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# EADLY TOOLS OF TERROR

**Can contemporary jihadists use  
CBRN weapons for terrorism?**

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An increase in violent Islamist extremism can be observed, especially across North Africa and the Middle East. New terrorist groups were born out of conflicts related to the Arab Spring, and previously established groups have merged into larger networks. Some of these new jihadi groups, such as the Islamic State of Iraq and al-Sham (ISIS), are known for their use of extreme violence to pursue their goals and are characterized by a younger membership more inspired to kill than to pray (Watts 2014, 1, 4). Some of these groups even engage in fierce competition with each other. This “new era for jihadism” (Lahoud and al-Ubaydi 2014, 6) means that it is necessary to look at old threats from new angles, such as the use of chemical, biological, radiological and nuclear (CBRN) weapons by terrorist organizations. Has jihadism changed to a degree that contemporary terrorist groups have overcome their “motivational constraints” (Dolnik 2008, 1) for pursuing CBRN related terrorism? A fresh perspective is needed. Previously reluctant jihadist groups could overcome their restraint in using CBRN weapons to gain media attention and prevail in competition with other terrorist organizations. They also might take advantage of changes in CBRN weapon availability, method of delivery and degree of complexity. We will examine the relevance of the CBRN terrorism threat with consideration for the three main aspects for a terrorist attack: intention, capability and opportunity (Forest 2012).

## TERRORIST MOTIVATORS

### *Media attention*

Terrorists use violence as a form of communication to influence their audience (Martin 1986, 1). Therefore, media attention is a central goal of many terrorist organizations (Walsh 2010, 8). Smaller terrorist incidents often fail to receive more than local or regional media coverage. Research shows that the media is most attracted to high casualty terror incidents, such as aircraft hijackings and attacks against targets associated with Western countries (Walsh 2010, 4). Conversely, attacks in places such as Iraq and Afghanistan are perceived as “normal” and receive less international media attention and public interest.

To maintain or regain media attention, terrorists “must heighten the threshold for the spectacular assault,” (Martin 1986, 7) which helps to explain the tendency of “new terrorism” to focus on maximizing the number of victims by acting indiscriminately against civilian targets and by increasing the use of suicide attacks (Walsh 2010, 7). Compared to conventional terrorist tactics, CBRN attacks would provide the needed stimulus to attract media attention. Weapons of mass destruction (WMD) are also regarded as “weapons of mass disruption” (Hoffer 2011, 107).

WMD use by terrorists is the highest threat to the security of the West and is its greatest fear (Auerwald 2006, 543), (Mowatt-Larssen 2011, 2). Therefore, it may be enough for terrorist organizations to simply threaten to use such weapons. For example, on December 24, 1998, Osama bin Laden stated in an interview with *Time* magazine that “acquiring weapons (WMD) for the defense of Muslims is a

religious duty,” which got him the undivided attention of the global media and Western governments.

On November 7, 2001, bin Laden gained media attention by directly addressing the potential use of CBRN weapons by al-Qaida with the following statement: “I wish to declare that if America used chemical or nuclear weapons against us, then we may retort with chemical and nuclear weapons” (Mowatt-Larssen 2011, 18).

One could argue that the use of CBRN weapons would discredit a terrorist group, especially when people identify with the victims (Martin 1986, 2). But that fear explains the increased publicity of the spectacular assault. Intense media coverage and massive audiences would facilitate the spread of fear and increase “customer interest,” enabling perpetrators to broadcast their message on an unprecedented scale (Walsh 2010, 6).

The “action-reaction” spiral of terrorist activity and media attention could be a strong motivator for jihadist groups to pursue CBRN strategies. It also creates a security dilemma. When the media cover terrorist incidents only marginally and condemn the perpetrators, which they frequently do, they also add incentive for the terrorists to increase the level of violence, including the possible use of CBRN weapons. On the other hand, when the media cover acts of terrorism extensively, they give terrorist organizations less reason to increase the level of violence but allow the perpetrators to use the publicity to influence their audience.

A desire to stand out amidst the steady flow of terrorism reporting is a strong potential motivator for contemporary jihadist organizations to use CBRN weapons.

### *Competition between jihadist organizations*

When al-Qaida issued a statement on February 2, 2014, stating it had no connection to ISIS, it was a sign that the fight for the world’s top position among the jihadist organizations had reached a new level of intensity (Lahoud and al-Ubaydi 2014, 1).

The first dispute between al-Qaida’s central leadership and ISIS’s forerunner, al-Qaida in Mesopotamia, started in 2005 after the Iraqi Sunni jihadists engaged in violence against the Shiite population. In 2006, most Iraqi Sunni jihadists merged into a group called the Islamic State of Iraq (ISI). Since early 2012, ISI became gradually more engaged in the Syrian insurgency, and in April 2013, unilaterally declared a merger with the al-Qaida affiliated group Jabhat al-Nusra (JN) and changed its name to ISIS.

JN leader Abu Saad al-Hadrami promptly rejected the merger, and al-Qaida’s central leadership declared it invalid. In the summer of 2013, ISIS leader Abu Bakr al-Baghdadi, publicly rebuked al-Qaida central leader Ayman al-Zawahri (Watts 2014, 3). Al-Zawahri, realizing that he was rapidly losing influence in Iraq and Syria, started mediations between JN and ISIS in an attempt to regain control in the region. He selected Abu Khalid al-Suri, the leader of Syria’s third-largest jihadist group and al-Qaida affiliated group Ahrar al-Sham, as his arbitrator. However, in early spring 2014, ISIS made its position clear by killing al-Hadrami, as well as Abu Khalid

(Lahoud and al-Ubaydi 2014, 2-4), (Watts 2014, 2).

At this point, Al-Zawahri confronted ISIS. He publicly disowned ISIS by leaking a letter to Al-Jazeera media and then denounced the group through clerics loyal to al-Qaida. In February 2014, al-Zawahri published a statement declaring: Al Qaida “has no connection with the ‘group’ called the Islamic State in Iraq and the Levant.” (Lahoud and al-Ubaydi 2014, 1) Following this declaration, al-Qaida used its affiliates JN and Ahrar al-Sham to engage ISIS units in Syria. What might seem a small regional dispute between two jihadist groups is really the beginning of a war between the two most influential Sunni jihadist groups in existence. Ultimately, “Ayman al-Zawahri seems to have overestimated his degree of influence,” Nelly Lahoud and Muhammad

al-Ubaydi of the Combating Terrorism Center wrote in March 2014. He not only struggles to maintain his influence in the Syrian and Iraqi insurgencies and to keep the money flowing in from Gulf donors, but also to keep al-Qaida’s leadership role in global Jihad (Watts 2014).

Al-Qaida’s fear of losing global influence and credibility among jihadist followers, supporters and affiliated groups like al-Qaida in the Arabian Peninsula and al-Qaida in the Islamic Maghreb, which are already favoring ISIS (Watts 2014), could be regarded as a potential motivator to stage another spectacular terror attack. Al-Qaida could use the publicity it would gain to demonstrate its capabilities to a global audience and reclaim its leadership position among jihadi organizations.

To achieve the psychological impact and number of victims needed, al-Qaida is now more likely to attempt a CBRN attack than in the past. It will assess the feasibility of CBRN in this context. Most analysts agree that such an event would likely bear al-Qaida’s signature of simultaneous and well-coordinated suicide attacks on multiple targets associated with the West.

## CBRN TERROR POTENTIAL

### *Acquisition of chemical weapons*

The acquisition of ready-to-use military-grade chemical weapons in a quantity that would allow for an effective terrorist attack and of the necessary delivery systems would only be possible for nonstate actors under three circumstances: (1) through transnational organized crime channels (TNOG) (Auerswald 2006, 559); (2) through a rogue state in

possession of chemical weapons, e.g., as could happen with Hezbollah and the Syrian Assad regime (Hummel 2013, 3); or (3) by forcefully seizing weapons from state-owned stockpiles, as may have already happened during the Syrian insurrection (Hummel 2013, 3) or during the ISIS seizure of the disused Iraqi chemical weapons complex in Muthanna (BBC 2014).

The development and manufacture of chemical weapons in an adequate quality and quantity would most likely be too complex and expensive for most terrorist organizations, as demonstrated by Aum Shinrikyo (Danzig, et al. 2011, 28), the terrorist group that released the nerve agent sarin into train cars on the Tokyo subway, killing 12 and injuring about 6,000. It is easier to acquire toxic dual-use chemical

substances meant for industrial or agricultural applications than military-grade chemical weapons (Forest 2012, 334).

### *Usability of chemical weapons*

The simplest method of chemical weapon delivery is to release chemical agents in the target area, as done in the 1990 Liberation Tigers of Tamil Eelam attack on a Sri Lankan military base in East Kiran (Hoffman 2009, 463-464), (Morbi 2011) or the 1995 Aum Shinrikyo attack on the Tokyo subway system (Danzig, et al. 2011, 31-32).

Terrorists could also use a structure’s heating, ventilation and air-conditioning system to disperse the chemical (Forest 2012, 336).

Improvised chemical weapons made from conventional explosives and dual use chemicals, e.g., toxic industrial chemicals or pesticides, are the most likely type of CBRN weapon for terrorism. The low degree of complexity and widespread proliferation of the necessary components (Forest 2012, 334) make this kind of chemical weapon attractive to terrorists with budget constraints, e.g. self-funded jihadist cells.

The 2004 al-Qaida plot to use chemical weapons against official buildings in Amman, Jordan, (BBC 2004) and the 2003 al-Qaida New York city subway plot (Mowatt-Larsen 2011, 26), both involving dual-use chemicals, show that terrorist organizations have already explored such methods.

Another possible CBRN terrorism scenario would be the release of toxic substances through an attack on, or sabotage of, an industrial installation containing toxic chemicals situated close to the intended target area. A terrorist attack of this kind could have the same impact as the 1984 Bhopal, India, industrial gas leak that killed thousands and injured half a million (Hoffer 2011, 103-104).



Dead pigeons cover the ground in the Damascus suburb of Arbeen in August 2013. Activists say the birds were killed during a chemical attack on civilians by Syrian government forces. REUTERS

### *Acquisition of biological weapons*

The pathogens necessary to construct a biological weapon could be harvested in nature, acquired through TNO networks or stolen from medical research facilities. Although terrorist organizations could produce pathogens themselves, the process would involve high-tech production facilities capable of turning out adequate quantities and knowledge of proper means of storage, transportation and delivery of the specific agent. Aum Shinrikyo, for example, was unable to successfully develop and utilize biological weapons, despite massive investment, and decided to use chemical weapons instead (Danzig, et al. 2011).

## Because of the high psychological impact on the target population, the use of a radiological weapon in a terrorist attack is possible.

### *Usability of biological weapons*

Potential delivery methods for chemical weapons could be modified to deploy biological weapons. Biological pathogens can be dispersed through a ventilation system, a target's food or water supply, or through contaminated objects like the mail or placed in an improvised explosive device (IED). The problem with the latter method is that up to 50 percent of the pathogen is destroyed by the dispersal explosion (Forest 2012, 337).

There is less risk of biological weapons use in contemporary terrorism because of the inherent complexity of acquisition, storage, transport and delivery (Hoffer 2011, 107). In addition, once the problems of identifying the specific agent are overcome (Graham 2010, 2), its effect on human targets can usually be medically mitigated (Hoffer 2011, 104).

The result of Aum Shinrikyo's biological weapon pursuit supports this argument. Al-Qaida also ran biological weapons programs in Afghanistan together with Jemaah Islamiyah (Joesse and Milward 2013, 3) and trained recruits to use such weapons, but is not known to have used biological weapons in any attacks, though they were connected to the 2003 ricin plot in the United Kingdom (Mowatt-Larssen 2011, 6, 23, 25).

The high degree of complexity related to development and delivery, in comparison to other types of CBRN weapons, and the lack of instant impact on the target population due to the pathogen-specific incubation time (Forest 2012, 336-342) make biological weapons a poor choice for a contemporary terrorist group.

### *Acquisition of radiological weapons*

Several highly radioactive elements suitable for the

construction of radiological dispersal devices (RDD) or radiation-emitting devices (RED) are widely obtainable because of their use in medicine and industry. (Forest 2012, 346). Terrorists can acquire these materials through TNO networks (Schmid and Spencer-Smith 2012) or by stealing them from unsecured medical or industrial facilities.

Although the construction of a radiological device is a rather simple mechanical process, personnel risk radiation exposure while handling radioactive substances during the acquisition of the materials, the construction of the radiological device and its storage, transport and delivery.

### *Usability of radiological weapons*

RDDs can be constructed in any form currently used for conventional IEDs. The radiological substances would increase the secondary effects of the IED, e.g., contamination of the target area and radiation poisoning of victims and first responders.

Despite increased security measures and built-in safety mechanisms against direct and indirect attacks for nuclear power plants worldwide (Hoffer 2011, 108), a terrorist attack on such a facility to turn it into a huge RDD should not be ruled out.

REDs are delivered by placing a radioactive substance where radiation will affect many people, such as a subway station or airport, an indoor stadium, a church, a government center or an office building (Forest 2012, 343). The 1995 Moscow Ismailovsky Park incident (Dolnik 2008, 1), which remains the only known attempt to use radiological weapons, demonstrates the potential of a RED.

Radiological weapons will most likely cause widespread fear and panic, especially when the target population becomes aware of the radioactive contamination (Hoffer 2011, 107). "The psychological effects would be the most devastating, mainly because of the automatic association of the word 'radioactive' with the word 'nuclear' in the minds of the majority of the world population," Adam Dolnik wrote in 2008 when he was director of research programs at the Centre for Transnational Crime Prevention in Australia. "In reality, however, more people would probably die in stampedes and car accidents resulting from the panicking population's desire to leave the affected area immediately, than from direct effects of radiation."

Because of the high psychological impact on the target population, the use of a radiological weapon in a terrorist attack is possible. This type of CBRN weapon could be used for a large-scale, high-impact terrorist attack by a well-funded jihadist organization.

### *Acquisition of nuclear weapons*

Following the breakup of the Soviet Union, there was concern that terrorists might acquire nuclear weapons or weapons-grade material from one of the former Soviet republics (Dolnik 2008, 1). Al-Qaida made several attempts to acquire weapons-related materials and knowledge from elements in former Soviet republics (Schmid and Spencer-Smith 2012), Pakistan and sources in Africa (Mowatt-Larssen 2011, 17, 18, 19, 26, 27).

Besides the risk of nuclear proliferation posed by the arsenals of Pakistan and India (Hoffer 2011, 110), and the weapons programs of North Korea and Iran (Graham 2010, 3), TNO networks remain the most likely sources for nuclear weapons, components and radioactive materials. The Umma Tameer-e-Nau, run by Bashiruddin Mahmood (Mowatt-Larssen 2011, 15), or Abdul Qader Khan's network (Auerswald 2006, 545, 557) are two examples of TNO networks that were active in this field before being shut down.

### *Usability of nuclear weapons*

The United States and other nations consider a nuclear-armed terrorist group to be the worst-case scenario (Auerswald 2006, 543), (Mowatt-Larssen 2011, 9). Al-Qaida has obviously also recognized this potential since they are known to have run a "nuclear weapon program" under Abdel Aziz al Masri since 1999, though they have not pursued this type of weapon since (Mowatt-Larssen 2011, 15, 18, 19).

The use of nuclear weapons as a terrorist weapon is very unlikely: It's generally assumed that nonstate actors don't have the capacities to acquire weapons-grade material in the required quantities, manufacture the weapons parts in isolation, construct a working device from these parts, and maintain the device properly during storage to keep it operational (Hoffer 2011, 109).

### **CONCLUSION**

Jihadist organizations intend to acquire CBRN weapons of all types to a certain degree. The capability of an organization to acquire or construct CBRN weapons depends on the specific group and the type of weapon. The CBRN capabilities of an established, well-funded, experienced group such as al-Qaida are higher than that of a new jihadist band in Africa or parts of the Middle East.

Intent to acquire and use biological and radiological weapons is comparatively low. Jihadist organizations can acquire or produce biological weapons, but they are severely limited by the complexity and costs. Acquiring materials and components for radiological and nuclear weapons was easier following the breakup of the Soviet Union, but opportunities are limited today. Although al-Qaida displayed the intention to acquire nuclear weapons in the 1990s and early 2000s, it seems to have de-prioritized it. The nuclear capabilities of nonstate actors, including jihadist organizations, can be regarded as very low to nonexistent. There is no evidence of a significant change in capabilities for any of the different CBRN technologies in recent years.

The acquisition and use of chemical weapons seems to be of a higher priority than other types of CBRN weapons. The agents and materials for chemical weapons are generally more affordable, easier to acquire, and safer and simpler to construct, handle and deploy. The ongoing war in Syria, where there are still military-grade chemical weapons, has undoubtedly facilitated the acquisition of such weaponry. There have been several cases in recent years in which jihadists attempted to acquire and use chemical weapons, usually

toxic dual-use chemicals, that are easier to obtain and less complex to use in improvised weapons. The recent case of ISIS seizing the disused Iraqi chemical weapons complex in Muthanna is another alarming indicator for this trend.

As a result, the most likely jihadist extremist CBRN terrorism scenario involves improvised chemical weapons attacks. There is incentive and opportunity to use this affordable and unsophisticated type of CBRN weapon to gain the attention of international media in an attempt to establish dominance in the current jihadist in-fighting and power struggles. Considering all the above, the use of certain types of CBRN weapons by contemporary jihadist organizations has become more likely. □

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