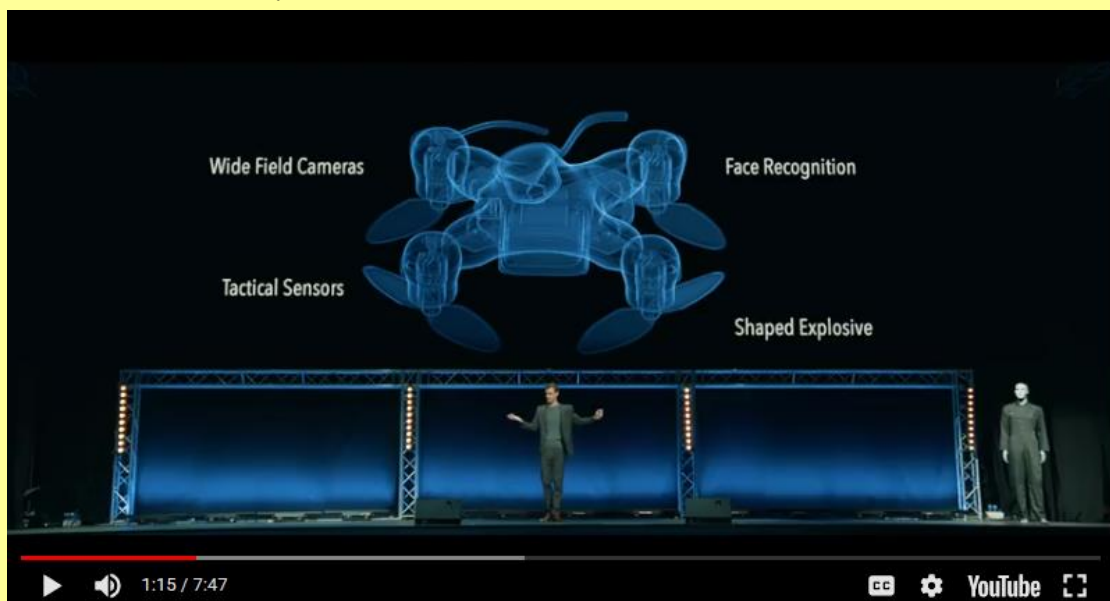
To nudge the international community towards a preemptive ban, the [Campaign to Stop Killer Robots](#) is sponsoring an event at this week's UN convention. One of the groups





speaking at event is the Future of Life Institute (FLI), and it's planning to show its short film, called *Slaughterbots*. Warning: the film is violent and disturbing.

"I participated in the making of this film because it makes the issues clear," Stuart Russell, an AI researcher at UC Berkeley and scientific advisor for the FLI, explained in a statement emailed to Gizmodo.



"While government ministers and military lawyers are stuck in the 1950s, arguing about whether machines can ever be 'truly autonomous' or are really 'making decisions in the human sense', the technology for creating scalable weapons of mass destruction is moving ahead. The philosophical distinctions are irrelevant; what matters is the catastrophic effect on humanity."

Russell doesn't deny that AI could be of great benefit to humanity, but "allowing machines to choose to kill humans will be devastating to our security and freedom," he said.

The film is done in a style reminiscent of the sci-fi series *Black Mirror*, and it takes place in the near future. A fictional company called StratoEnergetics is seen holding a product launch of its new AI-powered and miniaturized killer drones, but things start to take a dark turn. The weapon eventually gets into the wrong hands, and it's used as an assassination tool,



targeting politicians, political activists, and students. The film illustrates just how easy it'll be to build such weapons, and how hard it'll be to defend against them. (And if you watch carefully, you can see Gizmodo Media Group's Kinja platform portrayed in the short.)

"While robotic weapons usually conjure images of the *Terminator* and other unrealistic science-fiction scenarios, the film makes clear that fully autonomous drones could be far cheaper, smaller, and more effective than humanoid robots," noted FLI in its statement. "Their low cost could make them the next class of weapons of mass destruction. The film also depicts how difficult it will be for governments and militaries to keep the weapons out of the wrong hands."

Two years ago, the FLI released an [open letter](#) calling for a ban on autonomous killing machines, which was subsequently endorsed by over 20,000 people (myself included). More recently, AI professor Toby Walsh from New South Wales authored [a similar open letter](#), and just last week [over 300 Canadian and Australian scientists penned open letters asking their respective Prime Ministers to support a ban](#).

The frequency and urgency of these efforts, including this week's UN meeting in Geneva, shows how close we are to developing and deploying these weapons. It may only be a matter of time before the UN adopts some sort of ban, but for some countries, the temptation to use such weapons may be overwhelming.

►► The film: https://www.youtube.com/watch?time_continue=75&v=HipTO_7mUOw

British humor continued...

Let boys wear tutus and high heels if they want to, Church of England says

Source: <http://www.telegraph.co.uk/news/2017/11/13/let-young-boys-wear-tutus-high-heels-want-church-england-says/>

Not my
nephews,
other boys!



Nov 13 – Primary school boys should be allowed to wear tutus and high heels if they want to, the Church of England has said in its first guidance for teachers on [transgender issues](#). Children should not be restricted by their gender when dressing up, and girls should be able to wear a tool belt and fireman's helmet if they choose, the document says.



The guidance for teachers in Church of England schools, endorsed by the Archbishop of Canterbury, says that children "should be at liberty to explore the possibilities of who they might be without judgement or derision".

The document comes as a growing number of children coming forward to express doubt about their assigned gender.

Figures released earlier this year by the Gender Identity Development Service show that the number of under-18s referred to the north London clinic has grown from 314 in 2011 to 2,016 last year.

The guidance says: "For example, a child may choose the tutu, princess's tiara and heels and/or the fireman's helmet, tool belt and superhero cloak without expectation or comment. Childhood has a sacred space for creative self imagining."

The document, which gives teachers guidance on how to challenge transphobic bullying, also says young children "should be afforded freedom from the expectation of permanence."

"They are in a 'trying on' stage of life, and not yet adult and so no labels need to be fixed."



Teachers in Church of England schools should "avoid labels and assumptions which deem children's behaviour irregular, abnormal or problematic [just because it does not conform to gender stereotypes](#) or today's play preferences," it adds.

Introducing the document, entitled Valuing All God's Children, the Archbishop of Canterbury Justin Welby said: "All bullying, including homophobic, biphobic and transphobic bullying causes profound damage, leading to higher levels of mental health disorders, self-harm, depression and suicide."

"Central to Christian theology is the truth that every single one of us is made in the image of God."

An increasing number of schools have begun to liberalise their uniform policy to allow boys to wear skirts and dresses if they wish.

Under-18s who say they have been born in a body which does not match their gender are not offered surgery, but are sometimes given hormones which suppress puberty. Figures released to the Mail on Sunday earlier this

year suggest that more than 800 children are receiving this treatment.

Critics say that the medical risks are not well-enough understood.

But advocates say the trauma caused by going through puberty in the "wrong" body can lead to mental health problems and an increased risk of suicide in teenagers.

Earlier this year Education Secretary Justine Greening announced plans to speed up the process for adults to change gender.

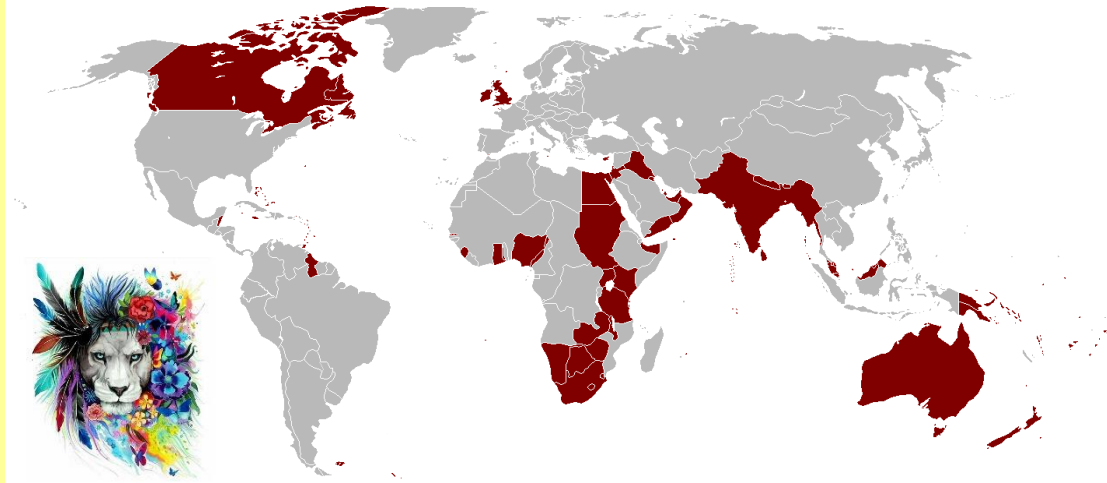
The guidance adds that teachers should work on discouraging children from using terms such as "gay" in a negative way, such as "you're so gay" or "your pencil case/trainers are gay".



However, it also said that they should avoid focusing on "any aspect of differing sexual practice" in order to "safeguard the latency of childhood".

Secondary school pupils should be allowed to "try on identities for size", it adds, explaining that teenagers "need to be offered the freedom that was afforded to the child in nursery of the metaphorical dressing up box of trying on identities without assumption or judgement".

Charities and LGBT organisations welcomed the document, which updates previous guidance on homophobia with specific reference to transphobic bullying.



Barnardo's chief executive Javed Khan said: "Respecting the unique worth of every person is an integral part of Barnardo's values, so we wholeheartedly welcome this move by the Church of England."

A spokesman for Stonewall said: "Our research shows that nearly half of lesbian, gay, bi and trans pupils are bullied for being LGBT at school: a situation that desperately needs to change.

"We would like to congratulate the Church for sending a clear signal that homophobic, biphobic and transphobic bullying must never be tolerated."

The Church of England has 4,700 schools, collectively teaching a million pupils.

The document acknowledges that members of Anglican churches hold a wide range of views on sexuality and gender issues, and says the topic is "sensitive".

In February the Church's governing body [narrowly voted to reject a bishops' report which upheld its current stance on sexuality](#), in a move which was interpreted as signalling support for a more liberal policy.

In July it voted to condemn ["conversion therapy" designed to change someone's sexuality](#), and to explore offering services for transgender people.

Last week an evangelical member of the senior body the Archbishop's Council [resigned her post, citing "heretical" Church teachings](#).

Unmanned Aircraft Systems – On the Way to the Jetsons' Era

By Charles J. Guddemi

Source: <http://www.domesticpreparedness.com/commentary/unmanned-aircraft-systems-on-the-way-to-the-jetsons-era/>



Debuting in 1962, "The Jetsons" depicted the family of the future, with people movers, tube travel, vehicles that folded up into brief cases for parking purposes, home computers, internet, microwave ovens, CT x-ray for medical purposes, cellphones, and speed limits of up to 2,500 miles per hour. Fast-forward to today, as roadways become more congested, one logical alternative is to go up. Unmanned aircraft systems bring the nation a step closer to the Jetson way of life.



Charles J. Guddemi served over 25 years for the United States Park Police (USPP). He worked in Washington, D.C., San Francisco, New York, and Philadelphia, rising to the rank of deputy chief. He has worked six presidential inaugurations, serving as the USPP principle planner for the 2013 inauguration. He was responsible for overseeing the safe dedications of the Martin Luther King Jr. and the Americans Veterans Disabled for Life Memorials. Well versed in the Incident Command System, he has served as incident commander, Operations and Planning Section Chief for many of the National Capital Regions largest special events and first amendment demonstrations. After the September 11, 2001, attacks, he designed the in-depth multi-layered security plan for the Statue of Liberty/Ellis Island Complex, creating mainland screening sites at Battery Park, Manhattan, Liberty State Park in Jersey City, NJ, and a secondary screening facility on Liberty Island prior to entering the Statue of Liberty Monument. The Statue of Liberty/Ellis Island Complex's security plan has served as a model for many of this country's critical infrastructure. He is a graduate of the 237th session of the Federal Bureau of Investigation (FBI) National Academy. He earned a Bachelor's of Art degree in psychology with a minor in business from the State University of New York at Albany.

Mega floods in Athens, Greece



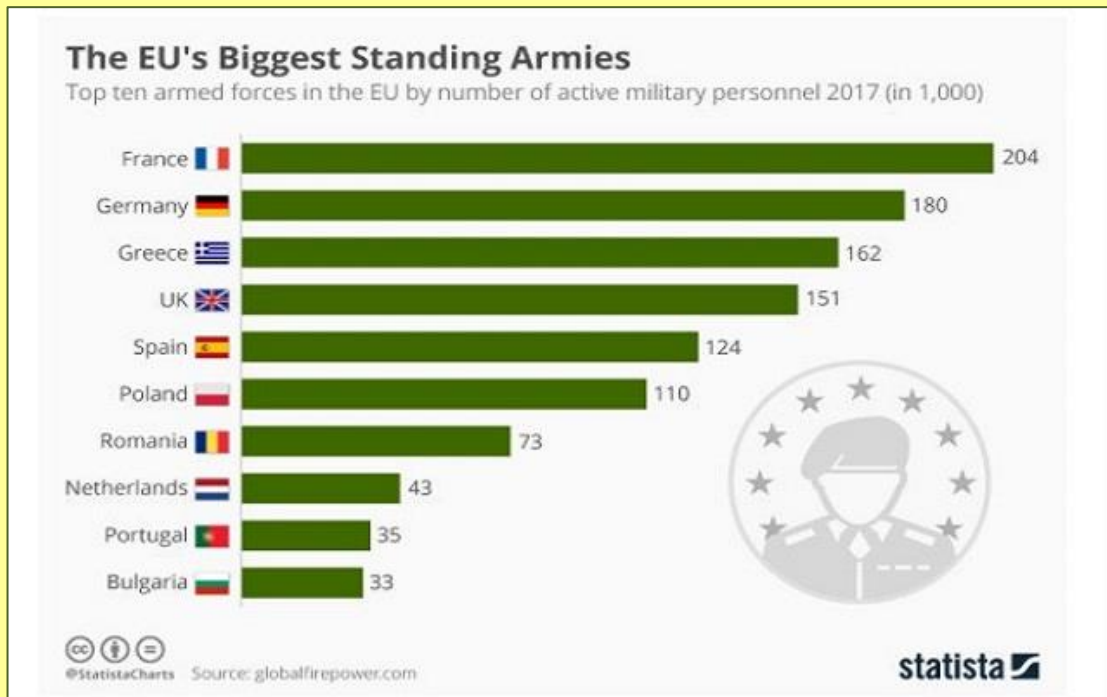
An unknown responder!



20 dead, many injured, in NW Attica Prefecture



EU military staff



Dubai Police adds five new luxury patrol cars to fleet

Source: <https://www.thenational.ae/uae/dubai-police-adds-five-new-luxury-patrol-cars-to-fleet-1.676471>



This Rolls-Royce Race has now joined Dubai Police's patrol fleet. Courtesy Dubai Police

Nov 17 – Dubai police has added several new cars to its luxurious patrol fleet.

A Rolls-Royce Wraith, Mercedes-AMG GT R, McLaren 720S, Audi R8, and Nissan Patrol will feature Dubai Police's new corporate identity on its livery which was approved earlier by Sheikh Mohammed bin Rashid, Vice President of UAE and Ruler of Dubai.





Major General Mohammed Al Marri, Assistant Commander-in-Chief of community happiness affairs and equipment at Dubai Police, said the force used the Dubai Motor Show to introduce to the public its brand new message - Smart, Secure, Together.

"The luxurious patrol cars will be available in the areas which are frequently visited by tourists such as Burj Khalifa, Dubai Mall, JBR, Burj Al Arab and Jumeirah," said Maj Gen Al Marri.

The new livery scheme was designed in line with Dubai Police Strategic Plan 2016-2021 goals, Dubai Government Plan 2021, and inspired by the UAE's 2071 Vision.

Maj Gen Al Marri said new supercars patrols are equipped with the latest technologies such as advanced cameras and computers directly connected to the control centre.

Dubai Police also showcased their eco-friendly vehicles, including the lightweight BMW i3 electric patrol.

Opium production up 87 percent in Afghanistan

Source: <https://www.militarytimes.com/flashpoints/2017/11/15/opium-production-up-87-percent-in-afghanistan/>



Nov 16 – **Opium production is up 87 percent in Afghanistan this year to a record level of 9000 tons,** 4200 tons more than 2016, according to recent report from the United Nations Office on Drugs and Crime, or UNODC.



"It is high time for the international community and Afghanistan to reprioritize drug control, and to acknowledge that every nation has a shared responsibility for this global problem," UNODC Executive Director Yury Fedotov said at the launch of today's report.

Opium production is one of the main staples of finance for Taliban operations in Afghanistan. The report is bad news for the Afghan government where it continues to struggle against a resurgent Taliban force.

According to a recent report from the Special Inspector General for Afghanistan Reconstruction, or SIGAR, Afghan forces lost more ground to the Taliban in the last several months, ceding control of nearly 9 districts to the militant group.

The record opium production is likely to continue to fund more bloodshed in Afghanistan.

"The significant levels of opium poppy cultivation and illicit trafficking of opiates will probably further fuel instability, insurgency and increase funding to terrorist groups in Afghanistan," the report reads. "More high quality, low cost heroin will reach consumer markets across the world, with increased consumption and related harms as a likely consequence."

The main driver of increased opium cultivation is more land is being used to plant poppy crops, according to the UNODC report.

"In Helmand province alone, cultivation increased by 63,700 hectares (+79%) which accounted for about half of the total national increase. Strong increases were observed also in Balkh (+10,000 hectares or almost five times more than in 2016), Kandahar (+7,500 hectares or +37%), Nimroz (+6,200 hectares or +116%), and Uruzgan (+6,000 hectares or +39%)," the report reads.



The southern region of Afghanistan accounted for 57 percent of the opium production in Afghanistan, far more than any other region. The northern region of Afghanistan produced roughly 16 percent of the opium and was the second-highest producer in Afghanistan.

The increased production in Afghanistan might be a result of territory gained by Taliban militants. As the report indicated, Helmand Valley increased its cultivation by nearly 79 percent.

"Some estimates project 80 percent of Helmand Province is now controlled by the Taliban Province that supplies the Taliban with approximately 60 percent of their funding," Sen. Joni Ernst, R-Iowa, said to Gen. John Nicholson, commander of U.S. forces in Afghanistan, in February.

Moreover, the report highlights the failure of the U.S. counternarcotics strategy in Afghanistan.

The U.S. has spent nearly \$8.6 billion in interdicting and eradicating opium production in Afghanistan, according to recent SIGAR estimates.

Despite U.S. efforts, cultivation of poppy has steadily increased in Afghanistan since the U.S. invasion in 2001.

To add insult to injury, this year, the Afghan government managed to eradicate 750 hectares of poppy, a 111 percent increase from last year, but the country still witnessed record opium production despite best efforts.

"Afghanistan remains the world's largest opium producer and exporter — producing an estimated 80% of the world's opium," the latest SIGAR report reads.

This year's opium production equates to 7 percent of Afghanistan's estimated GDP, or \$1.39 billion, according to UNDOC.

EDITOR'S COMMENT: Does this mean that the coalition is winning the war against terrorism?



Milk, a symbol of neo-Nazi hate

By Andrea Freeman

Source: <http://theconversation.com/milk-a-symbol-of-neo-nazi-hate-83292>



Aug 31 – The U.S.-based white supremacist movement that calls itself the “alt-right” has recently embraced milk as a symbol. In February, shirtless neo-Nazi protesters danced outside Shia LaBeouf’s anti-Trump art installation, *He Will Not Divide Us*, chugging gallons of milk that dripped messily down their chins.

Later, they claimed this act symbolized their opposition to “the vegan agenda.”

A poem appeared on an extreme right-wing news site, insisting: “roses are red, barack (sic) is half black, if you can’t drink milk, you have to go back.”

Other white supremacist discussion threads feature a map of the world tracking lactose intolerance, and academic studies of lactose intolerance in a Slavic population.

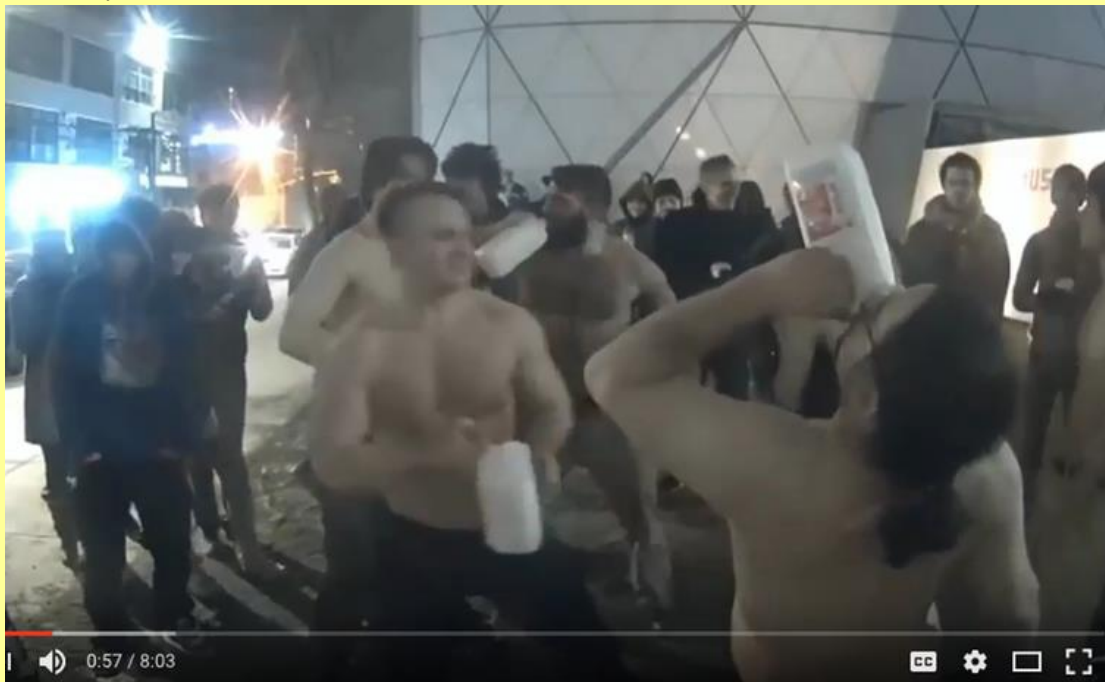
New emoji, old symbol

Milk as a symbol of white supremacy has also entered the Twittersverse. In early 2017, it replaced Pepe the Frog as the newest emoji symbolizing white superiority.

Infamous white supremacists Richard Spencer, president of the white nationalist think tank, National Policy Institute, and Tim Treadstone, the extreme right wing social media personality who goes by the name of Baked Alaska, both added milk symbols to their Twitter profiles.

In the box office hit *Get Out*, a white slave trader slowly sips on a glass of milk in a quiet moment.

I am a critical race scholar and law professor at the University of Hawaii Richardson School of Law. In my law review article, [The Unbearable Whiteness of Milk](#), I discuss the association between milk and white superiority.



Screen shot of the YouTube recording of the February protest — outside Shia LaBeouf’s anti-Trump art installation — in New York.

It’s not a new relationship. Instead, it dates back approximately 100 years. In the 1920s, a pamphlet from the U.S. National Dairy Council explained: “The people who have used liberal amounts of milk and its products ...” — meaning white people — “... are progressive in science and every activity of the human intellect.”

Similarly, the 1933 *History of Agriculture of the State of New York* declared: “A casual look at the races of people seems to show that those using much milk are the strongest physically and mentally, and the most enduring of the people of the world. Of all races, the Aryans



seem to have been the heaviest drinkers of milk and the greatest users of butter and cheese, a fact that may in part account for the quick and high development of this division of human beings.”

There is, in fact, a biological basis for Richard Spencer's Twitter boast that he is “very tolerant...lactose-tolerant!”

While most of the world cannot comfortably digest milk, a portion of the white population, originating from cold Scandinavian countries where drinking other species' milk was a survival tool, can digest it with ease. However, lactose-intolerance is not the worst of milk's harms. [Research links milk consumption to a host of serious health problems](#), including cancer and heart disease. There are significant [racial disparities in these milk-related illnesses, with groups including [African-Americans, Latinos], Native Americans and Native Hawaiians suffering the worst effects.

U.S. dietary guidelines may be racist

Nonetheless, the U.S. Farm Bill continues to subsidize the dairy industry, resulting in a surplus of milk. In turn, the Departments of Health and Human Services and Agriculture urge individuals to consume daily portions of milk products [in the federal Dietary Guidelines](#).

The USDA also disposes of the surplus through its nutrition programs. It distributes milk in the form of [free formula to mothers in the WIC](#) (assistance to women and children) program and to public school students who qualify for free lunches. In both these programs, people of colour are disproportionately represented.

The [USDA has also partnered with fast-food companies](#) to create products with higher amounts of cheese, such as Domino's American legends seven-cheese pizza line and Taco Bell's *quesalupa*. The USDA conceived of and promoted these products, launching them through expensive and coveted Super Bowl advertising spots.

Although white people eat more fast food overall, [people living in poor urban communities of colour disproportionately consume fast food](#) in their diets. The decision to introduce more milk into fast-food products therefore has a disparate impact on the health of communities of colour. These communities are far removed from federal food policy-making, with little to no access to the political process, which is subject to regulatory capture.

[Widespread belief in personal responsibility for health](#) compounds the problem by making regulatory reform appear irrelevant or futile. The “healthism” paradigm insists that health is a matter of good character, not structural determinants.

Popular racial stereotypes cast African-Americans and Latinos as fat and lazy, lacking the will power necessary to ward off obesity and other food-related illnesses.

These cultural myths mask the systemic inequalities that lead to racial health disparities, and the fact that regulation could alter them. Both the government and the dairy industry thus stand to gain from these racial tropes.

At this moment in history, both white supremacists and federal food policy in the United States are engaging in oppression through milk.

Andrea Freeman is Assistant Professor of Law, University of Hawaii William S. Richardson School of Law, University of Hawaii.

Swedish Total Defense Research Institute Report On "White Hatred" Lists Milk As Hate Symbol

Source: <https://redice.tv/news/swedish-total-defense-research-institute-report-on-white-hatred-lists-milk-as-hate-symbol>

Nov 18 – In a new [report](#) on "the white hatred" in Sweden by the Total Defense Research Institute (FOI) commissioned by the government



to map comments written on sites on the internet, milk is listed as a hate symbol and a symbol of "white power," along with the okay-symbol often used by Donald Trump.

The stated purpose of the report is to "provide an insight into some digital environments whose common denominator is that they are all xenophobic".

Expressing threats or profanity is considered to be an example of hatred, but expressions of anxiety or fear are also considered to be hatred, according to the report.

From the report:



Mjölk – Associationen mellan mjölk och vit makt-rörelsen aktualiserades under 2017 då mjölkdrinkande vitmakt anhängare började figurera i skådespelaren Shia LaBeoufs Trump-kritiska videoinstallation. Mjölkdrinkandet speglar föreställningen om den vita kroppens perfektion och kan spåras tillbaka till den genetiska mutation som ligger bakom många nordeuropéers förmåga att tillgodogöra sig mjölk som vuxna. Referenser till mjölk används bland annat av en av USA:s mest framträdande vit-maktanhängare, Richard Spencer, som skrivit texten "*I'm very tolerant... lactose tolerant*" ("jag är väldigt tolerant... laktostolerant") tillsammans med en symbol som visar ett glas mjölk i sin Twitter-profil.

OK-tecknet – att göra OK-tecknet, det vill säga när pekfingret och tummen som hålls i en cirkel, medan övriga tre fingrar pekar uppåt anses av vissa vara på väg att bli en hatsymbol. Genom att göra OK-tecknet så kan utläsa bokstäverna W och P det vill säga förkortningen av *white power*. Det sägs vara en av skribenterna på forumet 4chan som startade en kampanj för att sprida ryktet om ok-tecknets nya innebörd.⁵⁹

EDITOR'S COMMENT: What is next? SNOW? Vanilla ice cream? The white of the eye?



The President of Poland visited Greece



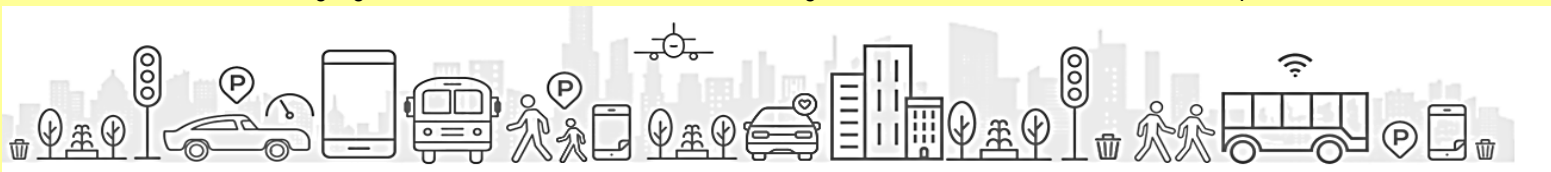
The Inconvenient Truth about Smart Cities

By Kendra Smith

Source: <https://blogs.scientificamerican.com/observations/the-inconvenient-truth-about-smart-cities/>

Nov 19 – This week, we learned that tech guru and mega philanthropist Bill Gates [purchased 25,000 acres of land in Arizona](#) with the intent to build a smart city from the ground up. The community, called Belmont, will “create a forward-thinking community with a communication and infrastructure spine that embraces cutting-edge technology, designed around high-speed digital networks, data centers, new manufacturing technologies and distribution models, autonomous vehicles and autonomous logistics hubs,” according to a spokesperson for Gates’ real estate firm Belmont Partners.

This announcement comes on the heels of the release of [2017 Smart Cities Index](#) by EasyPark Group, which highlights cities at the forefront of smart urban growth in such areas as advanced transportation



			TRANSPORT AND MOBILITY				SUSTAINABILITY				GOVERNANCE				INNOVATION ECONOMY	DIGITALIZATION				LIVING STANDARD	EXPERT PERCEPTION
#	CITY	COUNTRY																			
1	Copenhagen	Denmark	9.81	8.62	8.18	6.82	7.92	9.83	8.24	6.11	9.38	8.53	7.09	5.85	9.13	8.63	7.66	4.12	9.74	8.70	9.12
2	Singapore	Singapore	7.30	6.63	4.20	10.00	2.26	8.44	7.62	7.15	10.00	5.47	7.82	5.12	8.62	8.71	7.75	6.63	7.55	8.18	9.30
3	Stockholm	Sweden	7.49	5.93	6.71	6.54	8.44	6.88	8.94	8.79	9.29	10.00	7.62	7.66	9.57	8.37	9.22	6.28	8.69	7.32	8.20

and mobility, Internet connectivity, environmental protection, and several other elements. Given the global investment and public attention devoted to smart cities in recent years, critical explorations of their potential and challenges are worth discussion.

Somewhat of a catchall term for wired, ubiquitous, connected or networked cities, a smart city refers to the technological and data-driven urban systems designed for efficient, resilient and economic growth. They are supposed to be cities of the future that leverage technology and data to improve the lives of citizens and to become more proactive and responsive to the needs of the city. These goals are achieved, the theory goes, by running the city on an integrated operating system where ubiquitous broadband service and sensors master myriad city functions in real time.

The movement toward smart cities signifies attempts by public and private industry to tackle the complexity and, oftentimes, incoherence of urban design efforts to create livable and sustainable communities. However, the potential of smart cities to deliver on their goals should not be mistaken with reality of smart cities.

The current reality of smart cities is that there aren't any. At the end of the day, most so-called smart cities are just cities with a few or several standout smart projects. Such projects can take shape in a variety of ways. In Pittsburgh, the Pennsylvania Department of Transportation is piloting a [\\$30 million smart-signal system](#) that utilizes adaptive traffic signals to read traffic conditions and make adjustments to keep traffic flowing. Kansas City invested nearly \$15 million in a [smart lighting project](#) that will install 200 lights along its new streetcar line. The lights have built-in sensors and cameras that detect the presence of people and can turn off when no one is around to save 20–30 percent in electricity costs. Both efforts represent the potential of smart city technology, but they certainly do not represent the networked, end-to-end planning of an entire smart city.

A big reason for the disconnect between smart city potential and reality is the fact that smart cities are where the digital world blends, but can also collide, with the non-digital world. Non-digital issues such as legacy governance, social justice, politics, ideology, privacy and



financial elements that are not so smart, efficient or resilient when smart-city planning starts can become large factors. Any one of these elements can pose a challenge in and of itself and grow to monstrous proportions when combined with other longstanding problems in a city. Imagine the entanglements that existing public and private industries must go through to implement a single smart city project, let alone numerous projects such as smart lighting, smart transportation, smart buildings and the like to actually make a more complete smart city. Bill Gates' effort is notable because Belmont is a blank slate to be built from the ground up.

For stakeholders not fortunate enough to build a smart city to their specifications from its inception, finding the best way to implement smart city projects can present a major challenge. The cities highlighted in the 2017 Smart Cities Index are at the forefront of truly making their communities smart but even these cities



must contend with the challenges of their past and present. **Considering the trajectory of smart city, a few critical questions should come to the fore of any successful implementation effort:**

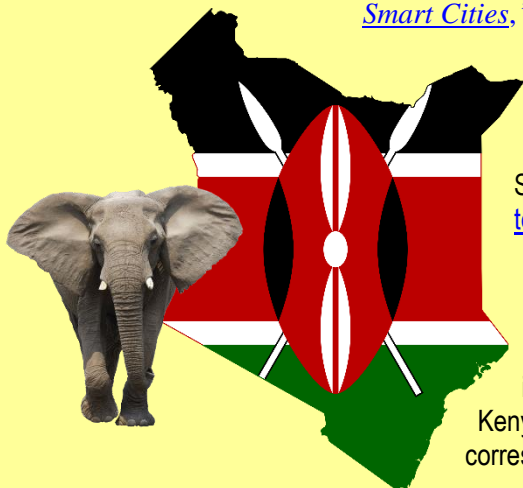
1. How will a smart city affect social justice in my city? Dialogue around smart cities often favors a narrative that they will be places that allow us to thrive by improving our quality of life. Without discussions of how to implement projects in inclusive ways, the efforts can reinforce institutional privileges and protections as well as exclusionary practices. Smart cities will not be utopian societies that, by the sheer presence of their technology, make everything better. As such, we must spend more time on our pressing socioeconomic issues of today to prepare ourselves to create smart and just cities.
2. What does it really cost to develop a smart city? Columbus, Ohio won a \$40 million grant from the U.S. Department of Transportation's [Smart City Challenge](#) in 2016. By 2017, the city had developed several public-private partnerships that turned the \$40 million into \$500 million in private funding aimed at supporting a smart city project focused on [transportation systems](#). It is unclear if other cities could pull off such a financial feat. Without government funding and strong partners off the bat, city leaders' ability to raise sufficient funds for a smart city is an uphill battle that cannot be ignored.
3. Who decides what the city really needs and will operate going forward? With a smart city comes a significant amount of decision making on what to do, who will do it, why and when to do it. The answers to the questions are not easy and can have massive repercussions. Take, for instance, the challenge of gentrification and urban displacement, which has long been framed simply as a symptom of wealthier people moving in to communities and effectively nudging out lower-income individuals. However, public investment can play a critical role in this process too. Perhaps the most shining, unfortunate example of this is what San



Francisco Federal Reserve researchers refer to as “[transit-induced gentrification](#)” in which public investment in transit—light rail, buses, subway—attracts affluent individuals. So much so that several [studies](#) have found that transit investments can alter the demographic composition of the surrounding neighborhood, resulting in pushing out lower-income individuals and creating new problems within the city. Potential outcomes like these should prompt questions about who should be making these decisions about public investments associated with smart cities. Finding pathways to figure out what the public wants from its city (and perhaps more importantly, what it does not) is critical. This requires citizen participation early in the process and throughout. The New Delhi-based Housing and Land Rights Network released a report, “[India’s Smart Cities Mission: Smart for Whom? Cities for Whom?](#)” The report highlights the massive problems with Indian Prime Minister Narendra Modi’s pledge to build 100 smart cities by 2020. Among the problems is the focus on technology of the future instead of issues of the present such as an agrarian crisis, insufficient civil rights for women, forced evictions to make room for the implementation of smart city projects, and so on.

The promise of smart cities is enormous but they require much work to prepare long before network switches are flipped. Creating truly smart cities will require that communities find a satisfactory balance between the present and the future.

Kendra L. Smith is the associate director of community engagement in the Center for Population Health Sciences at Stanford University. She recently co-authored “[Big Data and Smart Cities](#),” a report published by the American Planning Association.



How lessons from fighting terrorism are saving elephants in Kenya

Source: <https://www.pbs.org/newshour/show/how-lessons-from-fighting-terrorism-are-saving-elephants-in-kenya>

Nov 17 – Widespread illegal poaching in the African wild is threatening elephants and putting them at risk of disappearing in 10 to 15 years. Using some of the same techniques developed to fight terrorism, a new intelligence-led effort spearheaded by a U.S. Air Force reservist is helping Kenyan wildlife service agents and police disrupt poaching networks. Special correspondent Jane Ferguson reports.

Daniel Pipes on Trump, Iran, and a Fast-Changing Middle East

L'Informale (Italy)

November 13, 2017

Source: <http://www.meforum.org/7022/daniel-pipes-on-trump-iran-and-a-fast-changing>

Donald Trump decertified the Joint Comprehensive Plan of Action (JCPOA) with Iran, leaving it up to the U.S. Congress whether to sanction Tehran or not. Do you agree with John Bolton, Martin Sherman, and others that it is futile to “fix” the deal and necessary to “nix” it?

Yes, I emphatically agree with them. Trump took just half a step to dismantle the JCPOA when a full step is needed. His action does not fundamentally change American policy but puts the burden on the Senate. This represents a compromise between Trump’s original intention and the views of those in his administration who oppose such a fundamental change.

The U.S. government declares Iran the foremost terrorist state but does little or nothing in Syria to curb Iranian entrenchment. How do you explain this inconsistency?

The Middle East is a complicated place where consistency may be impossible to achieve. Opponents in one theater are often allies in another. That said, I wish Washington were more fundamentally hostile towards the Islamic Republic of Iran to the point of seeking to change



the regime, but that has never been the case in the almost forty years of Khomeinist government.

The American abandonment of Kirkuk by favoring the Baghdad government backed by Shiite militias against the Kurds is another example of favoring Iran, is it not?

That's unfair; Washington did not abandon the Kurds. They took an extremely unwise step in holding a referendum in late September and they are now paying the price for that mistake. You cannot blame the Trump administration for a referendum it clearly and consistently opposed.



Middle East Forum President Daniel Pipes

You cannot call the Americans not coming in and saving the Kurds from their mistake "abandonment."

Iran's aggression across the Middle East seems unstoppable given American passivity and Russian

cooperation. Does this mean a looming war for Israel?

Yes, a confrontation does seem likely, probably in Lebanon or Syria. As Iranian power expands, Hezbollah is pulling its forces from Syria and directing them against Israel. The likelihood of a Hezbollah-Israel war grows with time.

... The German political scientist Matthias Küntzel emphasized the chiliastic nature of Iran's foreign policy, pointing to Ali Khamenei describing the Islamic revolution of 1979 as the "turning point in modern world history" and saying his movement aims to create a "new civilization." How seriously should we take this outlook and how should we respond to it?

Iran's leadership undoubtedly sees itself at the vanguard of a revolution as earlier the Communist, Fascist, and Nazi leaderships did; this is not in dispute.

But all these regimes over time lose the support of their subject populations, something again taking place in Iran.

As this "Porsche Center Iran" suggests, Iranians have a keen taste for luxury



Almost forty years after the Islamic Revolution, only a

small minority of Iranians enthusiastically support it. This confronts the leadership with a problem: it wants to act aggressively but it understands its own fragility.

Any day now, there will be a bakery that has no bread or a gas station without fuel. The result could be a riot that spreads across the country and overthrows the government. I see that coming but, of course, cannot predict when. We who are on the outside should take steps to bring that day closer.

Is not the Iranian regime stronger than ever, after the ending of sanctions, billions of dollars in cash pouring in, and lucrative contracts with the EU pending? It has enough to improve the wellbeing of the population and become even more aggressive internationally.



Your calculus overestimates Tehran's economic competence and underestimates the Iranian population's expectations. From what we hear, there is massive disappointment with the JCPOA, leaving the regime yet more vulnerable.

How do you evaluate the resignation in Lebanon of Prime Minister Saad Hariri and his allegations about Iranian interference?

This is part of the immense drama surround Crown Prince Mohammad bin Salman of Saudi Arabia. It's hard at this early date to sort out what exactly Hariri's surprise and irregular resignation means. I suspect MbS found him weak and wants to replace him as political leader of Lebanon's Sunnis.

What is your assessment of the Trump administration's Middle East policy up to now?

In the campaign, Trump talked about making major changes to U.S. foreign policy in general and toward the Middle East especially.

Nine months later, however, it appears policy has returned more or less to where it was. Troops are returning to Afghanistan, the American embassy remains in Tel Aviv, the Palestinian-Israeli "peace process" is revived, the JCPOA with Iran continues, Erdoğan is praised, funds are denied to Egypt's government as a punishment, and Islamism is no longer explicitly named.

Why this reversion to the conventional? Because Donald Trump lacks both the philosophical foundation and the specific knowledge to implement his radical vision. He ended up relying on the same people he had criticized because they are the experts.

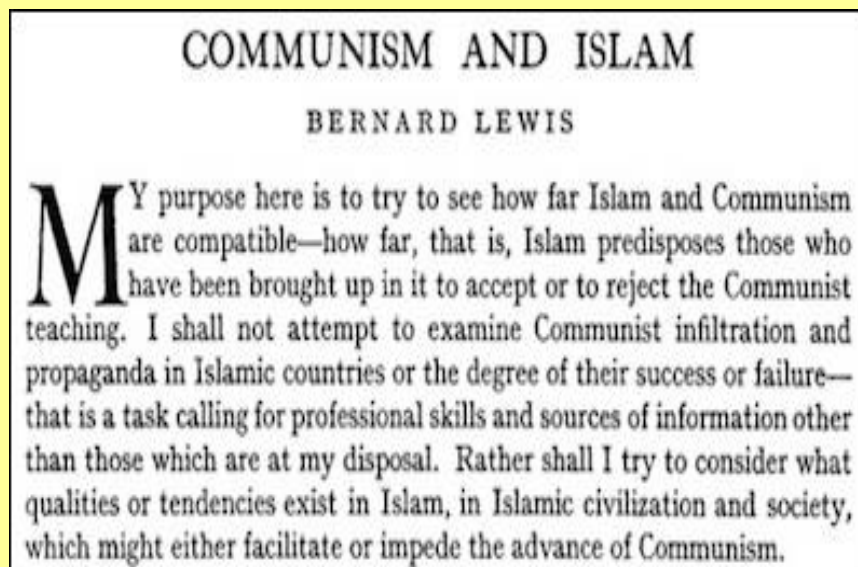
We see in Syria right an alliance of the nasties: Assad, Putin, Rouhani, Erdoğan. Is the Western world, and especially Israel, confronting a new axis of evil?

As you indicate, the forces in the Middle East are now much more malign than when George W. Bush coined the term "axis of evil" in 2002. From Israel's point of view, the situation is more dangerous, what with a weaker United States, a stronger Russia and Iran, plus a hostile Turkey. But Israel also gains from this circumstance, because a weaker United States and a stronger Iran means that other neighbors, in

particular the Saudis and the Egyptians, are open to working with it in a way that has never been the case.

Bernard Lewis, "Communism and Islam," *International Affairs*, January 1954, pp. 1–12

Your recent article in the Washington Times, "Saving NATO from Turkey" argues that NATO's



main goals today are to contain and defeat Russia and Islamism. This reminds me of Bernard Lewis' seminal 1954 article drawing a parallel between Communism and Islam. Could you ponder this similarity?

Good question. But I would say this is more of a coincidence than a parallel. Putin is not a Communist but a Russian nationalist. He doesn't have an ideology to impose around the world; rather, he is expanding Russian power at a time when the Russian population and energy resources are diminishing. So, it is a defensive action, not comparable to Communist aggression sixty years ago. Further, Islam Islamism was a weak force in 1954 and a very powerful one today.



The Operational Environment and the Changing Character of Future Warfare

By U.S. Army Training and Doctrine Command

Source: <http://smallwarsjournal.com/jrnl/art/the-operational-environment-and-the-changing-character-of-future-warfare>

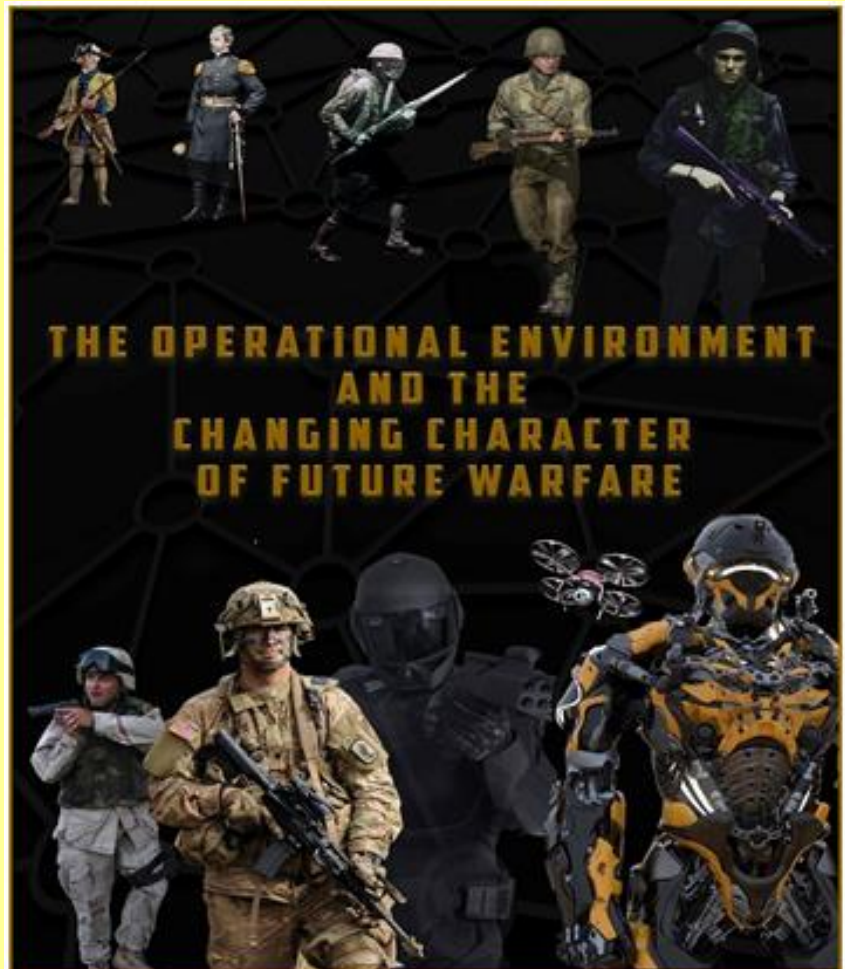
Nov 19 – The U.S. military, and therefore, the U.S. Army, finds itself at a historical inflection point, where disparate, yet related elements of the Operational Environment (OE) are converging, creating a situation where fast moving trends across the Diplomatic, Information, Military, and Economic (DIME) spheres are rapidly transforming the nature of all aspects of society and human life – including the character of warfare.

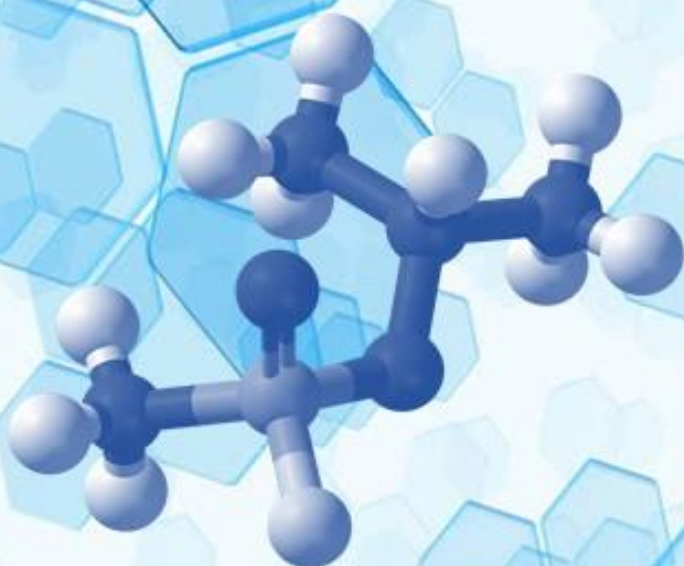
In [*The Operational Environment and the Changing Character of Future Warfare*](#), the first part of this paper describes how technology will impact how we live, create, think and prosper. The authors use this description to make an assessment on the OE and its implication on the future of warfare through 2050, which in their view is a continuum divided into two distinct timeframes:

- **The Era of Accelerated Human Progress, 2017-2035**, which relates to a period where our adversaries can take advantage of new technologies, new doctrine and revised strategic concepts to effectively challenge U.S. military forces across multiple domains.

- **The Era of Contested Equality, 2035-2050**, which is marked by significant breakthroughs in technology and convergences in terms of capabilities leading to significant changes in the character of warfare. During this period, traditional aspects of warfare undergo dramatic, almost revolutionary changes which at the end of this timeframe may even challenge the very nature of warfare itself.

As a data-centric organization, U.S. Army Training and Doctrine Command (TRADOC) G-2 continuously examines and develops new methods to understand, visualize, describe, deliver and assess the conditions of the operational environment. TRADOC G-2 would appreciate your feedback on this paper, which can be found under Deep Futures Assessment on the TRADOC Mad Scientist web page at <http://www.tradoc.army.mil/watch/>.





CHEM NEWS



Dutch technology maybe used in weapons of mass destruction

Source: <https://nltimes.nl/2017/10/26/dutch-technology-maybe-used-weapons-mass-destruction>

Oct 26 – There are indications that Dutch technology was used in weapons of mass destruction or missile programs of Iran, Pakistan and Syria, departing Ministers Lilianne Ploumen for Foreign Trade, Bert Koenders of Foreign Affairs and Klaas Dijkhoff of Defense wrote to the Tweede Kamer, ANP reports.

"In some cases the services received indications about the use of Dutch technology in mass destruction weapons or transmission agents in Iran, Pakistan and Syria", the Ministers wrote to the Tweede Kamer, the lower house of Dutch parliament. In the cases involved, Customs will do a follow-up investigation and the Public Prosecutor may decide to prosecute, according to the Ministers.

The departing Ministers were responding to parliamentary questions from the VVD, asked based on statements made by Onno Eichelsheim, the director of military intelligence agency MIVD. In an interview last month, Eichelsheim said that the MIVD annually [blocks a "substantial" number of attempts](#) by "countries of concern" to acquire knowledge and materials for weapons of mass destruction from Dutch companies.

Weapons of mass destruction include chemical, biological and nuclear weapons. Eichelsheim said that the Netherlands is almost a "supermarket for countries that want to develop such weapons".

Assad regime behind April 2017 sarin attack on Sunni civilians: UN

Source: <http://www.homelandsecuritynewswire.com/dr20171027-assad-regime-behind-april-2017-sarin-attack-on-sunni-civilians-un>

Oct 27 – **A new report, released Thursday by the Organization for the Prohibition of Chemical Weapons (OPCW), the UN chemical weapons watchdog, has found that the forces of Syrian President Bashar al-Assad were behind the deadly chemical weapons attack which killed more than ninety people in the village of Khan Sheikhoun on 4 April 2017.**



The Syrian regime's use of chemical weapons against Sunni civilian triggered a U.S. retaliation – fifty-nine Tomahawk cruise-missiles launched against the airbase from which the planes carrying the chemicals took off for the mission.





The UN and OPCW said that experts are “confident that the Syrian Arab Republic is responsible for the release of sarin at on 4 April 2017.”

CNN [reports](#) that in addition to the **nearly 100 killed**, dozens were rushed to hospital in the rebel-held



Idlib province after the incident, with symptoms such as convulsions, suffocation, coughing blood, and foaming at the mouth – all consistent with either sarin gas or chlorine exposure.

Assad was supposed to give up his chemical arsenal in 2013, but Israeli and Western intelligence were able to ascertain that, in violation of the U.S.-Russia agreement about Syria's chemical weapons, the Assad regimes kept stocks of sarin and VX munitions and precursors.

Russia has used its veto power at the UN Security Council to shield the Syrian government from measures aimed to punish the Assad regime for its repeated use of chemicals against



Sunni civilians. Earlier this week, Moscow vetoed a resolution extending the mandate of the UN and OPCW's Joint Investigative Mechanism (JIM) into the use of chemical weapons in Syria's war.

The new JIM report, however, backs up preliminary findings by U.K., U.S., French, and Israeli intelligence that it was a Syrian warplane that dropped sarin on the town.

"Britain condemns this appalling breach of the rules of war and calls on the international community to unite to hold Assad's regime accountable," Foreign Secretary Boris Johnson said in response to the report.

His comments were echoed by U.S. ambassador to the UN, Nikki Haley, who also reprimanded Russia for shielding the Syrian government. "In spite of these independent reports, we still see some countries trying to protect the regime. That must end now," she said. "It is the security council's role to make it clear that 'the use of chemical weapons by anyone will not be tolerated.'"

A statement from the Russian mission to the UN said "We have started a thorough study of this paper, which is of very complex technical nature."

There has been no formal response from the Syrian authorities.

OPCW has concluded that Assad's government is responsible for several chemical weapons attacks against Sunni civilians since Syria was supposedly disarmed of chemical weapons.

EDITOR'S COMMENT: Although it is not wise to express opinions based on photos only it is obvious that the top picture is **NOT** consistent with exposure to deadly nerve agents (PPE), while the second photo is exactly what to expect following exposure to these agents (excessive salivation).

Body of Iraq weapons inspector David Kelly is dug up and cremated after his grave was 'desecrated' by conspiracy theorists

Source: <http://www.dailymail.co.uk/news/article-5028439/Body-Iraq-weapons-inspector-David-Kelly-dug-up.html>

Oct 28 – The remains of **David Kelly**, the Iraq weapons inspector, have been exhumed by his



family after a sign was placed next to his grave by conspiracy theorists.

It is understood that the body has now been cremated after campaigners threatened to exhume his remains themselves amid speculation that he did not commit suicide.

The Welsh scientist had been employed by the British Ministry of Defence and had formerly

been a weapons inspector for the United Nations in Iraq.

He died days after he was exposed as the source of a BBC report in 2003 which referred the government's dossier on weapons of mass destruction as 'sexed up'.

The Justice for Kelly group, which reject the Hutton inquiry's findings that the scientist killed himself, placed a sign next to his grave calling for an inquest.

A family source told The Sunday Times: 'They did the placard; they used to leave notes on the grave and they would have vigils.

'Janice [Kelly's widow] hated it, she felt it was a desecration, and asked the police to get them to stop.'

A member of Justice for Kelly told the newspaper that the grave and headstone, in Longworth, Oxfordshire, was dug up in the middle of the night.

Dr Kelly came to public prominence after he was revealed



as the source of an off-the-record chat with BBC reporter Andrew Gilligan.

The Hutton Report later found that Dr Kelly, a member of a UN inspection team sent to Iraq to unearth weapons of mass destruction, had committed suicide.

However, many still believe the 59-year-old scientist may have been murdered by the security services.

Successive governments have refused to hold a full coroner's inquest, making him the only person in modern English legal history to be denied a proper inquest.

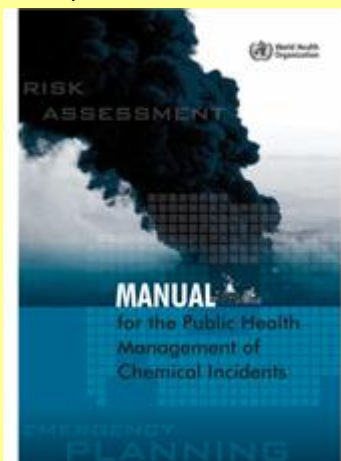
Lord Hutton's 2004 report, commissioned by Prime Minister Tony Blair, concluded that Dr Kelly killed himself by cutting his wrist with a blunt gardening knife.

However conspiracy theorists argue that the conclusion that Dr Kelly killed himself by severing the ulnar artery in his left wrist after taking an overdose of prescription painkillers is untenable because the artery is small and difficult to access, and severing it could not have caused death.

WHO Manual: The Public Health Management of Chemical Incidents

Source: http://www.who.int/environmental_health_emergencies/publications/Manual_Chemical_Incidents/en/

The purpose of the WHO Manual for the Public Health Management of Chemical Incidents is to provide a comprehensive overview of the principles and roles of public health in the management of chemical



incidents and emergencies. While this information is provided for each phase of the emergency cycle, including prevention, planning and preparedness, detection and alert, response and recovery, it is recognized that the management of chemical incidents and emergencies requires a multi-disciplinary and multi-sectoral approach and that the health sector may play an influencing, complementary or a leadership role at various stages of the management process. The target audience includes public health and environmental professionals, as well as any other person involved in the management of chemical incidents.

WHO and all those involved in the development of the publication hope that the publication will have wide application, especially in developing countries and countries with economies in transition, and that in the future the health sector will be better prepared to

acknowledge and fulfill its roles and responsibilities in the management of chemical incidents and emergencies, thereby contributing to the prevention and mitigation of their health consequences.

West should prepare for chemical attacks by the Islamic State

By Joseph Fitsanakis

Source: <https://intelnews.org/2017/10/23/01-2201/>

Oct 23 – A German newspaper reported last week that at least one European intelligence agency has already warned that the Islamic State is exploring the use of chemicals for attacks in Europe. Such an eventuality would be a radical departure from prior attacks by the Islamic State in the West. In the past, the militant group has shown a strong preference for low-tech means of dispensing violence, such as firearms, vehicles and knives. But it has utilized chemical substances in Iraq and Syria, and its technical experts have amassed significant knowledge about weaponized chemicals.





Last week, several European and American counter-terrorism experts participated in a bioterrorism preparedness exercise in Berlin. Codenamed [WUNDERBAUM](#), the exercise was one of several anti-terrorism drills that have taken place in the German capital this year alone. But last week's drill was the first with an exclusive focus on preparing for a bioterrorist attack. German authorities insisted that the drill



was not sparked by concrete intelligence of a pending biological or chemical attack. But the Berlin-based national newspaper *Die Welt* claimed on Friday that it had information about at least one such warning by a European intelligence agency. The paper did not name the



agency, but [said](#) that “a foreign intelligence agency” had warned European security authorities of a possible terrorist attack by the Islamic State using chemical weapons. According to *Die Welt*, the warning was “explicit” and cautioned that the Sunni militant group may be preparing to use improvised bombs utilizing chemicals, including toxic gasses. The warning was communicated to European intelligence agencies, including Germany’s said *Die Welt*.

How likely is such a scenario? Terrorist groups tend to be conservative in their use of lethal technologies. They typically opt for time-tested methods using explosives or firearms, because these have a higher of success in comparison to more sophisticated, hi-tech weapons. The latter are also more expensive to build and require scientific and technical capabilities that are not typically available to terrorist organizations. Militants are usually strapped for cash, and are not science-savvy, so exceptions to this general trend are rare. But the Islamic State is different. Ever since it made its eventful appearance in 2013, the group has experimented with a variety of chemicals, including nerve agents. It is known that it initiated a modest chemical weapons program, headed by Iraqi engineers who were trained under Iraq’s late ruler, Saddam Hussein. One of them, Abu Malik, was [killed](#) in an American airstrike in early 2015. Another, Sleiman Daoud al-Afari, who headed the Islamic State’s chemical weapons program, was [captured](#) by US Special Forces in northern Iraq in March of last year.

The Islamic State’s rapid loss of territory in the past year has delivered serious blows to the group’s military infrastructure. Its chemical weapons program, which was targeted early on by the US, Iran and other belligerents, is now almost certainly defunct. But many of its engineers and technical experts are still at large, as are those who were trained by them during the group’s heyday in Iraq and Syria. Despite its continuing retreat, the Islamic State is still capable of employing chemicals that are relatively easy to procure, such as chlorine, hydrogen sulfide, or even various fertilizers, to construct explosives or nerve agents. Last summer, members of a terrorist cell with connections to the Islamic State were arrested in Sydney, Australia. By the time they were [arrested](#), they had already procured significant quantities of hydrogen sulfide and had even tested the chemical, in an apparent preparation for a large-scale attack. The Australian case shows that the Islamic State is not averse to the tactical use of chemical weapons in terrorist attacks. As the militant group’s self-proclaimed caliphate is disintegrating, and its leaders feel like they have nothing left to lose, the deployment of unconventional terrorist technologies should not be excluded as a tactical option for the organization. Western counter-terrorism officials should actively and immediately prepare for such an eventuality.

Dr. Joseph Fitsanakis is Associate Professor in the Intelligence and National Security Studies program at Coastal Carolina University. Before joining Coastal, Dr. Fitsanakis built the Security and Intelligence Studies program at King University, where he also directed the King Institute for Security and Intelligence Studies. He is also deputy director of the European Intelligence Academy and senior editor at intelNews.org.

EDITOR’S COMMENT: A bit confused about the PPEs worn in the exercise – below photo.

Syrian Army Finds Bomb-Laden Car With Chemical Agents in Deir ez-Zor - Reports

Source: <https://sputniknews.com/middleeast/201711051058830713-syrian-army-bomb-laden-chemical-agents/>

Nov 05 – After taking control of Deir ez-Zor, the last major stronghold of Daesh terrorists in Syria, the government troops have found weaponry, and provisions in the city the network of tunnels that were used by terrorists.

A Sputnik correspondent reported from the eastern Syrian city that the Syrian forces inspecting the city have found a vehicle laden with explosives containing chemical agents.



The car was discovered in the city's district where two large arms depots were also found. One of the explosives was marked with an inscription that it contained chemical elements, which can only be used in laboratories.



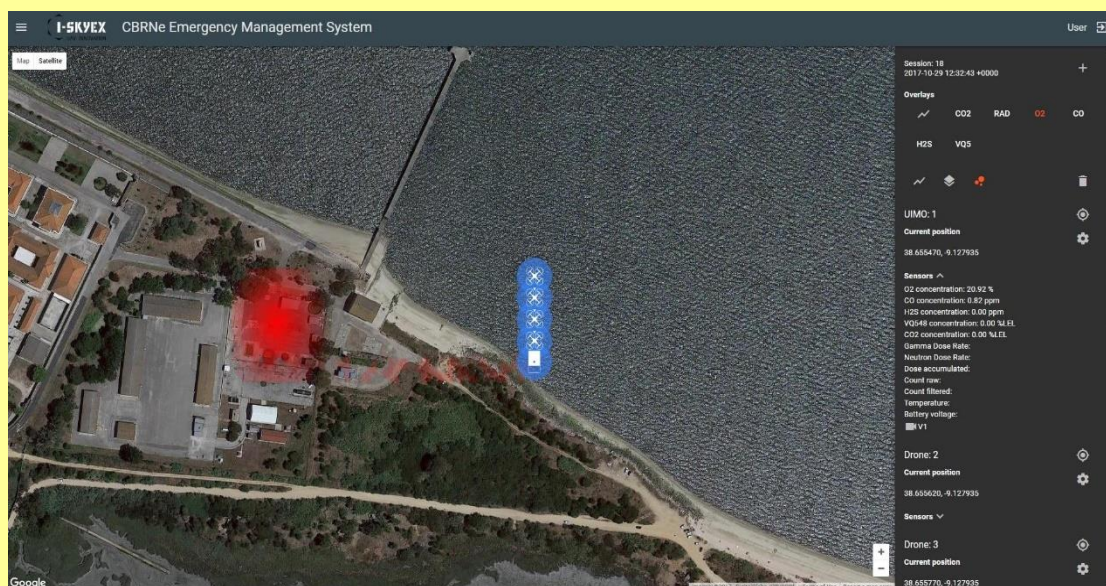
Deir ez-Zor was completely liberated by the Syrian armed forces on Friday, according to the Syrian Armed Forces' General Staff. Fights with terrorists, however, continue in the Deir ez-Zor province.

Daesh has been reported to have used the chemical weapons in Syria and Iraq. The US-led coalition has revealed it [had uncovered](#) in "mortars or RPGs, rocket-propelled grenades, with some type of chemical" that could be used as chemical weapons.

The use of chemical weapons is a highly contentious issue in Syria. Since 2013, the chemical attack in Syria's Ghouta was used as a pretext for the foreign invasion led by the US. In April 2017, another chemical attack occurred in the town of Khan Shaykhun in the Idlib province, resulting in 80 deaths. The attack was blamed by the Western powers on Damascus, who denied the allegations. The United Nations has also released a [report](#) accusing the Syrian government of using chemical weapons, saying it "continued to deliberately target civilians, including through the use of chemical weapons against civilians."

Defining the Hotzone in real time (chemicals and radiation detector)

Source: <https://www.linkedin.com/feed/update/urn:li:activity:6330540755823792128/>



CBRN decon: clean up your act

By Andy Oppenheimer

Source: <http://www.cbrneportal.com/cbrn-decon-clean-up-your-act/>

Nov 03 – An attack or release suspected to involve CBRN materials or as a result of a hazmat (hazardous materials) incident or accident would in many cases require the rapid decontamination of members of the public and the contaminated environment. Specialist first-responder units are trained to apply the procedure and would have to deal with situations where panic and multiple devices could present. Unlike a 'normal' explosion, usually of an IED (improvised explosive device), any level of CBRN emission from an attack will require specific kinds of clean-up.



Kuala Lumpur: VX nerve agent

On February, the half-brother of the North Korean leader Kim Jong-Un, Kim Jong Nam, was killed by VX nerve agent at Kuala Lumpur airport when two assailants coming from behind him smeared his face with a cloth.

Only on 25 February – a whole week after the assassination – parts of the airport departure hall were cordoned off and Police CBRN teams and a fire department Hazmat unit were called in. In the interim,



passengers had passed through the area where the victim had been assaulted. The Malaysian Atomic Energy Licensing Board received a police request for technical assistance but VX does not come under his jurisdiction as it is not a radioisotope.

[A hazmat crew scans the decontamination zone at Kuala Lumpur International Airport 2 in Sepang, Malaysia on 26 February 2017.](#)

VX can take six to eight days to dissipate. The agents are washed and rinsed away, dried up, sucked up by absorbent substances, or removed by heat treatment. Water and detergents, soda, soap, organic solvents – fuel, paraffin and

carburettor spirit are used.

This illustrated a poor readiness for dealing with the aftermath of a CBRN attack, albeit contained and limited. As CBRN is classed as low probability, many countries do not think it warrants the complex levels and types of preparedness needed, included for decon.



[A week following the killing of Kim Jong Nam on 13 February, a hazmat crew was sent in. Here the check-in kiosk machines are being scanned.](#)

►► [Read the full article at source's URL.](#)

Andy Oppenheimer AIEspE MIABTI is Editor-in-Chief of CBNW (Chemical, Biological & Nuclear Warfare) and CBNW Xplosive journals, a consultant in CBRNE and counter-terrorism, and author of IRA: The Bombs and the Bullets (Irish Academic Press, 2008).



NEW PRODUCT

CBRNE FRAGMENT PROTECTION SYSTEM FPS

CBRN materials, mixed with explosives (also known as dirty bombs), pose a real threat to the population and first responders. Hotzone Solutions Group and Blücher have partnered to develop a new protective system for First Responders: the CBRNE Fragment Protection System.

The FPS, in combination with the Saratoga suit, provides an additional external fragmentation protective layer further enhancing the CBRN protection capability of the SARATOGA® suit.



**HOTZONE
SOLUTIONS**
group

Prinsessegracht 6,
The Hague, 2514 AN, The
Netherlands

T +43(0)69919667890

F +31(0) 87 784 68 26

Office +31(0) 70 262 97 04

Email: info@hotzonesolutions.com

www.hotzonesolutions.com



**HOTZONE[®]
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Fragments for testing

Fragments for testing

THE CBRNE FRAGMENT PROTECTIVE SYSTEM

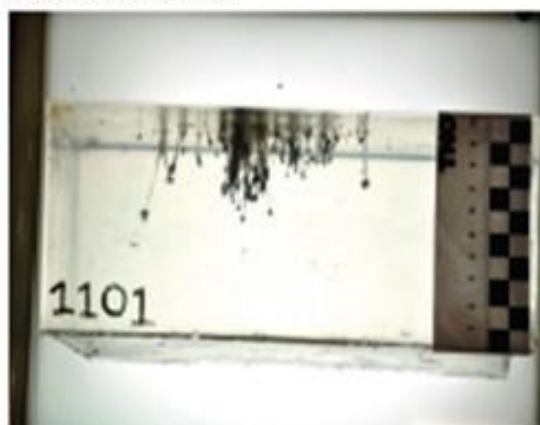
The CBRNE Fragment Protective system leads to the reduction of life threatening wounds by protecting critical body areas thereby increasing survivability, lessens CBRN contamination and infection risk, and reduces long term disease risk and side effects. The CBRNE FPS does not impair the function of any Personal Protective Equipment (PPE).

The specific garment system is composed of modular elements, which provides for a quick and flexible increase in protection to the highly sensitive areas of the human body. Quick and simple donning and doffing of all elements underlines the easy handling.

Test Results: Protected: no contamination



Test Results: Unprotected: injury with contamination



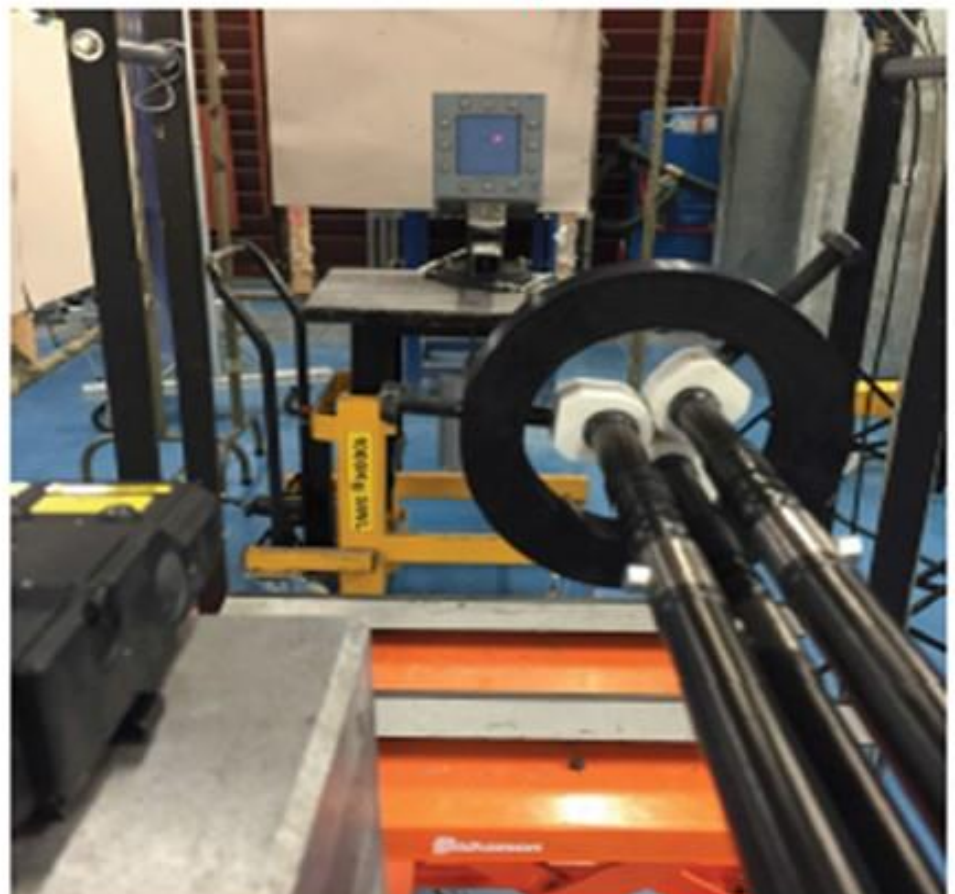


THE FRAGMENT PROTECTIVE TEXTILE (FPT) TECHNOLOGY

This multifunctional, lightweight, compressible and flexible knit fabric is based on the UHMWPE fibre material. The fibres' unique characteristics produce a highly resistant and durable textile that is stable against most environmental influences. The protective performance remains stable over long-wear durations, under high moisture conditions, UV radiation and against alkaline and acidic chemicals (e.g. sweat, urine) without any loss in performance.

The high strength and highly dense textile structure provides an ideal IED fragment protection. It prevents micro fragments such as dirt, sand and debris from penetration. The number of penetrating fragments is minimized and the penetration depth is reduced. The performance has successfully been tested according to STANAG 2920, and with The Triple Impact Technique, a new ballistic testing technique, with velocities of up to 410m/sec.

Triple Impact Technique



Taking the First Responder out of the Hot zone: A possibility that should be a necessity

By Marlène Meunier

Source: <http://www.cbrneportal.com/taking-the-first-responder-out-of-the-hot-zone-a-possibility-that-should-be-a-necessity/>

Nov 06 – When a man-made or a natural CBRNe incident occurs, particular attention needs to be given to the response after the ‘bang’. Though response plans may differ from organization to country to affected infrastructure, the recommended approach is: triage of persons and decontamination, in order to limit the effects of the CBRNe incident. Personal decontamination generally stops the agent from further harming the contaminated person, whereas the decontamination of infrastructure and equipment allow to reestablish the use of equipment or infrastructure. Those taking care of decontamination are first responders, with support from available technologies. The risk of secondary contamination, and possibly



death, is extremely high during this decontamination process since the first responder enters the hot zone, even when wearing protective equipment. The current state of the art technologies in decontamination do not include automated decontamination to the extent they should. Only minor adaptation of currently available robots and other developments to current technologies are needed to reduce the number of first responders needed for the process. Since we have the technological capabilities to remove the first responder from the danger zone the question begs: Why are we not investing to support this technological advancement?

The current state of the art

As decontamination is a central element to CBRNe response, there has been a significant investment in knowledge resulting in state-of-the-art technology and mechanisms that have been developed to decontaminate as effectively as possible. The challenges in developing these technologies arise because only CBRNe not only comes in all shapes and sizes, but there are also important differences between material and skin decontamination. This means that there is no one technology (mechanical or chemical) that will decontaminate all CBRNe contaminated areas as well as people: a universal solution is difficult. Currently available



technologies that respond to personal decontamination include: skin decontaminants (e.g. soap, enzyme preparations, RSDL, aldehyde, etc.) and devices such as decontamination shower tents and trailers. Agents for surface decontamination (e.g. OWR's GD-6 amongst others) have also been developed and devices (such as vacuum chambers, handheld agent fogging devices etc.) are available to both military and civil first responders to decontaminate materials from computers, tanks and sensitive equipment. Even though we cannot deny the efforts put into these developments, these solutions still require the first responder to enter the contaminated zone. Let us now turn to the state of the art of unmanned solutions in CBRNe response.

The only notable unmanned solution to decontamination is Kärcher's automated DSAP shower tent. The 240-C4T version with four tents is an automated decontamination solution as it includes a traffic light system for the victims to undress themselves, shower themselves, and redress without the need of physical assistance from a first responder. Although the first responders are still very close to the contaminated area, the traffic light system is a small adaption made that allows first responders to work out of the danger zone. The most promising unmanned solutions to infrastructural decontamination, on the other hand, are UGVs (unmanned ground vehicles). The combination of CBRN agents and IEDs (improvised explosive devices), have encouraged the development of UGVs with counter-CBRN capabilities. These have been developed based on already-existing robots specialized in C-IED and EOD (explosive ordnance disposal) tasks in order to allow for the removal of the first responder from hazard: a characteristic that is particularly relevant to the CBRN field. The current available capabilities of UGVs in response to CBRN threats are related to CBRN detection. This includes CBRN-sensors detectors, x-ray equipment and modules that can be mounted onto the chassis on the mounting points of robots in order to alert and report CBRN threats. The available modules do not include decontamination modules. UGVs and their modules are of particular interest, as the modular solution means a minor addition to the currently available technologies, whilst adding an entire decontamination of CBRN capability. Why can't other minor adaptations or more significant developments make unmanned decontamination a reality?

►► Read the full article at source's URL.

Marlène Meunier is currently an analyst at IB Consultancy and Homeland Defsec. She completed her bachelors in International Relations and Political Science with a focus on EU Institutions and Security. Having worked in international environments, specifically in Europe and Asia, multicultural awareness in project management has been developed through experience in the field with projects completed in Indonesia and in the Netherlands. Having been professionally active in Security and Defense Consultancy and Event planning since June 2017, invaluable experience and knowledge was gained in the field of CBRN and decontamination, working with the industry, government decision-makers and first responders. Her experience at the French Parliament has also expanded her knowledge on the relations between the French government, legislation, policy-making and the European Union.

Aldehyde medical skin decontamination kit

Source 1: <https://opecosystems.com/shop/item/aldehyde-medical-kit/decontamination-systems>

Source 2: https://opecosystems.com/persistent/catalogue_files/products/aldehyde_aldehyde_med_s-short-en.pdf

Aldehyde (OWR) is a rapid and effective skin decontamination system, delivered through a handy dual stage spray bottle.

Aldehyde guarantees the fast and safe decontamination of all known Chemical Warfare Agents and is used as part of a personal NBC kit, a NBC first aid box in mobile medical units, or at decontamination stations (NBC or Medical). The system allows a rapid decontamination of skin, clothes and personal equipment during civil or military operations.



- Handy, reliable applicator
- Fast and efficient effect
- Easy to use
- Suitable for skin and personal equipment
- Medical product with EU CE-marking
- Essential for every modern NBC first aid kit.

The decontamination solution is applied directly to the skin and is distributed evenly through use of a sponge. For decontamination against CWA a contact time of 1 minute is sufficient, nonetheless the solution remains active for about 10-15 minutes.



Chemical Detection Sensors to be Installed in the New World Trade Center Transportation Hub in New York City

Source: <http://www.newswise.com/articles/chemical-detection-sensors-to-be-installed-in-the-new-world-trade-center-transportation-hub-in-new-york-city>

Nov 08 – In New York, a new magnificent architectural wonder in white, the [World Trade Center Transportation Hub](#), also known as the Oculus, attracts tens of thousands of commuters and visitors every day. The Oculus, which opened last year, lives up to both meanings of its name—‘oculus’ from Latin



means ‘eye’ and ‘opening’. On the inside, the ceiling is shaped like an eye with a horizontal pupil. On the outside, the empty space above the structure, an opening between skyscrapers, lets sunlight hit the memorial footprints of the Twin Towers during the fall equinox. The Hub connects two subway systems and provides access to multiple buildings that make up the World Trade Center.



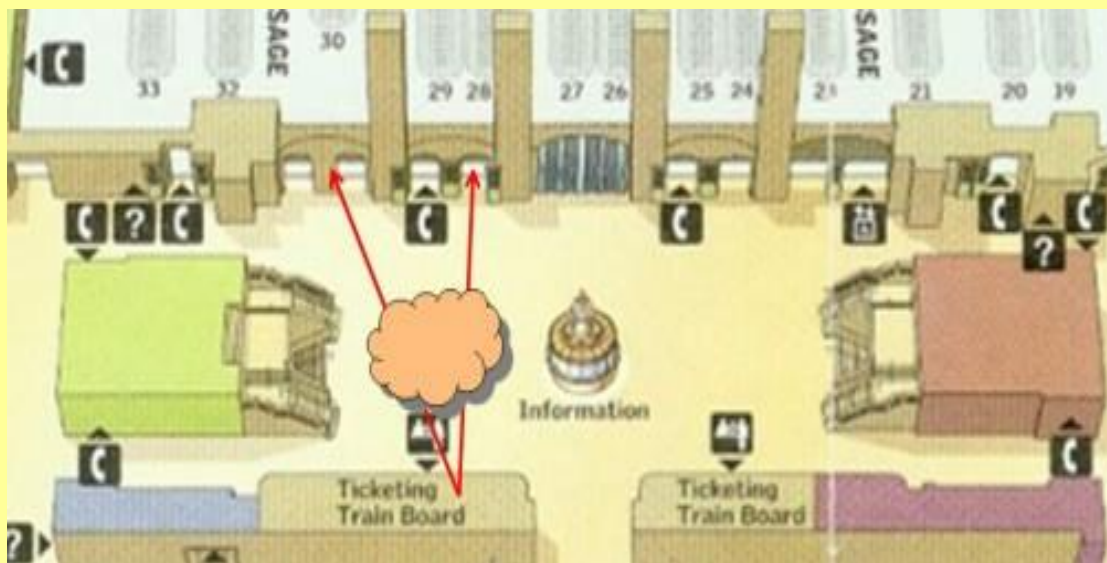
However, even the most beautiful and useful places are not immune to danger from terrorist chemical attacks.



The spacious atrium of the Oculus

To protect both the people and the World Trade Center Transportation Hub, the Department of Homeland Security (DHS) [Science and Technology Directorate](#) (S&T) entered into an agreement this spring with the [Port Authority of New York and New Jersey](#) to begin the design, establishment, operation and maintenance of a chemical detection testbed for identifying hazardous gases. A testbed is an environment where technology is positioned and tested. Together these institutions will examine the performance and effectiveness of already existing devices and will choose the most suitable ones for the Oculus.

“The goal is to achieve **independent detection by at least two different types of sensors in the event of an intentional release of a chemical dangerous to the public and employees** in the Oculus,” said Don Bansleben, program manager in S&T’s [Chemical and Biological Defense Division](#). The results from this testbed could be integrated into the Port Authority’s operational and emergency plans to enhance security and public safety measures.



A Bruker Rapid standoff detector scans area; lines represent view through chemical plume. The sensor identifies the chemical by measuring the infrared absorption caused by the plume



Intentional gas poisoning in public transportation dates back before 9/11. In 1995, a terrorist group called Aum Shinrikyo released self-made sarin nerve gas from a bag they left in a Japanese metro station. The gas killed 11 people and injured about 1,000. Chemicals, such as sarin gas, mustard gas and chlorine, a widely produced industrial chemical, have also been used in recent wars – the Iran-Iraq War in the 1980s and, most recently, in the Syrian conflict.

Although nearly all countries in the world have signed a Chemical Weapons Convention treaty for prohibiting the production and usage of chemical warfare agents, “there is a concern that people can secretly make these types of deadly chemicals, and easily walk in the subway with a backpack and release them,” said Bansleben. “To save lives, the Port Authority is interested in protecting this very large space.”

The Oculus is not the first place to be equipped with chemical sensors. U.S. public transportation spaces such as the Grand Central Terminal in New York City, and Washington, DC metro system have used such devices since the early 2000s. Hidden in nonobtrusive vented cabinets, chemical detectors are constantly sampling and scanning the air, looking for hazardous gases.

S&T, who funds this project, contracted the [Argonne National Laboratory](#) to install chemical sensing technology in a fashion to achieve maximum coverage of the volume of the Oculus. To achieve more reliable detection, the Lab will install different types of sensors that use two different physical techniques—**point and standoff**. If both techniques independently confirm a dangerous chemical present in the area, authorities will be alerted that a hazard is present.

◆ **Point detectors** register only substances that are close to them. These detectors sample the air to look for hazardous gases using Ion Mobility Spectroscopy and compare them quickly to a library of chemicals.

◆ **Standoff detectors** cover large areas via an infrared laser using the analytical technique of Fourier Transform Infrared Spectroscopy.

“For example, one of these sensors may be sending an infrared beam across a large space, and if the beam passes through a cloud of hazardous material, it may absorb the energy,” said Bansleben. “Every molecule has a fingerprint in the infrared region and will absorb energies at different frequencies; if there is a match, security would be alerted.”

Sometimes **cleaning chemicals may cause an alarm** to go off because of a similarity in a physical property to a threat chemical. False alarms, if they were to occur often, are problematic because they may cause unnecessary evacuation and thus make the technology unreliable. “Combining multiple techniques is the best way to achieve protection and avoid false positives,” Bansleben said.

If a sensor at a certain location identifies a hazard, it will alert the local operations center. Then the operators will notify security and, if needed, the Fire Department, First Responders, and the Police. If the authorities predict a wide spread of the chemical, they will evacuate the public immediately.

The project started just after September 11 this year, and the detectors, which will not be in plain sight, will be tested in the Oculus for a period of 12 months under S&T’s guidance. This period allows the Argonne National Lab to see how accurately the devices work, analyze collected data, and work with detector vendors to improve the technology.

After a year of successful testing, the Argonne National Lab will teach the Port Authority how to use the chemical detectors for another year. Then in 2019, S&T anticipates donating most of the detectors to the Port Authority so that it integrates them into its emergency response actions.

“The World Trade Center is something that has a lot of meaning for this country since 9/11,” said Bansleben. “We are proud to support and protect public transit systems from terrorism.”

DHS warns of terror threats using drones, chemicals and planes

Source: <http://nypost.com/2017/11/10/dhs-warns-of-terror-threats-using-drones-chemicals-and-planes/>

Nov 10 – **The Department of Homeland Security has released an updated terror bulletin that highlights the threat of weaponized drones, chemical attacks and the continued targeting of commercial planes.**



"We continue to face one of the most challenging threat environments since 9/11, as foreign terrorist organizations exploit the internet to inspire, enable or direct individuals already here in the homeland to commit terrorist acts," according to the bulletin.

The National Terrorism Advisory System bulletin, which replaced the old color-coded system, provides the public and law enforcement a summary about ongoing and potentially new terror threats.

"The current bulletin introduces unmanned aircraft systems as potential threats and highlights sustained concern regarding threats against commercial aviation and air cargo," DHS acting press secretary Tyler Houlton said in a statement.

A senior DHS official [told ABC News](#) that there has been an "uptick in terrorist interest" in using drones as weapons in the US and other western countries.

The official said the department wants to "guard against those tactics being exported to the West."

Since the previous bulletin, concerns about terrorist targeting the aviation industry have grown, the official said.

"[T]errorists continue to target commercial aviation and air cargo, including with concealed explosives," according to the updated bulletin.

TSA screeners, their equipment or their procedures flunked more than half of the undercover tests conducted by Homeland Security, a source familiar with a classified report [told ABC News](#).

When asked if the failure rate was 80 percent, the source replied: "You are in the ballpark."

Terrorists view "aviation as the crown jewel target," said former DHS secretary and current White House chief of staff John Kelly.

The bulletin also warns of the use of "poisons or toxins," about which there has been increasing chatter in the terror realm, the senior official said.

[The DHS response](#) to the terror threat is adapting as ISIS is close to defeat in safe havens, but continues to have branches and affiliates around the world.



EnVision CBRN

Source: <https://www.environics.fi/>

The ENVISION CBRN is a complete stand-alone CBRN detection product that can detect Chemicals and Biological contaminants using particle sizing and fluorescence and radiation using a GM tube. It includes the components of a ChemPro100i (with



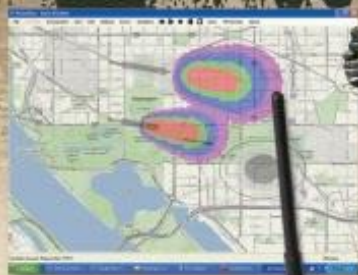
Radiation Detection Module) and a BioScout in one easily transportable pelican case. The ENVISION CBRN can be networked via hardwire interfaces that are provided standard, a custom wireless system can be performed by vendor. The system can consist of only one or several EnVision CBRNs linked to a portable or stationary control center. It features a 4.3" TFT WQVGA Display with touch screen and an integrated GPS Module. Note: Environics products are no longer distributed in the United States.



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CBRNe Master Courses awarded the 2017 "OPCW-The Hague Award"

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Department of Industrial Engineering and School of Medicine and Surgery

We are proud to announce that our [Master courses](#) have been awarded the prestigious "OPCW The Hague Award" for our outstanding contribution towards the goals of the Chemical Weapons Convention (CWC). Ambassador Üzümcü congratulated the award recipients and stated: "This year's winners have furthered the goals of the Chemical Weapons Convention to achieve a world free of chemical weapons".

The award ceremony will be held on 27 November in The Hague, during the first day of the Twenty-Second Conference of the States Parties to the Chemical Weapons Convention.



The Award

In 2014, the Organisation for the Prohibition of Chemical Weapons (OPCW) established the OPCW-The Hague Award to recognise and honour individuals and institutions that have made an outstanding contribution towards the goal of a world permanently free of chemical weapons; such contributions include promoting the peaceful uses of chemistry and preventing its misuse. The Award is a tribute reflecting the honour bestowed upon the OPCW for winning the Nobel Peace Prize in 2013 and is supported by a generous financial contribution from the City of The Hague.



Past Winners

The distinguished roster of past winners includes experts in analytical chemistry techniques, medical toxicology, the ethical use of chemistry, and the legal frameworks governing the elimination of all chemical weapons. These remarkable past winners share an uncommon dedication to working with others to eliminate chemical weapons and advance the peaceful use of chemistry.

- ◆ Dr Mahdi Balali-Mood
- ◆ Dr Alastair Hay
- ◆ Dr Robert Mathews

OPCW

As the implementing body for the Chemical Weapons Convention, the OPCW oversees the global endeavour to permanently eliminate chemical weapons. Since the Convention's entry into force in 1997 – with its 192 States Parties – it is the most successful disarmament treaty eliminating an entire class of weapons of mass destruction. Over 96 per cent of all chemical weapon stockpiles declared by possessor States have been destroyed under OPCW verification. For its extensive efforts in eliminating chemical weapons, the OPCW received the 2013 Nobel Prize for Peace.



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**Explosives
Knowledge Center**

ici-belgium.be/en/

EOD-10 Underwear with cooling properties

Source: <http://www.egozlin.cz/en/24878->

EOD-10 underwear set nanosilver® is used in combination with biological/chemical suits as underwear clothes. It is also designed and used for sport activities or common dressing in hot or extreme hot conditions. For quick sweat body releasing is this underwear produced with special Coolmax® fibre tested by racers in Really Dakar. The set is available in white, grey, burgundy and black colour.

Underwear properties

- Eliminates an odor in extreme works
- Antifungicidal/antibacterial
- Anti-allergic
- Absorption, is breathable and elastic
- Shape and design enables long-term and comfort wearing
- Treatment as common clothes without need of ironing
- Silver is firmly joined in fibre and is kept there within life-time fully, so antibacterial properties is provided for this period (to destroying)
- Antibacterial properties enables often usage without unpleasant odor

The set consists of:

- Under-Shirt with long sleeve (EOD-10/T)
- Under-legs (EOD-10/S)



Composition

52%polyestere (CoolmaxTM); 48%polyestere (antibacterial fibre nanosilver®)

Protective set EPP-10 Profi Protection

Source: <http://www.egozlin.cz/en/24878->

Protective biological and chemical protective suit with a overpressure protective hood provides optimum protection against dust, solid particles, aerosols, liquid organic and concentrated inorganic chemicals (also under pressure), against biological hazardous substances, radioactive substances and military warfare agents. It is classified in category III, type 3B, 4, 5 and 6 and meets the requirements of the standards: EN 14605, EN 14126 and EN 1073-2.

Properties of protective hood EOK-10:

- overpressure protective hood ensures a high level of respiratory protection against effect of life-threatening environmental impacts
- inner space of protective hood is protected by internal overpressure of air supplied from filter-ventilation unit (FVU) with combined filters which is placed on the user's comfort belt
- FVU supplies sufficient amount of filtered air (at least 120 dm³ / min)
- FVU is equipped with a visual warning and acoustic signals. A fully charged battery guarantees a minimum operating time of 4 hours
- acceptable level of internal overpressure ensures one-way exhalation valve





- large-visor

The set consist of:

- Chemical and biological suit
- Protective hood EOK-10/P
- FVU Proflow 2SC
- Combined filter, 2 pcs
- Protective gloves LATEX, 2 pairs
- Chemical protective boots
- Bag for bio-waste, 2 pcs
- Tightening tape, 3 pcs
- Pack for set

Protective biological and chemical suit EBO (category III, type 1-c B)

The protective biological and chemical suit with gas-tight adjustment, red: EBO-10

The protective biological and chemical suit EBO-10 with filtered air inlet enables the user to enter environments with a risk of presence of dangerous biological, chemical or deleterious substances. The inner space is secured by air positive pressure supplied

by filtration-ventilation unit that is hung on a belt inside the protective suit.

Properties:

- user's protection is secured by inner positive pressure
- filtration-ventilation unit supplies sufficient amount of filtered air (120 dm³/min)
- accumulator guarantees at least 8 hours of operating time
- quality of filtered air is ensured by appropriate filters, placed outside the suit
- optimal volume of inner positive pressure is ensured by one-way overpressure valves
- large view-through
- special hermetic zip fastener
- all seams are super-sealed by elastomeric mixture
- fabric: butyl rubber



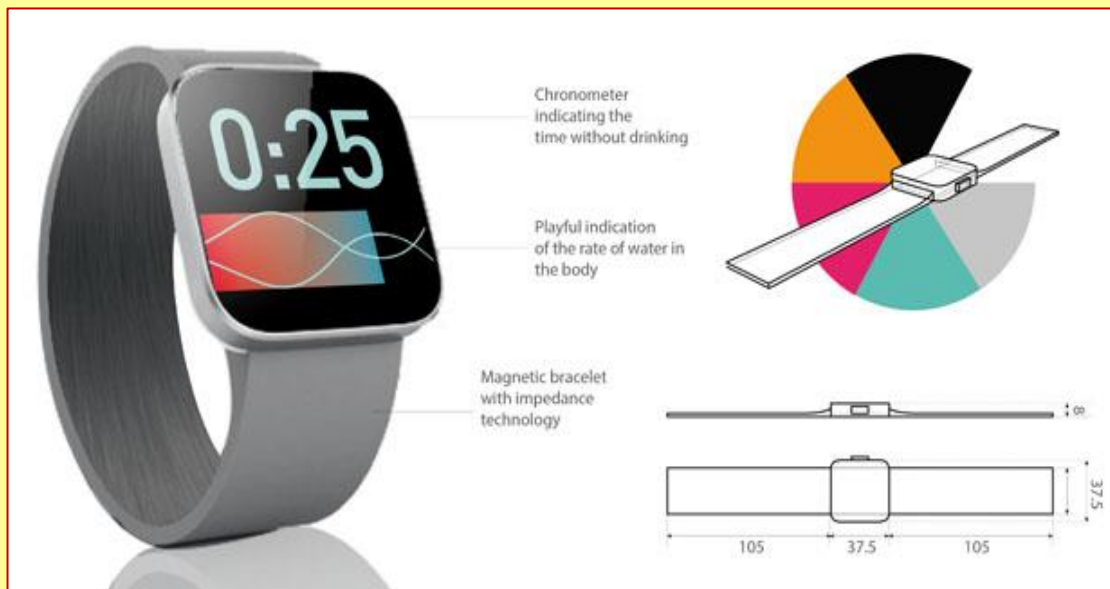
tH2O Medical Bracelet Monitors Hydration Levels of Your Body

Source: <http://www.tuvie.com/th2o-medical-bracelet-monitors-hydration-levels-of-your-body/>

tH2O medical bracelet is a design submission by Maeva Berthelot, it's a concept wearable [device for elderly people](#). Due to the loss of thirst notion, the dehydration of the elderly is frequent and may generate health problems. This medical bracelet assists the elderly people by reminding them to drink and allowing



them to watch their water rate in a simple way. This bracelet is also a great support for medical aids and auxiliary life, because it provides visualization user's water consumption level.



Designer : Maeva Berthelot

EDITOR'S COMMENT: Not a bad idea for First Responders dressed in PPEs (various types) in order to avoid dehydration and thermic shock.



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BIO NEWS



World leaders rehearse for a pandemic that will come 'sooner than we expect'

Source: <https://www.washingtonpost.com/news/to-your-health/wp/2017/10/24/world-leaders-rehearse-for-a-pandemic-that-will-come-sooner-than-we-expect/>

Oct 24 – The government ministers were facing a new infectious disease outbreak. The mysterious virus was sickening and killing people with alarming speed. Some patients had to be placed on ventilators to help them breathe. The new virus seemed resistant to antiviral medicine.

Within a week, officials had closed a major hospital and schools and quarantined thousands of people. Fear and panic spread quickly as people in neighboring countries became infected and died.

That scenario was part of a [pandemic](#) simulation held during the World Bank's annual meeting in Washington this month. It's not the kind of event that people would typically associate with the World Bank. But it's the fourth such exercise the bank has helped organize in the past year, reflecting what experts say is the growing awareness outside the traditional global health sector of the increasing threat and economic disruption posed by a global pandemic.

The chaotic and "horrendously inefficient" early response to the [2014 Ebola epidemic](#) in West Africa that killed more than 11,000 people was the catalyst for the simulations, said Tim Evans, senior director for health, nutrition and population at the World Bank.

"We realized that people were just making it up as they were going along, including us," Evans said, referring to the [Ebola response](#). The bank wanted to "move from a history of panic and neglect to one where we're going to start to prepare much more systematically to be ready for the 100 percent probability we will be dealing with this again," he said. "Probably sooner than we expect."

Outbreaks of life-threatening infectious diseases are [spreading faster](#) and with more unpredictability than ever.

An unusually [large plague outbreak](#) in Madagascar has killed 106 people since August. About 70 percent of the cases are the [more virulent form](#) of pneumonic plague that spreads by coughing, sneezing or spitting and is almost always fatal if untreated with antibiotics.

In Uganda, officials are on high alert because of a [recently reported outbreak](#) of the deadly Marburg virus that has [killed one person](#) and may have exposed hundreds more at health facilities and during traditional burial ceremonies. Marburg is a highly infectious hemorrhagic fever similar to Ebola and is among the most virulent pathogens known to infect humans.

For the World Bank simulation, organizers looked at the impact on travel and tourism of an outbreak of a mysterious respiratory virus in a hypothetical country. Participants included finance, health and tourism ministers from about a dozen countries, and officials from organizations including the World Health Organization, the Centers for Disease Control and Prevention, and the International Air Transport Association.

Discussions during the 90-minute session were off the record. But in interviews after the event, organizers said the step-by-step scenario made the theoretical possibility seem very real for participants. In particular, it drove home the need for speedy, accurate information-sharing and strong coordination within and across governments and institutions.

In today's fast-paced world, information flows through unofficial channels much faster than through official ones, said Ron Klain, who was the United States' [Ebola czar](#) during the epidemic and served as the moderator for the simulation.

"Government officials need to be more in sync with that and adjust to that," Klain said. Officials who rely on once-a-day updates in outbreak situations need to understand the importance of releasing accurate information in real time, he said.

"I think the exercise clearly flagged that, and the ministers and others really focused on that," he said.

Participants in the simulation were shown hypothetical social media posts. One news story about a cruise ship passenger who worked



in a lab researching the virus was seen by thousands of people within minutes of being posted on Instagram.

That part of the simulation was similar to what happened during the Ebola epidemic. A U.S. Coast Guard [helicopter and plane](#) were dispatched to a cruise ship off the coast of Mexico to obtain blood samples from a passenger on vacation. She had, 19 days earlier, been working in a lab at a Dallas hospital and possibly had come in contact with a sealed vial of blood belonging to Thomas Eric Duncan, a Liberian [who died](#) in October 2014, the first person to die of Ebola in the United States.

She had no symptoms, and blood tests later confirmed what doctors already knew: She did not have Ebola. (The only two people who caught Ebola in the United States were nurses caring for Duncan.)

The World Bank conducted its [first pandemic simulation](#) for finance ministers at its annual meeting last year. In January, the bank and the Bill and Melinda Gates Foundation hosted another simulation for chief executives of major companies at the World Economic Forum's annual meeting in Davos, Switzerland, in January. In July, they worked with German Chancellor Angela Merkel to conduct a pandemic simulation for health ministers at the G-20 governments meeting, which traditionally focus on finance and economics.

In the past, some countries have been reluctant to publicize outbreaks or [delayed reporting them](#) because of politics or worries about tourism and trade. In countries dependent on tourism, there is also political and economic pressure to take action that may turn out to be counterproductive for their economies, said Ryan Morhard, project lead for global health security at the World Economic Forum, which helped organize the World Bank simulation.

[Imposing quarantines](#) or closing borders may be seen as aggressive action, but those measures wouldn't necessarily be effective against a disease that spreads without symptoms, and could be "equally devastating to that economy," Morhard said.

Coordination also requires health ministries to work across the government with the finance and tourism sectors. "But that's not the way governments are usually set up any place in the world," Klain said. Most government systems "are really built in silos, nationally and internationally."

Although there is more awareness about the issue, experts agree that the world is [not prepared for the next pandemic](#).

"We still are not ready for the big one," Klain said, noting that next year is the centennial of the [great influenza pandemic](#) of 1918 -1919 that killed at least 50 million people worldwide.

"We're frankly not ready for a medium-sized one. The threat is still out there."

Scientists explore national security implications of gene editing

Source: <https://phys.org/news/2017-10-scientists-explore-national-implications-gene.html>

Oct 24 – A trio of scientists from the University of Wisconsin-Madison and the Morgridge Institute for Research participated in an international think tank this month on the intersection of genome editing technology and national security.

The Oct. 11-13 conference, based in Hanover, Germany, assembled a global group of bioethics and government experts to address security questions on gene editing as they relate to human health, agriculture and the potential to genetically alter species. Experts from the United States and across Europe, China and

India explored ideas for harmonizing gene editing policies across national borders.

"The promise of this technology is tremendous, as are the potential pitfalls," says Dietram Scheufele, professor of life sciences communication, Morgridge affiliate and conference co-organizer. "But [genome editing](#) is here to stay, not just in medicine, but also in countless applications in agriculture and food systems. The question is how to responsibly roll out various applications in a way



that does not unnecessarily slow down innovation."

The ability to quickly and precisely edit genomes, through new technologies such as CRISPR Cas9, is only a few years old but the technology is moving at remarkable speeds with applications arising in human therapeutics. A number of new clinical trials aim to take cells from a patient, such as blood cells or immune cells, edit them and transfer them back with new power to undermine diseases like cancer or [sickle cell anemia](#).

Scheufele says the rapid development of CRISPR has also fueled speculation about potential military or other more nefarious applications. This includes using CRISPR to produce viruses that can be inhaled to create genetic mutations associated with lung cancer.

"When assessing the security implications of genome editing, it will be particularly important to include the voices of all stakeholders," says Dominique Brossard, professor of life sciences communication and Morgridge affiliate. "Risk is not only a technical concept that scientific experts can quantify."

In her keynote speech, Brossard described how public engagement exercises have to go beyond informing and consulting audiences, and should rather co-create the knowledge society needs for emerging technologies

Pilar Ossorio, Morgridge bioethicist in residence and UW-Madison law professor, notes that while human [clinical trials](#) are highly regulated, other potential genome editing applications are less so. One area of particular concern are gene drives, a genetic editing technique that could

spread genetic modifications within a species. Such modifications could be introduced, for example, in mosquito populations, to attack their ability to carry [human health](#) threats such as malaria and the Zika virus.

"There are safety and environmental concerns about releasing an organism that has a gene drive into the wild," Ossorio says. "But security experts also worry about a [gene drive](#) that could be used to gradually poison a food supply, or enable a mosquito to transmit more rather than less virus."

Assessing the real threats will be difficult with a technology this young, but its relative ease of use and the scope of applications will make it more challenging, Ossorio says. "Gene editing is unprecedented in that it gives us the capability to make hundreds of genetic changes at the same time, and the process can be done in people, other animals and in plants."

In recent highly publicized efforts, scientists used CRISPR to breed pigs that were free of retroviruses that could sicken people, potentially clearing a hurdle for pig-to-human organ transplants. Another project used [gene editing](#) to change the color of morning glory petals from purple to white.

"We cannot envision all of the directions this technology could take," Ossorio says.

Adds Scheufele: "Many of the potential applications that have been flagged by some as problematic are far from being realistic scientifically. That's why it's important to have conversations now, with enough time to involve relevant stakeholders."



North Korea may be building biological weapons

Source: <http://nypost.com/2017/10/23/north-korea-may-be-building-biological-weapons/>

Oct 24 – **North Korea is suspected of producing biological weapons to unleash against enemy troops and civilians — including by fake janitors lugging backpack sprayers containing deadly pathogens, according to a report.**

"North Korea is likely to use biological weapons before or at the beginning of a conflict to disrupt society and create panic, incapacitate societies, and/or cause a significant military diversion," [according to](#)

[the Belfer Center for Science and International Affairs at the Harvard Kennedy School](#).

Dictator Kim Jung Un's rogue regime plans to spread the pathogens through various means such as missiles, drones, aircraft and even portable sprayers, the report said.

"It is theoretically possible that North Korean sleeper agents disguised as cleaning and disinfection personnel could disperse (biological weapons) agents with



backpack sprayers,” the report said.

The biological weapons also may be unleashed by the 200,000 special-forces troops, [the Korea Herald reported](#).

The Belfer Center says the hermit kingdom is producing the biological weapons in facilities disguised as agricultural research labs.

“It is likely that anthrax and smallpox is already used as a biological weapon,” the report said. “North Korean soldiers are vaccinated against smallpox, and so are US Army (personnel) stationed in South Korea — against smallpox and anthrax.”

North Korea has 13 types of biological agents that it can weaponize within 10 days, according to the report, which cites a 2015 South Korean Defense Ministry parliamentary audit.

Anthrax and smallpox are the likely agents it would deploy “in bioterrorism or in an all-out war,” according to the report. Others pathogens include the plague, cholera and botulism.

“Agents like anthrax could cause mass casualties with a small amount: only a few kilograms of anthrax, equivalent to a few bottles of wine, released into a dense city could kill 50 percent of the population,” the report said.

“If used on a large scale, these weapons can cause not only tens of thousands of deaths, but also create panic and paralyze societies.”

It is not known whether North Korea has the capability of weaponizing all 13 types of agents, the researchers said.

The report added that the difficulty in verifying North Korea’s capabilities arises in part from the mixed use of the equipment and facilities in creating the weapons.

“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,” the authors said.

“Moreover, equipment used for (biological weapons) production are often dual-use for agriculture, making external monitoring and verification virtually impossible.”

Meanwhile, North Korea threatened the US with an “unimaginable” nuclear strike for conducting military exercises with South Korea in the waters off the Korean Peninsula.

“The US is running amok by introducing under our nose the targets we have set as primary ones,” warned the state-run Korean Central News Agency, Newsweek reports. “The US should expect that it would face an unimaginable strike at an unimaginable time.” Japanese Defense Minister Itsunori Odonera warned that the North’s missile capabilities have grown to an “unprecedented, critical and imminent” level.

“Therefore, we have to take calibrated and different responses to meet that level of threat,” he said.



Smallpox Could Again Be a Serious Threat

By Gregory D. Koblentz

Source: http://www.slate.com/articles/technology/future_tense/2017/10/synthetic_biology_could_lead_to_the_re_emergence_of_smallpox.html

SynBioBeta, which bills itself as the world’s premier forum for innovators and investors interested in synthetic biology, concluded its sixth annual conference in San Francisco earlier this month. Companies from across the country and from around the world delivered presentations on how they are finding [biological solutions to human problems](#). The conference showcased how synthetic biology can be used to develop new drugs, protect the environment, and improve agricultural productivity.

But synthetic biology, like many other emerging technologies, is dual-use. The technological advances that fuel the amazing discoveries and products featured at the SynBioBeta conference can also be misused to cause harm.

The most recent dual-use concern about synthetic biology involves one of humanity’s oldest foes: smallpox. Smallpox was eradicated from nature in 1980, and all known stocks of the virus are located at World Health Organization-supervised repositories at the Centers for Disease Control and Prevention in the United States and at the [Vector Institute in Russia](#).



However, a Canadian scientist funded by the American biotech company Tonix has recently [demonstrated the ability](#) to create pox viruses from scratch. In this case, it was horsepox, a once-extinct virus resurrected by stitching together fragments of synthetic DNA to create an intact viral genome. [Poliovirus](#) was the first virus created in a laboratory by assembling the chemical building blocks of life in the pattern encoded in the virus' genetic sequence. The synthesis of horsepox virus was a significant accomplishment due to the much larger size of the virus and its more complicated biology.



Smallpox lesions are shown in this 1973 photograph in Bangladesh / Getty Images

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Although horsepox virus itself is not dangerous, the technology and techniques used to re-create horsepox can also be used [construct the closely related smallpox virus](#). At the Aspen Security Forum in July, Thomas Bossert, President Trump's homeland security adviser, [warned](#) that horsepox is "not going to kill any of us, but that suggests that somebody might in the future now possess the capability to produce synthetic smallpox without the live virus. And that scares me to death. ..."

The re-emergence of smallpox would be a global health disaster. Prior to its eradication, smallpox killed an estimated 300 million people, [more people than all the wars of the 20th century combined](#). Most of the world's population is susceptible to this lethal and contagious disease since routine immunization against smallpox was discontinued after the success of the WHO's global eradication campaign.

If resurrecting horsepox virus provides a roadmap to synthesizing smallpox virus, then why would anyone try to synthesize it? Because there are potentially legitimate uses for it. Tonix [claims](#) that the horsepox virus is a good candidate for developing a new, safer smallpox vaccine. Horsepox virus, smallpox virus, and the vaccinia virus that is used in smallpox vaccines are part of a closely related group of pox viruses. Vaccinia is the most well-understood of the pox viruses and is popular with scientists because it can stably integrate large segments of foreign DNA. Engineering pox viruses, such as vaccinia, could help create [new vaccines](#) and [cancer therapies](#). But any lab that creates these beneficial applications through synthetic biology would also have the capability to produce infectious smallpox virus from synthetic DNA. Unfortunately, the current legal and technical safeguards against the synthesis of smallpox virus are weak and fragmented. There is no clear international legal or regulatory framework to prevent the synthesis of smallpox virus. The WHO has a [policy](#) banning the synthesis of the smallpox and regulating who can produce and possess large fragments of smallpox DNA, but it hasn't been widely adopted by states. Furthermore, there is no mechanism—at either the national or international level—for detecting or punishing violations of this policy. The 1972 Biological Weapons Convention, which outlaws the possession of biological weapons, provides a



strong normative bulwark against the acquisition and use of smallpox, but without a verification system it would not present a meaningful obstacle to such an undertaking by a determined scientist, group, or state. Some companies' idea of customer screening is to make sure they have a valid credit card.

In addition, there is only an uneven patchwork of nonbinding regulations designed to prevent the misuse of synthetic DNA. Leading members of the DNA synthesis industry have formed the [International Gene Synthesis Consortium](#), which oversees a voluntary system for the screening of customers and gene sequence orders. The consortium accounts for 80 percent of the global market for synthetic DNA, which is a good start, but this leaves an uncomfortably large number of companies with no legal obligation to screen either customers or sequence orders for biosecurity purposes. Some companies' idea of screening customers is to make sure they have a valid credit card.

Unless these safeguards are strengthened soon, the capability to produce smallpox will be globally distributed and either loosely or completely unregulated. That will open the door for a disgruntled or radicalized scientist, sophisticated terrorist group, unscrupulous company, or rogue state to re-create the smallpox virus.

But there is still time to act to prevent that from happening. International organizations, national governments, the DNA synthesis industry, and the synthetic biology community all have a [role to play](#) in preventing the re-emergence of smallpox.

The first step should be making sure that this kind of research happens only at a small number of approved facilities. The WHO and the U.N. Security Council should create an enforceable international legal prohibition against the possession of smallpox virus outside of the two WHO-designated repositories, synthesis of the virus, and the use of smallpox as a weapon. In addition, governments, scientists, and private firms wishing to generate pox viruses using synthetic DNA should be required to seek the approval of the WHO.

The DNA synthesis industry should declare a temporary moratorium on the synthesis of pox-virus DNA fragments above a specified threshold until the WHO oversight system can be established. The industry should also create a mechanism to allow member companies to better share information about how they screen customers and sequence orders, conduct annual exercises to test these safeguards, and commission third-party audits of their biosecurity practices.

National governments should criminalize the unauthorized possession and synthesis of smallpox. They also need to require that any scientist receiving government funding for life sciences research can purchase synthetic DNA only from companies that adhere to strong biosecurity protocols (like those in place for members of the International Gene Synthesis Consortium). Governments should also sponsor research to increase the effectiveness and reduce the cost of the biosecurity measures adopted by industry.

More broadly, the life sciences community, particularly in the field of synthetic biology, needs to intensify efforts to raise awareness of these dual-use and biosecurity issues as early as possible in the scientific education process. The private sector, which is increasingly commercializing breakthroughs in synthetic biology, needs to be engaged as a partner in safeguarding the bioeconomy. Finally, the growing number of biohackers and citizen scientists interested in exploring synthetic biology should be nurtured in safe, secure, and transparent working environments.

These measures are intended not to prevent peaceful research on pox viruses, but to ensure that this work is carried out with the maximum level of transparency, safety, and security. The eradication of smallpox was one of humanity's greatest triumphs of the 20th century. Synthetic biology has the potential to revolutionize public health, medicine, energy, and environmental protection in the 21st century. But to reap the promise of this technology, we need to be vigilant about its perils.

►► An expanded version of this article appears in the September 2017 issue of [Health Security](#).

Gregory D. Koblentz is an associate professor and director of the Biodefense Graduate Program at the Schar School of Policy and Government at George Mason University and a member of the Scientists Working Group on Biological and Chemical Security at the Center for Arms Control and Non-Proliferation.



The dangerous combination of civil war and threat of global pandemics

Source: <http://www.homelandsecuritynewswire.com/dr20171027-the-dangerous-combination-of-civil-war-and-threat-of-global-pandemics>

Oct 27 – There are **thirty civil wars underway around the globe, where civilians are dealing with death and destruction as well as public health emergencies exacerbated by the deadly march of conflict.**

Yemen is battling an unprecedented [cholera outbreak](#) which has killed more than 2,150 people this year, with another 700,000 suspected cases of the water-borne disease. The government and a rival faction have been fighting for control of the country, taking 10,000 lives since 2015.

Some seventeen children in Syria have been paralyzed from a confirmed [polio outbreak](#) in northeastern districts, with forty cases reported in a country that had not had a case of polio since 1999. The cases are concentrated in areas controlled by opponents of President Bashar al-Assad.

And in the Democratic Republic of Congo — where the civil war officially ended years ago, but thousands of people still suffer from recurrent uprisings and scant infrastructure — a yellow fever outbreak was met last year with a [lack of vaccines](#). The WHO was forced to give inoculations containing a fifth of the normal dose, providing protection for only one year.

And yet today, of the nearly 200 countries on this planet, only six nations — three rich ones and three poor ones — have taken steps to evaluate their ability [to withstand](#) a global pandemic.

“The bottom line is that despite the profound global threat of pandemics, there remains no global health mechanism to force parties to act in accordance with global health interests,” write Freeman Spogli Institute’s (FSI) [Paul Wise](#) and [Michele Barry](#) in the Fall 2017 issue of [Daedalus](#).

“There also persists inherent disincentives for countries to report an infectious outbreak early in its course,” the authors write. “The economic impact of such a report can be profound, particularly for countries heavily dependent upon tourism or international trade.”

China, for example, hesitated to report the SARS outbreak in 2002 for fear of instability during political transition and embarrassment over early mishandling of the outbreak. Reporting cases of the 2013 Ebola outbreak in West Africa were slow and the virus killed some 11,300 people in Sierra Leone, Guinea and Liberia before the epidemic was declared over in January 2016.

“Tragic delays in raising the alarm about the Ebola outbreak in West Africa were laid at the doorstep of the affected national authorities and the regional WHO committees, which were highly concerned about the economic and social implications of reporting an outbreak,” Wise and Barry write in the journal published by the American Academy of Arts and Sciences.

Stanford [notes](#) that the *Daedalus* issue, “Civil War & Global Disorder: Threats and Opportunity,” explores the factors and influences of contemporary civil wars. The twelve essays look at the connection of intrastate strife and transnational terrorism, the limited ambitions of intervening powers, and the many direct and indirect consequences associated with weak states and civil wars.

“Wise and Barry, both medical doctors with extensive field experience in violence-prone developing countries, analyze the relationship between epidemics and intrastate warfare,” write FSI’s [Karl Eikenberry](#) and [Stephen D. Krasner](#) in [their introduction](#) to the issue that includes eight essays by Stanford University faculty.

“Their discussion is premised on the recognition that infectious pandemics can threaten the international order, and that state collapse and civil wars may elevate the risk that pandemics will break out,” they wrote.

Eikenberry and Krasner hosted [a panel discussion](#) about the new volume of *Daedalus* with FSI senior scholars, including Wise and Barry, on 23 October. Podcasts with the authors will be available at FSI’s [World Class](#) site over the next few weeks.



Prevention, detection, and response

Barry and Wise believe there is significant technical capacity to ensure that local infectious outbreaks are not transformed into global pandemics. But those outbreaks require some level of organized and effective governance — and political will.

Prevention, detection, and response are the keys to controlling the risk of a pandemic. Yet it's almost impossible for these to coincide in areas of conflict.

Prevention includes solid immunization programs and efforts to reduce the risk of animal-to-human spillover associated with exposure to rodents, monkeys and bats.

Then, early detection of an infectious outbreak with pandemic potential is crucial, through a methodical surveillance structure to collect and test samples drawn from domestic and wild animals, a capacity sorely lacking in areas of conflict and weak governance.

"Civil wars commonly disrupt traditional means of communication," they write. "The Ebola virus outbreak in West Africa exposed glaring weaknesses in the global strategy to control pandemic outbreaks in areas with minimal public health capacity."

New strategies that utilize satellite or other technology to link remote or insecure areas to surveillance are urgently needed, they said.

Then there is the response in countries where civil war not only makes it difficult, but politically treacherous.

In Syria, there had not been a case of polio reported since 1999. In 2013, health workers began to see children with the kind of paralysis that is associated with a highly contagious polio outbreak.

"However, the government and regional WHO office have been intensely criticized for their slow and uneven response," the authors note, particularly the government's resistance to mobilizing immunization efforts in areas sympathetic to opposition forces.

Pressure from international health organizations and neighbors in the region ultimately led to the reinstatement of vaccination campaigns throughout Syria.

"The Syrian polio outbreak is an important reminder that health interventions, though technical in nature, can be transformed into political currency when certain conditions are

met," they write. "At the most basic level, the destruction or withholding of essential health capabilities can be used to coerce adversaries into political compliance, if not complete submission."

Strengthening global oversight

The only comprehensive global framework for pandemic detection and control, the authors write, is the [International Health Regulations](#) treaty, which was signed in 2005 by 196 member-nations of the World Health Organization to work together for global health security.

The IHR imposed a deadline of 2012 for all states to have in place the necessary capacities to detect, report and respond to local infectious outbreaks. But only a few parties have reported meeting these requirements, and one-third has not even begun the process. There have also been efforts to enhance state reporting of health systems capacities through voluntary assessments of countries working through the [Global Health Security Agenda](#) consortium.

But both frameworks, Barry said in an interview, need financial and political support.

"I see a stronger IHR with more than words — but actual money behind it in order for it to become stronger," said Barry, noting the Global Health Security Agenda ends in 2018 and she has been asked to sit on a NAAS task force to form its next iteration. "I'm hoping we can move the needle to put money into bio-surveillance and health security, especially in conflict areas." Why should Americans care?

"Pathogens know no borders," Barry said. "And with climate change, we have tremendous movement of vectors; with globalization and billions of people routinely in flight, we have tremendous health threats traveling first class and coach."

Twenty countries at high risk

Meanwhile, some twenty countries are at high risk for pandemic emergence. The two Stanford professors are urgently calling for "new approaches that better integrate the technical and political challenges inherent in preventing pandemics in areas of civil war."

Wise and Barry note that human factors, such as the expansion of



populations into previously forested areas, domesticated animal production practices, food shortages, and alterations in water usage and flows, have been the primary drivers of altered ecological relationships.

So globalization with climate change brews the perfect storm.

“There is substantial evidence that climate change is reshaping ecological interactions and vector prevalence adjacent to human populations,” they said. “Enhanced trade and air transportation have increased the risk that an outbreak will spread widely. While infectious outbreaks can be due to all forms of infectious agents, including bacteria, parasites, and fungi — viruses are of the greatest pandemic concern.”

Science suggests the greatest danger of pandemic lies in tropical and subtropical regions where human and animals are most likely to interact. Most of the estimated 400 emerging infectious diseases that have been identified since 1940 have been zoonoses, or infections that have been transmitted from animals to humans. The human immunodeficiency virus (HIV), for example, is believed to have emerged from a simian host in Central Africa.

Recent analyses have suggested that the “hotspots” for emerging infectious diseases

overlap substantially with areas plagued by civil conflict and political instability.

The U.S. Agency for International Development and the Centers for Disease Control and Prevention have been working on the [Emerging Pandemic Threats Program](#) to improve local pandemic detection and response capacities by directing resources and training to countries thought to be at high risk for pandemic. However, it is not clear that this and related programs are addressing the political dynamics at the local level that will determine the essential cooperation of local communities with any imposed global health security response.

“The unpredictability of a serious infectious outbreak, the speed with which it can disseminate, and the fears of domestic political audience can together create a powerful destabilizing force,” Wise and Barry write in their conclusion. “Current discussions regarding global health governance reform have largely been preoccupied by the performance and intricate bureaucratic interaction of global health agencies. However, what may prove far more critical may be the ability of global health governance structures to recognize and engage the complex, political realities on the ground in areas plagued by civil war.”

The pandemic potential of latest H7N9 flu strains

Source: <http://www.homelandsecuritynewswire.com/dr20171027-the-pandemic-potential-of-latest-h7n9-flu-strains>

Oct 27 – **During China’s unprecedented fifth wave of H7N9 avian influenza activity, worrisome changes to the virus emerged, including a shift to a highly pathogenic form with some infections able to resist neuraminidase inhibitors such as Tamiflu, and now researchers who put the virus through its paces in animal studies are warning that the virus could easily become more lethal and resistant to treatment.**

The novel virus first emerged in humans in China in 2013 as a low-pathogenic strain and remained fairly stable until the fifth wave, which was marked by a surge of infections across a much wider swath of the country that piled up more than 700 human infections as it killed poultry flocks for the first time. The case total in the fifth wave accounts for almost half of the global total of about 1,600 human cases.

The H7N9 virus is already at the top of the US Centers for Disease Control and Prevention’s (CDC’s) potential pandemic flu threat rankings, and in March, flu vaccine advisors to the World Health Organization recommended new candidate vaccine viruses be produced in case vaccines are needed against the latest circulating H7N9 strains.

CIDRAP [says](#) that in the new study, published in [Cell Host & Microbe](#), a research team led by Yoshihiro Kawaoka, DVM, Ph.D., at the University of Wisconsin–Madison, conducted experiments in early 2017 to characterize and gauge the threat from a recent H7N9 sample isolated from a patient from China who died from the disease.



The main finding that has Kawaoka's team worried is that for the first time they've identified a flu virus that spreads among ferrets and is lethal in both the animals experimentally infected and the ones kept in close contact, suggesting airborne spread. In a press release from the university, Kawaoka said, "This is the first case of a highly pathogenic avian virus that transmits between ferrets and kills them. That's not good for public health."

Earlier ferret studies on the low-pathogenic form of the H7N9 virus also found some evidence of airborne spread, but transmission didn't appear to be as efficient.

Test-driving transmission, sensitivity to different antivirals

Before the patient included in the current study died, he or she had been treated with oseltamivir (Tamiflu), a neuraminidase inhibitor that is the gold standard for treating influenza infections. Using techniques to characterize the virus, the researchers saw signs that the virus had started to mutate. The patient's sample contained H7N9 virus that was sensitive to oseltamivir and some strains that were resistant.

Using recombination techniques, Kawaoka's group made two viruses virtually identical to the patient's, one sensitive to oseltamivir and the other containing the resistance mutation. Then they tested how well the viruses, along with an earlier low-pathogenic H7N9 virus for comparison, grew in human respiratory cells. All three strains grew efficiently, but the resistant strain less so.

In the next experiments with different mammals—mice, ferrets, and macaques—they found that each virus caused illness, but to different degrees.

To see how each virus spread by respiratory droplets, they experimentally infected one ferret with one of the viruses and placed it a cage on the other side of a barrier from a healthy ferret. Each of the three ferrets infected with the different strains passed their viruses to the healthy cage-mates. Two ferrets infected with the nonresistant strains died, as did the previously healthy ferrets who were exposed to the infected animals' respiratory droplets.

Ferrets are thought to be the best animal model for studying flu viruses in humans, because clinical symptoms and transmissibility seem similar. However, some experts doubt how well ferret studies predict what will happen in humans.

Kawaoka said that without additional mutations, the virus transmitted among and killed the ferrets, and he added that further changes might not be needed to make H7N9 a potential pandemic threat, though human-to-human transmission has so far been limited.

The group also examined the drug-resistant strain's response to oseltamivir and confirmed that it didn't respond to the drug. However, they found that it did respond to favipiravir, a polymerase inhibitor that so far has only been approved by Japan for emergency use in a pandemic setting.

In their conclusions, the researchers wrote that earlier ferret studies on highly pathogenic H5N1 suggested several mutations would be needed for the virus to spread efficiently through respiratory droplets, and that taken together, studies so far hint at highly pathogenic H7N9 viruses possibly posing a greater pandemic threat than H5N1.

"I don't want to cause alarm, but it's only a matter of time before the resistant virus acquires a mutation that allows it to grow well, (rendering it) more likely to be lethal at the same time it is resistant," Kawaoka said in the press release.

Obstacles to identifying mutation red flags

So far, it's not known what mutations would enable the oseltamivir-resistant virus to grow well, and Kawaoka said a moratorium on gain-of-function (GOF) experiments that might identify potential markers is still in place after several years.

His group was one of two that conducted GOF experiments with H5N1 to tease out what mutations might make the virus a greater threat, which in 2011 triggered "dual-use" concerns—worries that research meant for beneficial purposes could be used to create bioterror threats or for other ill purposes.

Much of the debate hinges on the usefulness of the experiments for pandemic planning—identifying surveillance markers and developing vaccines and drugs—and if any benefits outweigh the risks of an accidental or intentional lab release.



CIDRAP notes that in 2014, the Obama administration announced a moratorium on federal funding for GOF studies, though it allowed some studies involving Middle East respiratory syndrome coronavirus (MERS-CoV) and flu to resume. A federal advisory group tasked with coming up with recommendations to help federal officials weigh their GOF funding decisions finished its work in 2016.

In January, the White House Office of Science and Technology Policy (OSTP) issued guidance for federal departments to develop mechanisms for care and oversight of potential pandemic pathogens, as they adopt their policies for reviewing and funding research involving those pathogens.

Ryan Bayha, director of strategic engagement with the office of science policy at the National Institutes of Health, said the Department of Health and Human Services is in the process of finalizing a review process based on the OSTP guidance. When the HHS policy is finalized, NIH would then be able to lift the pause," he said.

Kawaoka said scientists need a better understanding of why H7N9 is lethal and transmissible, and what's different about the resistant strain. "If we know that, because there are multiple viruses circulating, we could narrow down efforts to those that are lethal and transmissible."



World not prepared for H7N9 threat

Michael Osterholm, Ph.D., MPH, director of the University of Minnesota's Center for Infectious Disease Research and Policy (CIDRAP) said the study's findings bolster concerns that experts already have about H7N9. "The study is another very stark reminder that we could be sitting on top of a global time bomb with H7N9," he said. CIDRAP is the publisher of CIDRAP News.

Large gaps in pandemic preparedness still remain, and if H7N9 triggers a pandemic, the vaccine would likely play a limited role, he said.

Osterholm added that little work has been done to create strong global supply chains of the critical supplies and services that would be needed to battle pandemic flu, and he predicted critical shortages of drugs and equipment such as respirators if the next global flu threat is even close to the severity of the 1918 pandemic virus.

More than 1,300 suspected plague cases reported in Madagascar

Source: <http://www.homelandsecuritynewswire.com/dr20171030-more-than-1-300-suspected-plague-cases-reported-in-madagascar>

Oct 30 – **The World Health Organization (WHO) reported a total of 1,309 suspected cases, including 93 deaths, in an update 27 October on the plague outbreak in Madagascar. The case-fatality rate for the outbreak is now 7 percent.**

The numbers reflect an increase of 12 cases and 9 fewer deaths from the WHO's previous update on 20 October.

The number of new plague cases continued to decline for the second week in a row, with 12 affected regions reporting no new cases. All suspected cases were reported between 1 August and 24 October, with the majority (882 or 67 percent) confirmed as pneumonic plague, the only type of plague transmitted from person to person. The WHO said as of 24 October, 94 percent of traced case contacts had received prophylactic antibiotics.

A total of 186 suspected cases are unspecified and undergoing further testing. Seventy-one healthcare workers have been infected in this outbreak, but none of those cases have proved fatal.

Plague is endemic in parts of Madagascar, and though the outbreak began with one epidemiologically linked cluster, the WHO warned that the risk at the national level is still "very high." The risk of international spread, however, is deemed "very low" because of the short incubation period for pneumonic plague.

In other plague news, the European Centre for Disease Prevention and Control (ECDC) [released](#) new guidelines for detecting plague on ships and airplanes, and for using [personal protective equipment](#) (PPE) in healthcare settings with suspected plague patients.



For traveling, plague should be suspected when a person has traveled from an active outbreak area and reports persistent fever, cough, and trouble breathing. Prophylactic antibiotics may be given to any passengers or crew that came into contact with the person.

Plague patients should be isolated, if possible, in healthcare settings and healthcare workers should wear protective coverings, gloves, and masks.

New Biosecurity Threats Appear in Less Familiar Forms

Source: <http://www.contagionlive.com/publications/contagion/2017/november2017/new-biosecurity-threats-appear-in-less-familiar-forms>

Nov 01 – Infectious diseases pose a threat from multiple avenues—naturally occurring events such as outbreaks, accidental incidents like lab errors, and intentional acts of bioterrorism. Globalization, growing populations, and increasing encroachment of humans onto animal habitats have increased the risk for spillover and natural outbreaks. From the laboratory side, the threat is a mixture of biosecurity and biosafety. Biosecurity measures are those that seek to protect the organisms from nefarious actors, while biosafety practices look to protect investigators (or the public) from accidental exposures. The Ebola outbreak in 2014 and 2015, the Zika virus epidemic of 2015 and 2016, findings of smallpox vials in National Institutes of Health laboratory freezers in 2014, and continual lab errors involving mishandling and shipping of live select agents all highlight the threat of natural and accidental events. Although these recent occurrences have reinforced the need for preventive and responsive measures, the threat of bioterrorism can seem a bit distant; however, with advances in biotechnology and global travel, we must remain vigilant.

The 2001 Amerithrax attacks easily come to mind when discussing the threat of bioterrorism. Following the September 11, 2001, attacks, letters laced with anthrax added a new horror to the United States, a country that was already vulnerable. The Amerithrax attacks killed 5 individuals and sickened 17 and are considered the worst biological attacks in US history.¹ The decontamination costs alone were estimated to be \$320 million, and challenges with postexposure prophylaxis recommendations and compliance only added to the chaos.² Perhaps one of the most unexpected aspects of this attack was the conclusion that US Army Medical Research Institute of Infectious Diseases biologist and anthrax expert Bruce Ivins, PhD, was considered the most likely culprit (he later took his own life prior to charges being filed).³

Typically, bioterrorism is thought of in terms of attacks like the ricin release by Aum Shinrikyo in the Tokyo subway and the poisoning of salad bars with *Salmonella* by the Rajneeshee cult in Oregon.⁴ All these attacks involved fanatical groups and revealed deep-rooted challenges with the science of acquiring, growing, weaponizing, and disseminating complex biological weapons. The Amerithrax attacks were different because the anthrax was delivered in a fine powder that ensured easy inhalation exposure. Many were surprised that the threat came from not only a scientist but also an American researcher working at an infectious disease institute aimed at protecting the United States. Moreover, Dr. Ivins had the means and capacity to make the attack exponentially worse but simply had chosen not to.³

It was during this time that significant gaps were found within the United States' response to such an attack. Whether it was who was responsible for decontamination, physician capacity to diagnose agents likely to be used for bioterrorism, or the sensationalized news, numerous factors left the United States truly struggling to handle such an event.⁵ The Amerithrax attacks gave insight into not only the poor American preparedness and response for bioterrorism but also a new source for weapons: skilled scientists.

Although there is always the potential for nonstate actors—ISIS, for example—to develop crude biological weapons, a more recent focus regarding biothreats has aimed at emerging technology.⁶ The scientific capabilities and tacit knowledge of bioterrorism will ultimately affect the bioweapon, whether it be the selection of organism, the crude design or complex dissemination method, etc. The Amerithrax attacks gave us a small window into the capabilities of a nefarious individual with significant skills and knowledge in bacteria. Recent biotech advances have added a new spin to biothreats.



For example, the biotech industry is rapidly growing, bringing new technologies like synthetic biology, digital-to-biological converters, and gene-editing tools like CRISPR-Cas9 to the masses.⁷ CRISPR can effortlessly be purchased online for \$150, making the process significantly easier.⁸ A tool that can easily edit DNA like a pair of scissors with a copy and paste has the potential to prevent mosquitoes from transmitting malaria and to remove chronic conditions from humans. Gene editing also has the capacity for gene drive, which allows genetic traits to be quickly passed down through generations. The potential for CRISPR is endless, and yet it has many scientists worried. The ease of use and access, not to mention very limited federal oversight, could have unintended effects due to a garage-biohacker's tinkering around with DNA. Jennifer Doudna, PhD, one of the inventors of CRISPR, expressed her worry about this very act, noting, "I think there's sort of the potential for unintended consequences of gene editing in people for clinical use. How would you ever do the kinds of experiments that you might want to do to ensure safety?"⁹ Although CRISPR has made gene editing easier and more accessible, there also exists the hazard of dual-use research of concern (DURC), like that of gain-of-function research (GoF). DURC is life sciences research that, despite its good intentions, has the capacity to be directly misapplied to pose a threat to humans, animals, the environment, agriculture, etc. The recent news that a Canadian research team reconstituted horsepox with little specialized knowledge, mail-ordered DNA fragments, and \$100,000 highlights the DURC debate.¹⁰ Although the research has yet to be published, the concern is not only that this process could be applied to reconstitute smallpox but also that the research was not flagged in the review process for risks related to dual-use research. The horsepox experiment points out the possibility that such work can be done and that even at the most structured level, proper risk review is not being done.¹¹ Moreover, such an experiment raises concerns for lowering the barriers to experiments using smallpox and normalizing DURC in a manner that could be dangerous.

GoF is one of the most common examples of DURC. Experiments with GoF involve increasing the virulence, transmissibility, or host range of pathogens. Although this research is performed to better understand current diseases and what it would take for them to evolve to have more pandemic potential, this research inherently worries many in the research community because of the risk of accidental release or intentional misuse by a nefarious actor. This first became an issue in 2012 when 2 research teams genetically modified H5N1 viruses to transmit efficiently between mammalian hosts to show the genetic mutation needed for the virus to sustain human-to-human transmission.¹² The concern over this research led to a federal moratorium's halting funding for such experimentation until guidance could be developed.¹³

What do CRISPR and DURC have to do with bioterrorism? In a word, everything. The growing biotech industry makes the science of genetic engineering easier and more accessible, while DURC means that research with pathogens of pandemic potential poses both a biosecurity and biosafety risk. Imagine a lab failure, which history proves can happen, that results in the release of a strain of H7N9 that has been modified to be easily transmitted among people or a strain of *Neisseria meningitis* that is highly resistant to antibiotics. This becomes even more relevant as the dramatic increase in biodefense activities and in the number of biosafety level 4 labs continues.¹⁴ Moreover, imagine that this incident is not an accident; rather, it has occurred because of a person with bioterrorist ambitions who acquired access to these labs or even an insider threat like Bruce Ivins. The truth is that the threat of bioterrorism is no longer beholden to the state program or cultish group with a makeshift lab in their garage but may also include a DIY biohacker or laboratory worker with nefarious intent.

How can we, as infectious disease practitioners, prepare or respond? First, knowledge is key. It is crucial to understand the threats, whether they are a natural outbreak, a lab breach you read about, or even just a review of the signs and symptoms of organisms we tend to worry about but may not see in the United States (such as severe acute respiratory syndrome, Middle East respiratory syndrome, anthrax, etc). Researchers should also consider the implications of their work and take the necessary review processes to ensure the proper biosecurity measures are taken.

Second, as simple as it sounds, practice vigilant infection control. That's right—hand hygiene, personal protective equipment use, rapid isolation of potentially infectious patients, and working with your infection prevention and control (IPC) resources. Fundamentally,



these practices will provide the first and most vital line of defense against the exposure and spread of a disease.

Third, keep an open communication channel with those IPC resources and your local public health department. If something seems off, say something. You are without a doubt the most vital part of identifying patients with unusual or concerning disease presentations. Every outbreak begins with someone asking questions and knowing when to bring in additional resources. Consider a surge of patients with the same symptoms during an off time of year or with symptoms of a rare disease. Although the surge could be a flu epidemic, or the result of a crowd from a major sporting event being exposed to a food-borne pathogen, it could also be something more sinister. By touching base with public health officials, you allow them to start investigating.

Last, don't stop what you're doing. Infectious disease threats present from all angles—natural, accidental, or as acts of bioterrorism—but they all require identification, isolation, and treatment from practitioners. The field of infectious disease and public health isn't for the weary, and every person is vital to global health security.

Ms. Popescu is a hospital epidemiologist and infection preventionist with Phoenix Children's Hospital in Phoenix, Arizona. She is currently a PhD candidate in Biodefense at George Mason University, where her research focuses on the role of infection prevention in facilitating global health security efforts.

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EDITOR'S COMMENT: Fed up with CRISPR threats. If they are so dangerous why they do not forbid their use. Most probably they will do it when it will be readily available on the Internet – or is it already available (read Bill Gates interview [the one with 30 mil casualties from bioweapons])



Mapping the Microbiome of ... Everything

Source: <https://health.ucsd.edu/news/releases/Pages/2017-11-01-mapping-the-microbiome-of-everything.aspx>

Nov 1 – In the **Earth Microbiome Project**, an extensive global team co-led by researchers at University of California San Diego, Pacific Northwest National Laboratory, University of Chicago and Argonne National Laboratory collected more than 27,000 samples from numerous, diverse environments around the globe. They analyzed the unique collections of microbes — the microbiomes — living in each sample to generate the first reference database of bacteria colonizing the planet. Thanks to newly standardized protocols, original analytical methods and open data-sharing, the project will continue to grow and improve as new data are added.

Earth Microbiome Project collaborators collect and analyze samples from diverse environments around the world. Top left: Hiking through the rain forest of Puerto Rico to sample soils with students (credit:

Krista McGuire, University of Oregon).

Top middle: Colobine monkeys in China, whose fecal microbiomes were sampled for this study (credit: Kefeng Niu). Top right: Bat in Belize, whose fecal microbiome was sampled for this study (credit: Angelique Corthals and Liliana Davalos).

Bottom Left: Researcher sampling a stream in the Brooks Mountain Range, Alaska (credit: Byron Crump). Bottom middle: Swabbing bird eggshells from Spain (credit: Juan Peralta-Sanchez). Bottom right: Researcher sampling the southernmost geothermal soils on the planet, at summit of Mt. Erebus, Ross Island, Antarctica (credit: S. Craig Cary,

Univ. of Waikato, New Zealand).

The paper describing this effort, published November 1 in *Nature*, was co-authored by more than 300 researchers at more than 160 institutions worldwide.

The Earth Microbiome Project was founded in 2010 by Rob Knight, PhD, professor at UC San Diego School of Medicine and director of the Center for Microbiome Innovation at UC San Diego; Jack Gilbert, PhD, professor and faculty director of The Microbiome Center at University of Chicago and group leader in Microbial Ecology at Argonne National Laboratory; Rick Stevens, PhD, associate laboratory director at Argonne National Laboratory and professor and senior fellow at University of Chicago; and Janet Jansson, PhD, chief scientist for biology and laboratory fellow at Pacific Northwest National Laboratory. Knight, Gilbert and Jansson are also co-senior authors of the *Nature* paper and Stevens is a co-author.

“The potential applications for this database and the types of research questions we can now ask are almost limitless,” Knight said. “Here’s just one example — we can now identify what kind of environment a sample came from in more than 90 percent of cases, just by knowing its microbiome, or the types and relative quantities of microbes living in it. That could be useful forensic information at a crime scene ... think ‘CSI.’”

The goal of the Earth Microbiome Project is to sample as many of the Earth’s microbial communities as possible in order to advance scientific understanding of microbes and their relationships with their environments, including plants, animals and humans. This task requires the help of scientists from all over the globe. So far, the project has spanned seven continents and 43 countries, from the Arctic to the Antarctic, and more than 500 researchers have contributed to the sample and data collection. Project members are using this information as part of approximately 100 studies, half of which have been published in peer-reviewed journals.



"Microbes are everywhere," said first author Luke Thompson, PhD, who took on the role of project manager while a postdoctoral researcher in Knight's lab and is currently a research associate at the National Oceanic and Atmospheric Administration (NOAA). "Yet prior to this massive undertaking, changes in microbial community composition were identified mainly by focusing on one sample type, one region at a time. This made it difficult to identify patterns across environments and geography to infer generalized principles."

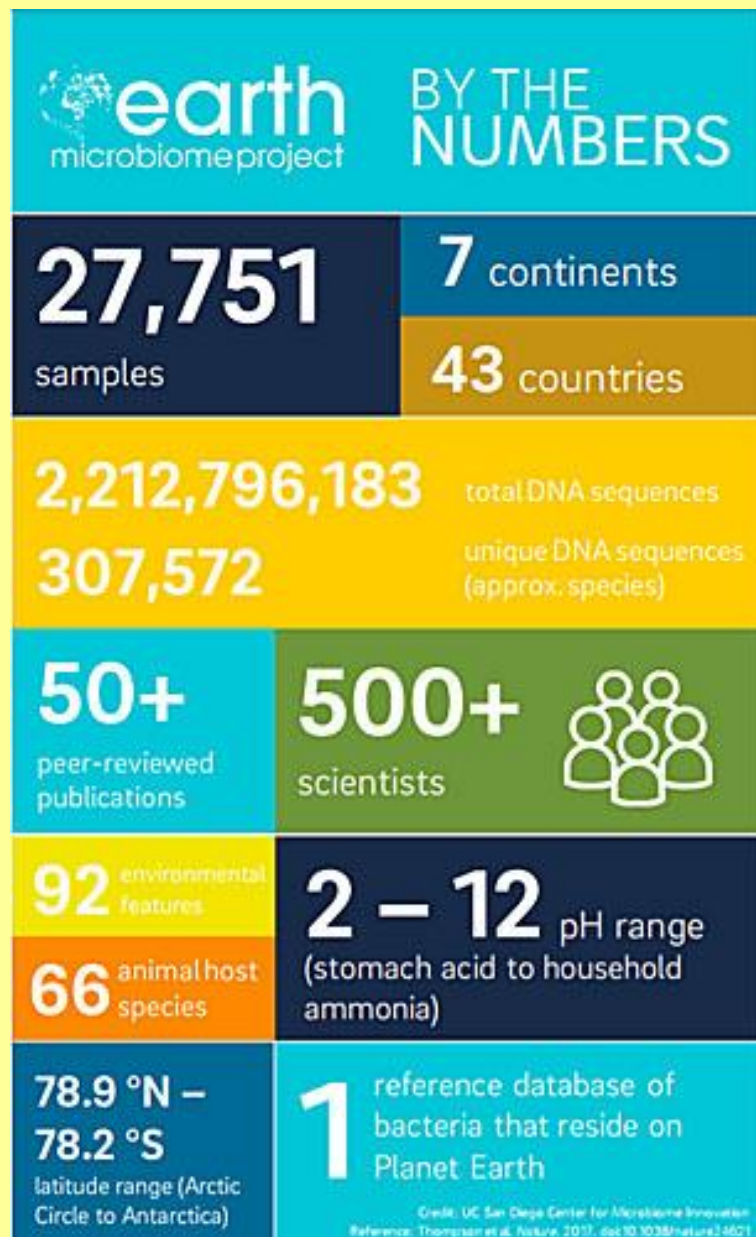
Project members analyze bacterial diversity among various environments, geographies and chemistries by sequencing the 16S rRNA gene, a genetic marker specific for bacteria and their relatives, archaea. The 16S rRNA sequences serve as "barcodes" to identify different types of bacteria, allowing researchers to track them across samples from around the world. Earth Microbiome Project researchers also used a new method to remove sequencing errors in the data, allowing them to get a more accurate picture of the number of unique sequences in the microbiomes.

Within this first release of data, the Earth Microbiome Project team identified around 300,000 unique microbial 16S rRNA sequences, almost 90 percent of which don't have exact matches in pre-existing databases.

Pre-existing 16S rRNA sequences are limited because they were not designed to allow researchers to add data in a way that's useful for the future. Project co-author Jon Sanders, PhD, a postdoctoral researcher in Knight's lab, compares the difference between these other databases and the Earth Microbiome Project to the difference between a phone book and Facebook. "Before, you had to write in to get your sequence listed, and the listing would contain very little information about where the sequence came from or what other sequences it was found with," he said. "Now, we have a framework that supports all that additional context, and which can grow organically to support new kinds of questions and insights."

"There are large swaths of microbial diversity left to catalogue. And yet we've 'recaptured' about half of all known bacterial sequences," Gilbert said. "With this information, patterns in the distribution of the Earth's microbes are already emerging."

According to Gilbert, one of the most surprising observations is that unique 16S sequences are far more specific to individual environments than are the typical units of species used by scientists. The diversity of environments sampled by the Earth Microbiome Project helps demonstrate just how much local environment shapes the microbiome. For example, the skin microbiomes of cetaceans (whales and dolphins) and fish are more similar to each other than they are to the water they swim in; conversely, the salt in saltwater microbiomes makes them distinct from freshwater, but they are still more similar to each other than to aquatic animal skin. Overall, the microbiomes of a host, such as a human or animal, were quite distinct from free-living microbiomes, such as



those found in water and soil. For example, the free-living microbiomes were far more diverse, in general, than host-associated microbiomes.

“These global ecological patterns offer just a glimpse of what is possible with coordinated and cumulative sampling,” Jansson said. “More sampling is needed to account for factors such as latitude and elevation, and to track environmental changes over time. The Earth Microbiome Project provides both a resource for the exploration of myriad questions, and a starting point for the guided acquisition of new data to answer them.”

For more about the Earth Microbiome Project, visit earthmicrobiome.org and follow @earthmicrobiome on Twitter. For the complete list of co-authors and institutions participating in the Earth Microbiome Project, [view the full Nature paper](#).

The project was funded, in part, by the John Templeton Foundation, W. M. Keck Foundation, Argonne National Laboratory, Australian Research Council, and Extreme Science and Engineering Discovery Environment, which is supported by National Science Foundation (ACI-1053575).

Data collected and analyzed in the Earth Microbiome Project have already been used in many studies of:

- Skin of whales, dolphins, seals, fish, birds, bats, cats, rats, rattlesnakes and Komodo dragons
- Drinking water (doi.org/10.1016/j.watres.2012.12.027, doi.org/10.1186/s13071-016-1607-1)
- Ocean communities from the [surface of the North Atlantic](#) to the deep seafloor of the Pacific
- [Oil spills](#)
- Gut health of [primates](#)
- How gut microbiomes [evolved to digest ants](#) and how ant gut microbiomes [evolved to eat plants](#)
- How soil microbes affect [wine grapes](#)
- How obesity affects smelling of [wine aromas](#)
- How the human microbiome [changes over time](#) and alters the [spaces we live in](#)

Strengthening the Cost Effectiveness of Medical Countermeasure Development against Rare Biological Threats: The Ebola Outbreak

By Mark Lawrence Johnson, Jean Belin, Frederic Dorandeu et al

First Online: 31 October 2017

Source: <https://link.springer.com/article/10.1007/s40290-017-0211-9>

Abstract

Some chemical, biological, radiological, and nuclear agents, whether naturally, accidentally, or intentionally released, can be very damaging and pose a high risk to national security, owing to their potential for economic and social disruption. Efficacious pharmaceutical research and development could protect populations against such agents via new prophylactic drugs and vaccines or post-exposure treatment with antidotes and antimicrobials. However, because of the unpredictable nature of when, if ever, the health risks of specific chemical, biological, radiological, and nuclear agents might be realized, the development of medical countermeasures against these agents carries less promise of free market rewards to entice investment, and thus this development necessitates public funding or incentives. In terms of defining the level and targets of such public funding, the potential economic impact of any realized threat must be determined. This article first examines the specific components of market failure—research and development efforts vs. market rewards—associated with medical countermeasures against chemical, biological, radiological, and nuclear agents. Then, the latest natural outbreak of the Ebola virus disease is used as a case study to illustrate the risks that such biological agents can pose to social and economic structures. Rather than addressing risks associated with exposure from terrorist events, this case study highlights the potential to strengthen the case to fund relevant medical countermeasures for naturally occurring diseases with epidemic potential that could also impact Western countries owing to the consequences on their armed forces operating in the area of the outbreak, on trade, or even travelers who may disseminate the disease. To that end, causal factors that led to a lack of medical countermeasures prior to the 2014 outbreak



are identified, then opportunities that could have triggered a re-evaluation as a threat worthy of high actionable concern are probed.

Scottish Parliament evacuated after 'white powder' in envelope sent to MSP

Source: <http://www.criticalinfrastructureprotectionreview.com/news-november-2017/scottish-parliament-evacuated-after-white-powder-in-envelope-sent-to-msp/>

Nov 07 – The Scottish Parliament was evacuated after a suspicious package containing white powder was sent to an MSP.

Police in Edinburgh said they were called to Holyrood at about 11.35am, and the building was evacuated as a precaution.

A source at the parliament said the incident involved three similar envelopes and that one was believed to contain white powder.

According to Sky's Scotland Correspondent James Matthews, the alarm was raised after staff of Conservative MSP Jamie Halcro-Johnstone opened the mail. He was not there at the time.

A Parliament spokesman later confirmed the incident was over: "Parliamentary business as well as all tours and events will go ahead as planned this afternoon.

"The MSP block is now open and Members and their staff can return to their offices. The Scottish Parliament building remains open to the public."

Bio-terror is a public health issue

Source: <https://cosmosmagazine.com/biology/bio-terror-is-a-public-health-issue>

bushfires, floods, hurricanes, rising oceans, that sort of thing.

To American scientist, physician and biodefence expert Laura Kahn, however, one of the biggest dangers facing humanity is not gargantuan, but invisible to the naked eye.

"The great challenge we face in the 21st century is figuring out how to sustainably feed ourselves, in a warming planet, without unleashing many more deadly zoonotic diseases upon ourselves," she says.

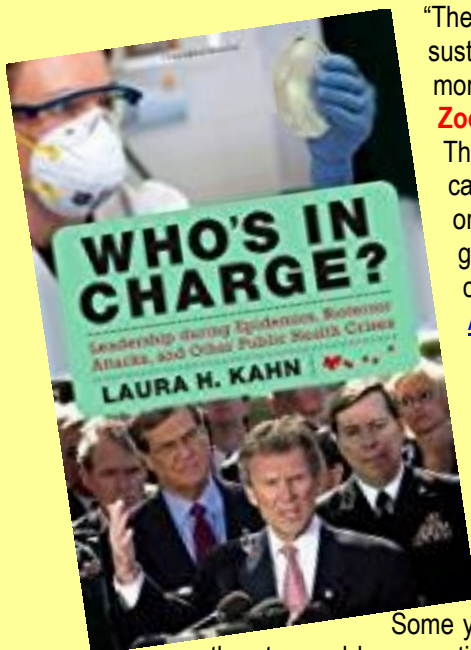
Zoonotic diseases are those that jump from one species to another.

They have always been part of human history – the plague, for instance, is caused by a zoonotic bacterium that leaps from fleas, and measles was originally a cattle virus called rinderpest – but urbanisation and population growth appear to be providing ever more frequent opportunities for bugs to cross over the species barrier.

[A landmark 2005 study](#) found that of all known human pathogens, 60% were zoonotic. The total was even higher – 75% -- in the case of emerging infectious diseases.

In recent years, zoonotic diseases have spurred several worldwide public health emergencies, and cost a great number of lives. Examples include Ebola, SARS, MERS, West Nile and Zika. Terrible though their tolls have been, they are tiny compared to two of the commonest zoonoses around: influenza (which, depending on the strain, jumps from birds or swine) and HIV/AIDS, which crossed over from chimpanzees.

Some years ago, exploring possible alternative strategies to better manage the threat posed by zoonotic diseases, Kahn co-founded the [One Health Initiative](#) – a collaboration between physicians, veterinarians and other health professionals. Member organisations include the American Medical Association, the Centres for Disease Control and Prevention, the US department of Agriculture and the American Nurses Association.



"One Health recognises the close linkages between human, animal, and environmental health," she explains.

"We've built up silos over the past century and focus primarily on humans. We must recognise that we don't live in a vacuum. We are part of a dynamic, microbial world."

The One Health approach, with its insistence that human wellbeing is indivisible from that of other species and the wider environment, may sound simply well-meaning and aspirational, but Kahn sees it as a bulwark against not merely unplanned epidemics, but also against the distinctly more anthropogenic threat of bio-warfare.

"Most of the agents of bioterrorism are zoonotic diseases as well," she says. "There's an overlap between emerging diseases and bioterrorism -- the zoonotic connection."

To this end, for six years up to 2009, she organised a series of seminars on biodefence, sponsored by the Carnegie Corporation and held at Princeton University.

From this experience, she wrote a book, *Who's In Charge?*, examining leadership responses during "epidemics, bioterror attacks and other public health crises".

And while the risk of a devastating biological warfare attack – whether by state actors or terrorists – is always present, Kahn is just as worried that the next pandemic might arise from the pure, simple and ugly fact that our species is rapidly filling up the world with its own microbe-filled manure.

"We need to understand how our microbial world works, and how our microbial bodies work," she says.

"We also need to figure out what to do with all of our wastes. Humans and our domestic animals now make up around 98% of the mammalian zoomass on the planet.

"Much of human and animal manure gets spread onto agricultural fields as fertiliser. It leaches into the soil and waterways, causing soil and water contamination from heavy microbial overloading. This contributes to food-borne and waterborne illnesses. So, everything is connected."

One way to tackle this problem, she says, is to take the One Health approach and make it both global and mandatory.

"The One Health concept must be integrated into the United Nation's Sustainable Development Goals," she says. "And One Health must be integrated into public health. Public health solely focuses on humans. We need to expand it and include the animals and environment, too."

For Cosmos readers in the UK, Kahn is set to expand on these ideas when she gives [a talk at the Centre for the Study of Existential Risk at Cambridge University](#) later this month.

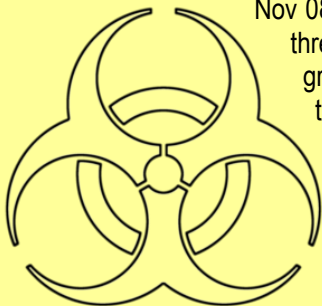
For those who can't make it, she's happy to sum up her theme.

"Bottom line?" she asks. "If we want this planet to sustain us, we need to respect it and learn how to live with it better than we're currently doing."

What should the US national biodefense strategy look like?

By Laura H. Kahn

Source: <https://thebulletin.org/what-should-us-national-biodefense-strategy-look11268>



Nov 08 – Like many other countries, the United States faces a wide range of growing biosecurity threats, from pandemics to laboratory accidents to deliberate attacks by governments, militant groups, and even rogue individuals. Currently, a hodgepodge of federal agencies deals with these dangers, with no one person or entity effectively in charge of biosecurity. Back in 2004, a [presidential directive](#) assigned responsibility for coordinating operations against bioterror attacks to the Department of Homeland Security (DHS). In theory, this made sense, but in practice, it didn't work out so well. In 2009, then-DHS Secretary Janet Napolitano took charge of the interagency response to the H1N1 influenza pandemic. The DHS had only limited success in coordinating interagency efforts, making last-minute changes to previously established plans and forcing the White House to take charge. In 2015, the Blue Ribbon Study Panel on Biodefense [concluded](#) that the United States still needed a single coordinated biodefense strategy.

Today, it looks like America may finally be getting one. In late 2016, Congress enacted the [National Defense Authorization Act](#) for fiscal year 2017, requiring four government



agencies—the departments of Defense, Health and Human Services, Homeland Security, and Agriculture—to jointly develop a national biodefense strategy and implementation plan. As of September 2017 that effort was underway, overseen by the National Security Council. As a strategy takes shape, now is a good time to consider what a national biodefense strategy should look like, and what obstacles stand in the way.

What are the dangers?

The [Blue Ribbon Study Panel on Biodefense](#) is a privately funded project—led by former Senators Joseph Lieberman and Tom Daschle, former New Jersey Governor Tom Ridge, and former Secretary of Health and Human Services Donna Shalala, among others—with the mission to assess the state of US biodefense efforts. Since its launch in 2014, it has issued several reports that give a good road map of what is needed for bio-defense and protecting the agricultural sector.

Biological threats are growing, according to the Panel's [initial 2015 report](#). The State Department assessed that five countries (China, Iran, North Korea, Russia, and Syria) have been failing to comply with the Biological Weapons Convention. Meanwhile, advances in science and technology, including the gene-editing technique CRISPR, enable would-be bioterrorists to develop novel biological threats with potentially catastrophic effects. Failing to predict these risks leaves the United States vulnerable.

The United States faces other biological threats too. Dangers introduced by wildlife can wreak havoc on livestock, ultimately affecting the food supply. The US agriculture industry is one of the largest sectors of the country's economy, constituting about 5.5 percent of the gross domestic product. In October, the Blue Ribbon Study Panel issued a [new report](#) on the defense of animal agriculture. It found that a highly pathogenic strain of avian influenza, brought to the United States in December 2014 by migrating birds, cost the US economy a total of \$3.3 billion, including the cost of slaughtering more than 50 million birds on 232 farms across 21 states. That outbreak occurred naturally. A bioterrorist attack designed to inflict as much damage as possible could be much more catastrophic.

The piecemeal nature of the American healthcare system also has [national security implications](#), which have been exacerbated by the Trump administration's efforts to undermine

the Affordable Care Act. Having millions of people without access to healthcare while a deadly epidemic circulates through the population is akin to having only a few rooms of a house insured while a fire rages inside it.

What should be done?

While the national biodefense strategy is bound to be broad in scope, a few strategies and approaches stand out as particularly important.

First, human-intelligence-based monitoring of rogue nations and militant groups that use bioweapons is critical. Nothing works better than eyes and ears on the ground. This highly dangerous work has to be done by intelligence professionals who place utmost trust in the US government to keep their work highly classified and provide protection in the event of discovery. The current administration does not appear to inspire that kind of confidence from the intelligence community.

Second, a national strategy must include a plan for disease surveillance of humans and animals, with a view to [predicting](#) the next naturally occurring epidemic. This kind of work is difficult, because there are so many viruses that could spill over from other mammals or birds into humans. Given limited resources, the government should be strategic regarding where it implements surveillance. [Bats, rodents](#), and wild waterfowl are arguably the likeliest candidate species to harbor the next deadly pandemic pathogens.

Third, even the most secure laboratories are fallible, meaning that they pose risks stemming from accidents and lab-acquired infections. A US Army biodefense lab [mistakenly shipped live anthrax](#) to other labs for more than a decade. Centers for Disease Control (CDC) labs experienced a series of mishaps; in 2014, these accidents involved bird flu and anthrax. Since then, the CDC has made [some progress](#) on lab safety, but there is still no federal oversight for laboratory-acquired infections. (The CDC does do surveillance of



infections, but not of those acquired in laboratories.) The [National Institute for Occupational Safety and Health](#), while it tallies injuries and chemical exposures, likewise does not monitor laboratory-acquired infections. In other words, this is a problem that has fallen through the bureaucratic cracks and must be corrected.

Fourth, any national biodefense agenda should include plans to review the lab-oversight body known as the Federal Select Agent Program, subject of [a new GAO report](#). At high-containment laboratories, scientists work on the extremely dangerous pathogens—such as Ebola and anthrax—known as “select agents.” Currently the Federal Select Agent Program, which is jointly managed by the Departments of Agriculture and Health and Human Services, oversees laboratories’ handling of these pathogens. But the GAO report found that the program has problems, including not being independent of all the labs it oversees, and consequently being vulnerable to conflicts of interest. The report also found that the program may not have formally assessed the risk level of some of its activities, and that it had gaps in its workforce and training. In short, there is room for improvement in the system meant to protect us from select agents.

Fifth, a national biodefense strategy should include the investigation of large-scale wildlife die-offs. Such events—like when thousands of crows died during a New York city West Nile virus outbreak in 1999—provide important clues that something in the environment is amiss. Investigations require the kind of expertise normally housed within the Environmental Protection Agency (EPA) and the US Fish and Wildlife Service (part of the Department of the Interior.)

Finally, a national biodefense strategy must recognize that human, animal, and environmental health are linked, and take a “One Health” approach to biological threats. A threat to one component in this triad threatens them all. For that reason, animal and environmental health must be taken just as seriously as human health—which requires devoting personnel and resources to monitoring them, which requires sufficient funding for entities like the EPA and the Fish and Wildlife Service.

Obstacles to good biodefense

[Another new GAO report](#), this one called “Federal Efforts to Develop Biological Threat Awareness,” suggests that efforts to plan and implement a national biodefense strategy are on track. The report details the intelligence-gathering capabilities of the Departments of Defense and Homeland Security, and the global disease surveillance and research on biological agents that are being conducted by the Departments of Health and Human Services and Agriculture. However, other developments are not so reassuring.

Currently, according to the GAO report, each of five departments—the four mentioned above, as well as the EPA—conduct their own intelligence, laboratory work, and analysis on bioterrorism and biowarfare, including on agricultural threats and environmental contamination. They have interagency agreements and working groups that share information with each other, but they do not conduct threat analyses collaboratively. Gaps remain in shared efforts across the entire federal government’s biodefense enterprise. The agencies are also missing out on opportunities for sharing resources and lowering costs. The Department of the Interior, which is not mentioned at all in the GAO report, should also be a part of biodefense efforts, as it oversees wildlife health through the Fish and Wildlife Service.

Most distressingly, the current administration appears willfully ignorant of scientific issues, while at the same time disinclined to fund critical scientific efforts. The White House Office of Science and Technology Policy, which is intimately involved with biodefense issues, remains [leaderless and understaffed](#). Meanwhile, Trump’s budget for fiscal year 2018 proposed [significant cuts](#) to the federal government’s biodefense efforts.

The cuts included [eliminating funding](#) for the National Biodefense and Countermeasures Center, which conducts threat characterization and analysis of potentially dangerous pathogens. Fortunately a bipartisan congressional amendment [restored funding](#) for the Center, but other biodefense efforts remain in peril. For instance, the proposed cuts could potentially jeopardize crucial



disease surveillance work performed by the [Laboratory Response Network](#). Established by a presidential directive and operational since 1999, the Network includes more than 150 state and local labs in public health, veterinary health, agriculture, food, and water testing, and provides extremely important surveillance against biological terrorism. It should remain a key part of the national biodefense strategy. Whether or not the Trump budget passes without further changes remains to be seen.

The National Security Council staff and leaders of the effort to draft a national biodefense strategy have an enormous opportunity to make a difference right now. The fact that we will soon have a coordinated strategy is a great reassurance. But planning mistakes or omissions could lead to grave dangers in the future. A comprehensive, One-Health-based strategy is essential for preparing for the next deadly biological threat.

Laura Kahn is the author of [One Health and the Politics of Antimicrobial Resistance](#), published in 2016 by Johns Hopkins University Press. A general internist who began her career in health care as a registered nurse, Kahn works on the research staff of Princeton University's [Program on Science and Global Security](#). Her expertise is in public health, biodefense, and pandemics. From 2003 to 2005, she led a study that assessed the public health infrastructures of New Hampshire, New Jersey, New York, and Pennsylvania. She has also co-organized the Carnegie Corporation's "Biodefense Challenge" seminar series, which introduces biosecurity, codes of conduct, and dual-use biotech threats to the life sciences community. Prior to joining Princeton, she was a managing physician for the New Jersey Department of Health and Senior Services and a medical officer for the Food and Drug Administration.

The weaponizing of biology: bioterrorism, biocrime and biohacking

Author/Creator: Vargo, Marc E., 1954 – author.

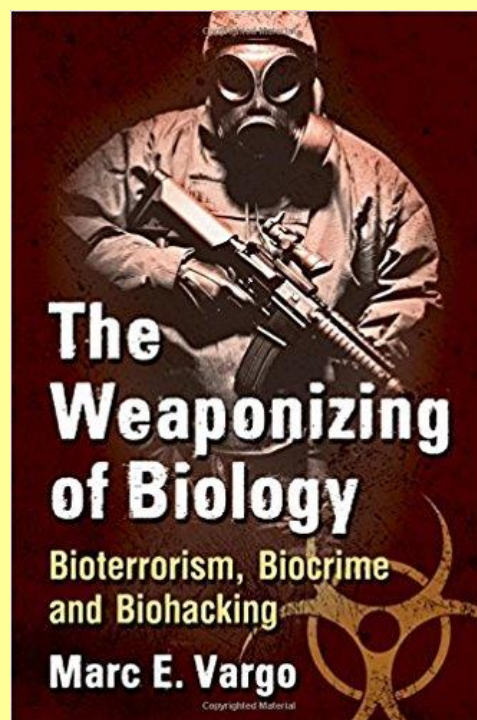
Publication: Jefferson, North Carolina : McFarland & Company, Inc., Publishers, [2017]

Format/Description: Book vii, 244 pages ; 23 cm

Summary: "Focusing on three forms of biological threat--bioterrorism, biocrime and biohacking--the author examines the history of biowarfare and terrorism, including the ideologies and motives of violent extremist organizations. Groups drawn to biological aggression are discussed, along with the array of viruses, bacteria and toxins they might use in their attacks"-- Provided by publisher.

Contents:

- ◆ Introduction
- ◆ From ancient China to al-Qaeda: a brief history of biological warfare
- ◆ Bioterrorism and biocrime: ideologies, motives and objectives
- ◆ Biohacking: citizen science and societal risk
- ◆ Pathogens, toxins and their weaponization: science subverted
- ◆ Bad medicine: biocrime in the healthcare professions
- ◆ The Oregon conspiracy: salad bars, salmonella and the Orange People Sect
- ◆ Tokyo under siege: the Aum Shinrikyo biochemical attacks
- ◆ Lethal letters: September 11th and the anthrax enigma.



International Conference on Management and Information Systems

September 25-26, 2017

Preparedness of Health Facilities in Chandigarh for Biological Disasters**Gaurav Bhatia****Namrata Sandhu***fear_naught@hotmail.com**namrata.sandhu@chitkara.edu.in***Chitkara University**

Disasters are the constant companions of mankind. Mostly, any talk of disasters centers only around natural disasters with anthropogenically caused disasters not being given adequate credence. Utilising an exploratory approach and the World Health Organisation's Hospital preparedness checklist, this paper examines the preparedness of Chandigarh to combat incidents of Biological Disasters. The findings have been discussed under nine major heads – viz. Command & Control; Communication; Safety & Security; Triage; Surge Capacity; Continuity of Essential Services; Human Resource Development; Logistics and Supply Management and Post Disaster Recovery.

Source: <http://www.icmis.net/icmis17/icmis17cd/pdf/S186.pdf>**6 medical innovations that moved from the battlefield to mainstream medicine**

By Leah Samuel

Source: <https://www.statnews.com/2017/11/10/medical-innovations-war/>

Nov 10 – Wartime medicine is an incredibly challenging setting for the doctors, nurses, and paramedics who practice it: Not only are the injuries frequently serious ones, but the tools at hand are often more limited than in a traditional hospital.

Over the centuries, that has meant that battlefield medical personnel have had to innovate. Those wartime practices, in turn, often served to refine medical practice beyond the military.

Here are six cases in which wartime clinicians changed the way medicine is practiced more broadly.

Tying off

War's biggest killer has always been blood loss. That's not a surprise, given the weapons of war over the ages, including swords, bayonets, bullets, grenades, and missiles. But it was a 16th-century Italian war that popularized a means to slow or stop the bleeding. In 1537, a French barber-surgeon named Ambroise Pare went to care for soldiers at the Siege of Turin. Horrified by the many bloody injuries he came across, Pare began fashioning ligatures, and tied them onto the soldiers near their wounds. He wasn't the first to think of that — Romans and Arabs had also deployed the technique of tying a rope or belt onto a wounded limb — but it had fallen out of favor as doctors adopted other ways to stop bleeding, such as cauterizing wounds with boiling oil.

That method, on a battlefield, was as inconvenient as it was (probably) painful. So Pare was instrumental in getting doctors to reconsider ligatures, or **tourniquets**, leading to the widespread use of them today — not just on the battlefield but in emergency rooms and at sites of accidents and natural disasters.

Shedding light

Sometimes medical discoveries take an extra-long route from the battlefield to the doctor's office. In 1862, after the Civil War's Battle of Shiloh, medical personnel noticed a glow in the wounds of soldiers from that fight. The mysterious light baffled the doctors even more when they noticed that soldiers whose wounds glowed had a better survival rate than those without illuminated injuries. That prompted many at the time to call the phenomenon "the angel's glow," indicating that celestial beings had healed the soldiers with heavenly light. It took almost 140 years, a microbiologist mom, and two teenagers to find a more earthly explanation.



In 2001, after learning of the glowing wounds at a history exhibit, 17-year-old Bill Martin asked his mother, who studied bioluminescent bacteria, whether those could be responsible for the glowing wounds of the



Battle of Shiloh. And like any good scientist, USDA microbiologist Phyllis Martin told her son to conduct an experiment to find out. [So he did](#). The younger Martin and his friend Jonathan Curtis discovered that the glow came from *Photorhabdus luminescens*, a bacterium carried by nematodes — small worms which feed on insects. The boys concluded that as the soldiers crawled through mud, their wounds attracted insects, followed by the hungry nematodes. The nematodes' bacteria not only break down the insect bodies for eating but also kill off competing microbes. It was the latter function that saved the soldiers. And since that discovery, medical scientists have begun looking into *Photorhabdus luminescens* as a way [to treat](#)

[antibiotic-resistant infections](#). Other researchers are using the glowing bacteria to develop a [protease inhibitor to treat HIV and other diseases](#).

Restoring flow

On the battlefield, blunt-force and impact injuries can stretch or crush veins and arteries. So, it's not surprising that war and its attendant injuries have driven many of the advances in repairing blood vessels. Much of the progress came during the Korean War, which began in 1950. At that time, Army vascular surgeon [Carl Hughes](#) and his colleagues at Walter Reed Army Hospital set out to study the types of [vascular injuries Korean War soldiers suffered](#) and how they fared.

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Among the team's discoveries was that while ligation — tying off or clipping injured vessels — stopped the bleeding immediately, it resulted in amputation far more often than simply taking the time to repair the artery or vein. This realization led to a [dramatic drop in the number of wartime amputations](#) from World War II to the Korean War.

The discovery also helped popularize **vascular repair surgery** more broadly, by familiarizing surgeons with the techniques and with new tools such as the now-ubiquitous [Potts clamp](#). Today those tools and techniques help treat everything from heart disease to varicose veins.

Halting infection

War also brought about the mass production of **antibiotics**, especially sulfanilamide and [penicillin](#). World War II helped both of them find widespread respect, production, and use.

In 1928, when Scottish bacteriologist [Alexander Fleming](#) noticed a weird mold had taken over his Petri dishes and eliminated the bacteria on them, his findings didn't get much notice. But Fleming continued his research and kept talking up what he called "mold juice" (he didn't come up with "penicillin" until later), eventually winning a Nobel Prize and attracting the attention of drug maker Pfizer. The company soon began mass-producing the drugs for distribution to medics during WWII, and ultimately, to doctors and hospitals across the country.

In 1932, German biochemist [Gerhard Johannes Paul Domagk](#) discovered that the compound sulfanilamide could vanquish deadly strains of bacteria, like the streptococcus in his lab mice and in his first human test subject, his gravely ill young daughter. The wide distribution of so-called "sulfa drugs" began when World War II soldiers carried powdered



sulfanilamide in their first-aid kits. By the end of the war, doctors were routinely using these antibiotics to treat streptococcus, meningitis, and other infections.

Saving face

Though plastic surgery is often associated with cosmetic procedures, its origins were in reconstructive surgery. Today, reconstructive plastic surgery helps people with cosmetic concerns resulting from birth defects like cleft lips, physical assaults like acid attacks, and medical conditions like [necrotizing fasciitis](#)



and other causes of disfigurement. And its origins trace back to 20-year-old [Carleton Borgan](#). Hospitalized while serving in the Civil War, Borgan was taking mercury pills for pneumonia. They created a gangrenous ulcer on his tongue. Gangrene spread quickly from his mouth to his eye and led to the removal of his right cheekbone.

Desperate, the young man offered up his face to Gurdon Buck, a New York surgeon. With a series of operations, Buck used dental and facial fixtures to fill in Borgan's missing bone until the Army private's face regained its shape. Buck also photographed the progress of Borgan's facial regeneration. Buck went on to perform 32 more facial reconstructions for soldiers disfigured by bullets, bayonets, and musket balls, and he [photographed](#) many of those operations. Though primitive by today's standards, Buck's techniques planted the seeds of the sophisticated reconstructive surgery we have today.

Getting there

As the Civil War got underway in the 1860s, transport for wounded soldiers consisted largely of a motley collection of vehicles operated by whomever happened to be available. And some of those people weren't particularly suited for the job because they drank heavily, and/or fled with an empty wagon when the shooting started.

Enter [Jonathan Letterman](#), an Army doctor who developed an efficient and effective [ambulance system](#) that ultimately became a model for today's local systems of emergency transport. At each battle, he set up caravans of 50 ambulances. Each vehicle carried supplies, including morphine and bandages, along with a driver, a stretcher, and two guys to carry it.

Letterman built on his efforts as the war dragged on. He added a lockbox to the ambulances, under the driver's seat, to prevent bandits from stealing drugs and other supplies. Spring suspensions made for a smoother ride over the uncertain and variable terrain between the battlefield and the hospital.



His ideas led to better, faster recovery from war wounds. Now Letterman's name graces an [award](#) for improving patient outcomes.

Leah Samuel is a staff reporter for STAT. A journalist for over 25 years, Leah's work has appeared in newspapers and magazines across the country, including Harvard Magazine, Labor Notes, the Chicago Reporter, and PublicSource.org. Leah is also a film fan, history buff, science nerd, and trivia nut. When she's not working on a story, she frequently replaces her notebook and pen with yarn and a crochet hook.

U.S. Remains Unprepared for Agricultural Disease Outbreaks

Source: <http://www.govtech.com/em/disaster/US-Remains-Unprepared-for-Agricultural-Disease-Outbreaks.html>



Nov 13 – The poultry farmers of Iowa could see it coming, almost like a storm on the horizon. Avian influenza struck Minnesota — the nation's largest turkey producer — first, striking hardest where turkey production was the dominant industry. It then jumped to Missouri, then Arkansas, then north to Kansas and north again to South Dakota, defying the migration patterns of the wild birds suspected of carrying the virus, before striking Minnesota a second time. It sickened and killed both turkeys and chickens.

Iowa is the nation's leading egg producer, with 60 million birds laying 15 billion eggs per year, or one out of every five produced in the United States. The state ranks ninth in the nation in turkey production.

In Iowa, avian influenza struck a turkey farm first, then a huge egg farm with more than 4 million layers. Before the outbreak subsided, 77 properties in Iowa were hit. Millions of birds were killed, either by the virus or in the attempt to keep it from spreading. Across the country, it had affected nearly 50 million birds in 21 states.

Is this what agricultural terrorism would look like in the United States? It might.

"The United States is underprepared for biological threats," said the 2015 report from the Blue Ribbon Study Panel on Biodefense. "Nation states and unaffiliated terrorists (via biological terrorism) and nature itself (via emerging and re-emerging infectious



diseases) threaten us,” it continued. “While biological events may be inevitable, their level of impact on our country is not.”

Although the United States has not experienced an act of agroterrorism by foreign terrorists, this avian influenza event is not made up. It’s what happened when an avian influenza that is particularly harmful to birds, known as a highly pathogenic avian influenza (HPAI), struck the heartland in spring 2015. There are several different strains of HPAI, including the H7N9 strain that, according to the World Health Organization (WHO), has killed dozens of people and sickened hundreds in China since 2013.

The 2015 outbreak was not an act of terrorism, but an animal disease outbreak with natural causes. It was the worst animal disease event in U.S. history, according to the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Veterinary Services. However, small outbreaks of animal diseases — killing a few dozen or a few hundred animals — are common.

During the 2015 Iowa avian influenza outbreak, “every day you would wake up and say, it can’t get worse than this,” says Robin Pruisner, agriculture security coordinator for the Iowa Department of Agriculture and Land Stewardship and the state’s incident commander for the outbreak. “And day after day, week after week, it got worse.”

Diseases of plants and animals are a threat to national security, whether or not the outbreaks are caused by terrorists. Food safety policies that defend against accidental and natural disease outbreaks should also limit the harm done by a biological terrorist attack against agriculture.

A heightened awareness of the threat of bioterrorism and agroterrorism has been part of America’s general increased alertness about terrorism after the 9/11 attacks, and the anthrax attack that followed a few weeks later. In that anthrax attack, five people died and 17 were sickened when weaponized anthrax was sent in envelopes through the U.S. Postal Service.

In June 2017, President Trump signed the Securing our Agriculture and Food Act, which puts the Department of Homeland Security’s assistant secretary for health affairs in charge of coordinating efforts to prevent and respond to agroterrorism attacks. It’s one of several laws enacted since September 2001 to address bioterrorism in general and a handful of laws to address agroterrorism specifically.

In response to the signing of the act in June, Rep. David Young, R-Iowa, who introduced the bill to Congress, said, “Agroterrorism is a real threat, and this legislation takes the necessary and critical steps to protect America from high-risk events which pose serious threats to our food, across Iowa and the United States.”

The risks

Though there is general acknowledgment that a biological agroterror attack could harm the nation’s economy and food supply, as well as possibly cause human illness, the likelihood of an attack is not clear.

In 2002, “U.S. Navy SEALs found a list of pathogens and a schematic in an Afghanistan cave that al-Qaida planned to use to produce bioweapons. In addition to six human pathogens, 10 pathogens targeted food, six targeted livestock and poultry, and four targeted crops,” wrote former U.S. Sen. Tom Daschle and chairman of the Joint Chiefs of Staff Richard B. Myers in a 2016 U.S. News & World Report article.

This story has been repeated many times, in articles and by experts in agroterrorism, although a source for the information is not given. The validity of this vivid and chilling

terrorist threat to American agriculture rests on the credibility of Daschle and Myers.

Another consideration is how easy it would be to attack that nation’s agriculture system with a disease organism.

“We tend to think of bioweapons in the human world, in warfare,” said William Karesh, executive vice president for health and policy for the nonprofit EcoHealth Alliance and adviser to the Blue Ribbon Study Panel on Biodefense. “It’s a sophisticated process to take a naturally occurring organism and make it weaponizable. But some of these animal diseases are caused by viruses that can survive for months or years without having to do anything special to them.”

The consequences of an agroterror attack would be grave, Karesh said. It could be devastating to the economy, because agriculture makes up 5.5

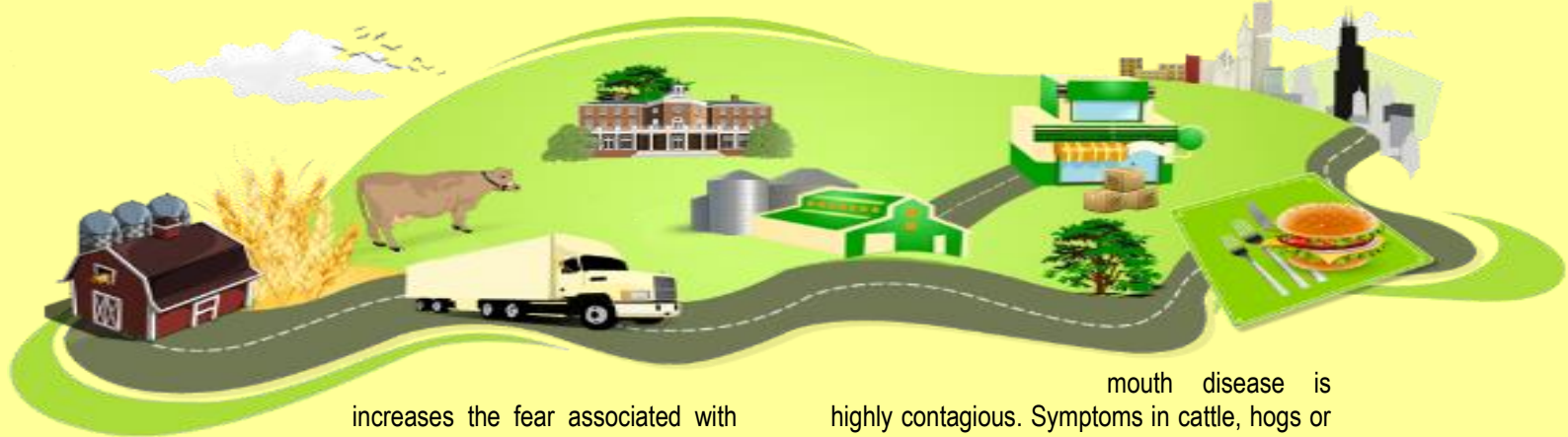


percent of the country's gross domestic product and employs 11 percent of Americans. It could cause food shortages and even starvation.

It could also harm human health. Bioweapons have been created from diseases shared by animals and human beings, such as anthrax, brucellosis, histoplasmosis, plague, Q fever, rabies and tularemia. The direct threat to human health and the association with bioweapons

to how to contain them. For emergency managers, they are people well worth getting to know before an outbreak.

"Foot-and-mouth disease is one of my biggest concerns," said Ron Snyder, a consultant based in Brooklyn, Iowa, and a trainer who developed the DHS-certified curriculum for the AgTerror Emergency Responder Training program. Foot-and-



increases the fear associated with agroterrorism.

On the other hand, naturally occurring or accidentally caused animal disease outbreaks are so common that they are drained of some of their terror. Only the largest outbreaks make the national news. Some agroterrorism experts have said that this makes an attack less valuable to terrorists.

Animal disease response

The threat of even natural or accidental disease outbreaks is so serious that many diseases of animals and plants are mandatory to report at local, state, federal and international levels. The World Organisation for Animal Health (OIE), an intergovernmental organization with 180 member countries, collects animal disease data from around the globe.

Veterinarians who work with farm animals in the U.S. are trained, and reminded, to contact the USDA assistant district director (ADD) for their state or their state veterinarian's office when they encounter any one of a long list of diseases, including anthrax, foot-and-mouth disease, and rabies, as well as lesser-known diseases like vesicular stomatitis.

USDA ADDs and state veterinarians are the people with top-of-mind knowledge of animal diseases, from how contagious they are among animals to how dangerous they are to humans

mouth disease is highly contagious. Symptoms in cattle, hogs or sheep don't show up until five to seven days after exposure, Snyder said, which is more than enough time for animals or equipment to be transported from coast to coast.

A 2001 outbreak of foot-and-mouth in the United Kingdom showed just how devastating this disease could be. Millions of animals were slaughtered to stop a disease that does not affect people and doesn't kill adult animals, but destroys their economic value. The effort cost the equivalent of \$10 billion, according to the BBC. The outbreak not only hurt farmers and stopped UK meat exports, but also caused a drop in tourism.

What makes responding to an animal disease outbreak so tricky, Snyder says, is that it brings together so many groups that don't normally work together, including law enforcement, public health officials, medical personnel, veterinarians, agriculture officials, farmers and producers, and hazardous materials teams. "We can't silo information," he said.

Emergency management role

Pruisner, the Iowa agriculture security coordinator, said she works closely with the state's county emergency managers and the state Homeland Security and Emergency Management Department. The big



difference between responding to a natural or unintended disease outbreak and a criminal or agroterrorism attack is that in the latter, you need to preserve evidence for law enforcement. In both cases you will likely be involved in setting up quarantines and helping dispose of many animal carcasses.

“Emergency managers tell me that all emergencies are local, and if they need help, they will reach out,” she said.

But a disease outbreak is a regulatory matter, she added. If the disease is on the federal reporting list, and conditions warrant it, the response is going to come from the federal government. “I think this was hard for the locals to buy into because it is the opposite of how they handle things.”

Iowa had plans for dealing with a major animal disease outbreak, Puisner said. It wasn’t enough. “The best-laid plans go awry. You can plan and exercise and you will still find yourself in uncharted territory.”

In Iowa, one place the plans went off course was in disposing of millions of poultry carcasses. The plan called for farmers to use one of several means of sanitary disposal: landfill, burial on site, composting or incineration.

But some landfills refused the carcasses, Puisner said, either because they were already full or were concerned about spreading the disease to nearby farms. Not all farmers could bury the carcasses because, with a shallow water table, it risked contaminating local drinking water supplies. Few farmers chose incineration. (News reports say that there simply weren’t incinerators in the area.) So many farmers were composting and the area ran out of the wood chips, cornstalks and other carbon sources that were needed to mix with the carcasses.

Through the spring of that year, USDA teams were coming into the state for 28-day deployments. In animal health emergencies, the USDA depends on volunteer veterinarians who are trained ahead of time and become temporary federal employees when they are called into service.

“We had the red team, the indigo,” Puisner said. “Each team had trained together and had their own way of doing things.” Some farmers dealt with several teams during the crisis, each with different procedures and a different bedside

manner. “We needed a better transition and more consistency in the field.”

The crisis and legislation

Farmers complained. The egg and turkey producer associations complained. They said that state and federal authorities did not take action soon enough, that the instructions to farmers were confusing, and that the cleanup took too long. In news reports, the USDA said it would change things, particularly providing more consistent points of contact between farmers and the agency.

Puisner said that in the future, the state will provide a liaison so that individual farmers can reach the same person throughout an emergency. It also put together a book describing procedures in the first few hours and days after avian influenza is detected on a farm. But for Rep. Young, enough was enough. In his press release announcing the president’s signing the bill he introduced into law, he hints that the shortcomings of the avian influenza response inspired him to introduce the legislation that would become the Securing Our Agriculture and Food Act, which mandates that the Department of Homeland Security (DHS) coordinate responses to agroterrorism.

The release said: “First introduced in 2016, and then again in January of this year, Congressman Young’s legislation addresses concerns brought to light after Iowa suffered the largest animal disease outbreak in state history, when the 2015 avian influenza outbreak wiped out millions of layer hens, turkeys and backyard flocks. Response efforts revealed problematic preparedness concerns and breaks in the federal government’s ability to communicate with stakeholders and react quickly to large-scale animal disease outbreaks. This disaster also raised concerns among farmers, producers and ag experts about whether our nation would be able to capably share information and respond to agroterrorism threats and attacks, ultimately an attack against our nation’s citizens.”

That may sound like Young set out to punish the USDA for its failure in the 2015 avian influenza outbreak by handing over the reins to DHS in the event of an agroterror attack, but, through a spokesman, Young



said that isn't so. Previous laws put the DHS assistant secretary for health affairs in charge of the response to other forms of bioterrorism. This law makes sure that agroterrorism is included. Sen. Pat Roberts, R-Kan., one of the bill's Senate sponsors, agrees that this was the goal. Young said that DHS and the USDA must work together for the nation's response to be effective.

Because it brings together so many government agencies and so many different types of expertise, responding to agroterrorism takes an exceptional level of coordination and communication. In the end, it means meeting the challenges of human nature as much as it means defeating a disease.

"At times," Pruisner said. "I don't have words for 2015."

ENVI Assay System

Biodefence tests

Source: <https://www.environics.fi/product/envi-assay-system/>



The ENVI Assay System biodefence tests provide fast, simple and reliable solution for BWA identification from environmental samples. The ENVI Assay System Gold offers disposable, separate assays for **seven highly poisonous agents**: ricin toxin, botulinum toxin, SEB, POX, anthrax, yersinia pestis (plague) and Francisella tularensis (tularemia). ENVI Assay System test kits include all tools required for performing a test: test cartridges, sampling swabs, buffer solution vials, dispensers and antibody reagents and instructions for use – no separate sample collection kits are needed. ENVI



Assay System test are designed to use with ChemPro Reader Module which enables long term data storage and enhances the reliability when working in demanding environment.

Biohackers are using CRISPR on their DNA and we can't stop it

Source: <https://www.newscientist.com/article/mg23631520-100-biohackers-are-using-crispr-on-their-dna-and-we-cant-stop-it/>

Nov 15 – People are starting to alter their own DNA with cheap, easy gene-editing technology. Is it time to regulate CRISPR?

Gene editing is entering the mainstream. CRISPR, a cheap and easy technique for making precise changes to DNA, has got researchers around the world racing to [trial its use in treating a host of human diseases](#).



But this race is not confined to the lab. Last month, [Josiah Zayner](#) (photo), a biochemist who once worked for NASA, became the first person known to have edited his own genes with CRISPR.



During a lecture about human genetic engineering that was [streamed live on Facebook](#), Zayner whipped out a vial and a syringe, then injected himself. Now, following in his footsteps, other biohackers are getting ready to take the plunge and tinker with their own genes.

Away from the strict controls of formal science, this self-experimentation might seem dangerously reckless. But if people are allowed to modify their own body through cosmetic surgery, tattoos and other augmentations,

should a person's own genome really be off limits?

Zayner's experiment was intended to boost his strength by removing the gene for myostatin, which regulates muscle growth. A [similar experiment in 2015](#) showed that this works in beagles whose genomes were edited at the embryo stage. He injected himself with the CRISPR system to remove the gene.

"Will allowing broad access to CRISPR risk creating a group of 'superhumans' with enhanced abilities?" [Robin Lovell-Badge](#), a leading CRISPR researcher at the Francis Crick Institute in London, says Zayner's experiment was "foolish" and could have unintended consequences, including tissue damage, cell death, or an immune response that attacks his own muscles.



Kill switches for engineered microbes gone rogue

Wyss Institute for Biologically Inspired Engineering at Harvard

Source: <https://www.sciencedaily.com/releases/2017/11/171116132732.htm>

Nov 16 – Stable autonomous kill switches ensure biocontainment of living microbes designed as devices for medicine or the environment. New research outlines two new types of kill switches that address these challenges. The new kill switches are self-sufficient and highly stable in bacterial populations that evolve, and they last over many generations. They can ensure that only bacteria with intact synthetic gene circuits survive, or confine bacteria to a target environment at 37°C (body temperature) while inducing them to die at lower temperatures, as demonstrated during bacterial exit from a mouse intestinal tract

Security Agency Says Oklahoma Bioterror Drill Designed To Prepare For Hazard, Not Create One

Source: <http://kosu.org/post/security-agency-says-oklahoma-bioterror-drill-designed-prepare-hazard-not-create-one>

Nov 21 – **The U.S. Department of Homeland Security's plan to spray chemicals and biological agents in simulated terrorist attacks at an abandoned school has alarmed residents and caused a stir on both sides of the Oklahoma-Kansas border.**

The agency says the substances are safe and the test is needed to plan the country's response to a potential terrorist plot, but news of the proposed tests — one planned for early 2018; the other in the summer — is fueling Facebook discussions and petitions, online conspiracy theories and internet watchdogs of the "New World Order."

"We're spraying these materials not to create a hazard, but rather to understand what the hazard would be if someone else released a hazardous material," says Lloyd Hough, the Homeland Security program manager overseeing the tests.

The federal agency has conducted similar bioterrorism tests and drills before in subway systems in Boston, New York City and Washington, D.C. The Oklahoma tests are planned



to take place at the Chilocco Indian Agricultural School, which closed in the '80s. The school buildings are located in a remote, rural setting but have updated heating and air-conditioning systems, and can simulate how airborne contaminants infiltrate modern buildings.



"We're looking to understand what happens in a typical home," Hough says.

'Sounds scary'

The Oklahoma Department of Agriculture, Food and Forestry approved [a permit](#) for the spraying. **Two powdery chemicals will be released during the winter test**, the federal agency reported in [its environmental assessment](#), including urea laced with a fluorescent dye commonly found in laundry detergent, and titanium dioxide, a commonly used white pigment.

When the public hears chemical names like titanium dioxide, "it sounds scary," says Kitty Cardwell, an OSU professor and director

of the National Institute for Microbial Forensics and Food and Agricultural Biosecurity. "It's a chemical name, but if you look on the ingredients list in your toothpaste, in ranch dressing," you'll see it.

For the summer test, the security agency wants to release a pound of *Bacillus thuringiensis*, a bacteria and pesticide used in "caterpillar killer" dust found on the shelves of big-box stores.

"It's not more than you would be exposed to if you lived next to an agricultural setting," says Cardwell, who's not involved in the proposed tests, but has worked on similar ones.

Test questions

The Chilocco school, located near Newkirk in northern Kay County, is owned by the Council of Confederated Chiloco Tribes and leased to OSU's Multispectral Laboratory, which conducts experiments on contract for law enforcement and government security agencies.

In a statement, council speaker and Otoe-Missouria Chairman John Shotton said, "The tribes would like to know more about the environmental and human impact of the proposed testing." Shotton said the council also requested meetings between the federal agency and each of the member tribes, including the Otoe-Missouria Tribe, Ponca Tribe, Tonkawa Tribe and the Pawnee and Kaw nations.

Hough, with Homeland Security, says the Oklahoma tests are key to planning a public response to a chemical or biological attack. The testing would also be helpful in the event chemicals or biological agents are accidentally released, say from a plant explosion or a train derailment.

"Should the Department of Homeland Security give emergency managers and first responders instruction that they should stay in their home and shelter in place," he says, "or should they leave the home and head in a different direction?"



CRISPR

Source: <https://www.youtube.com/watch?v=4YKFw2KZA5o>

CRISPR is everywhere recently, including the recent launch of *The CRISPR Journal* (published by Mary Ann Liebert, Inc.). But, clustered regularly interspaced short palindromic repeats is not the easiest thing to describe the layman, or even some people within the industry. This animated video from **Nature** beautifully illustrates how CRISPR/Cas9 can cut double-stranded DNA for a variety of purposes.



Plague outbreak: where does it still exist, and could it spread?

By Allen Cheng

Source: <http://www.homelandsecuritynewswire.com/dr20171120-plague-outbreak-where-does-it-still-exist-and-could-it-spread>

Nov 20 – An outbreak of plague has been occurring in Madagascar, with more than 2,000 cases and 170 deaths [reported](#) since August 2017.

This island nation is one of the few remaining hotspots for plague in the world, with cases usually reported between September and April each year.

But this outbreak has been unusual, as it has affected many different areas in Madagascar, including heavily populated cities.

What is plague, and how is it treated?

Plague is a [serious disease](#) caused by the bacteria *Yersinia pestis*. It has a high death rate if untreated. There are several different clinical forms, including bubonic plague (affecting the lymph nodes), pneumonic plague (affecting the lungs) and septicemic plague (involving the bloodstream).

Outside of outbreak situations, deaths from plague are usually due to delays in recognition and diagnosis, rather than a lack of treatment options. Although antibiotic resistant strains have been [described](#), plague can generally be treated with a number of [commonly available antibiotics](#).

Why does plague still exist?

Plague was responsible for hundreds of millions of deaths in three devastating [pandemics](#), including the Plague of Justinian in the 6th century, the Black Death in the 14th century, and the Third Pandemic that originated in China in the 19th century.

In these pandemics, it's [generally thought](#) plague was introduced by rats (often transported on ships) then transmitted to local rats in domestic settings. Fleas then transmit the bacterium between infected rats and humans. But there's still some [debate](#) on the transmission pathways of plague in these pandemics. The classical cycle between an animal reservoir (rats) to humans through an insect vector (fleas) is [common](#) to many animal-associated infectious diseases, known as zoonoses.

The pattern of plague cases seems to have [changed](#) to a more complex ecology over the past 50 years. There has been a shift in cases from Asia to Africa and the re-emergence of disease in other areas such as the United States.

It's now recognized there are many potential pathways of transmission from animals to humans in different settings. In the US, plague is thought to be [transmitted](#) from [wild rodents](#) in rural areas, such as prairie dogs and rock squirrels.

In some African countries, it's [thought](#) cases arise where there is human encroachment into forest areas. Outbreaks have also been linked to the consumption of [infected camel and goat meat](#) in Libya, and from exposure to [infected guinea pigs](#) during preparation for cooking.

In recent years, there's been interest in the impact of climate change on the potential for outbreaks. The prevalence of plague in animals in Kazakhstan is [associated](#) with higher temperatures in spring and rainfall in summer, as are [outbreaks](#) in the [US](#). Tree ring [studies](#) also suggest similar climatic conditions may have triggered the Black Death and the Third Pandemic.

How can it be controlled?

Modern plague [control](#) includes finding cases and treating them, and where cases are detected, clearing homes of fleas using insecticides. Plague cases in hospitals need to be cared for safely to prevent spread to health care workers and other patients.

In affected communities, people should act to keep rats out of homes. This includes making sure food is stored and disposed of safely. Avoiding bites from fleas is also important, using insect repellents and ridding animals of fleas. Although rat control using poisons can also be used, this should only be done after fleas have been controlled, as fleas can leave dying rats and make things worse.



At a national and international level, systems to respond to outbreaks are required to make sure the public receives reliable information, to deploy logistics and resources to where they are required, and co-ordinate the various national and international organizations involved in the response.

How easily can it spread between countries?

Although the concept of [quarantine](#) arose from efforts to control plague spread, travel and trade restrictions are not often warranted given their potential economic impact. The wider fallout from outbreaks can be severe. For example, a relatively small [outbreak](#), mostly localized to the city of Surat in India in 1994, provoked widespread panic. This resulted in a national collapse in tourism and trade that was [estimated](#) to cost up to US\$2 billion.

In this current outbreak, only the Seychelles has implemented travel bans, and it's thought the risk of transmission is low. Few confirmed cases have been [reported](#) in travelers from Madagascar during the current outbreak.

The [World Health Organisation](#) has been working with neighboring countries to improve preparedness efforts. This includes improving surveillance at airports and sea ports, developing contingency plans and pre-positioning of antibiotics and protective equipment.

What is the future for plague?

It's not possible to eradicate plague, as it is widespread in wildlife rodents outside the sphere of human influence. Outbreaks generally are managed reactively by "firefighting teams" deployed to clear houses of fleas, identify and treat cases and give pre-emptive treatment to contacts at risk.

A more preventative approach, such as the identification of areas at risk using climate models and animal surveys to focus flea and rat control efforts would be better. But this requires a better understanding of transmission pathways in each region where disease persists.

Allen Cheng is Professor in Infectious Diseases Epidemiology, Monash University.

