ABSTRACT

The military utility of chemical and biological weapons has long been recognized as marginal. Indeed their use by state actors has been banned (CWC and BTWC). They are no longer weapons of mass destruction (WMD) but could conceivably still be weapons of mass terror and panic used by non-state actors or rogue states, as indeed they have been. Radiological weapons, or dirty bombs, have never been used as WMD given their zero military utility. But again, RW could be used as a weapon of mass terror or panic. Although they are still central to NATO, Russian and Chinese military doctrine for the time being, nuclear weapons, the last real WMD, are slowly evolving the same way. Some US and Russian categories, eg INF, no longer exist. The military utility of other nuclear weapon systems is also being marginalized (deterrence remaining in the eye of the beholder). The generals, and more importantly the politicians, will eventually figure out that nuclear weapons are no longer usable at any level. There is no such thing as a sub-strategic or tactical nuke. Any nuclear weapon use will have global consequences. Besides, conventional weapons are becoming more accurate and more destructive (and potentially more prone for strategic use). While the big military strategic game will be played out in the two "spaces", outer and cyber, the CBRN focus must remain the Middle East, India-Pakistan and North Korea.

Background
My remarks are more a look at the future than a reiteration of NBCW/CBRNe history which we all know. I want to concentrate on the evolution of views towards the deployment and use of these "agents" over time. I also want to retain the conceptual link between WMD (weapons of mass destruction) and what we now call CBRNe. In the late ‘60s and early ‘70s, my Gunner training included NBCW – nuclear, biological, chemical warfare. Google “NBCW” and you get “National Board of Catholic Women”. Scroll down further and the acronym finder says that NBC Warfare is a definition “that appears very rarely”.

The artillery course in "nuclear target analysis" taught us to plan tactical nuclear strikes against Warsaw Pact armoured formations as they invaded West Germany. It was “nuke ‘em til they glow”. We also choked on tear gas in the “gas chamber” as we shouted our Army ID numbers in our NBCW suits minus the gas mask. In other words, we trained for the use of nuclear and chemical weapons as normal military practice. We
were also made aware of the biological threat. At the strategic nuclear level, one talked about “counter force” and “counter value” nuclear strikes, the latter against cities. All a normal part of warfare.

We all are familiar with Clausewitz’s dictum that “war is merely a continuation of politics by other means”. This dictum continues to resonate. There still exists lots of classic 18th/19th century political and military thinking on threats, national security and perceptions of national security interests.

The devastation of the 20th century reinforced this attitude with the creation of Grand Alliances, non-aggression pacts and the idea of collective security. Indeed, as the destructive power of weapons grew exponentially, no single state felt safe, not even the superpowers. I would suggest that, in the 21st century, wars fought by Grand Alliances, however defined, are less likely. How many true alliances, besides NATO, are there anyway? Flashpoints for military confrontation, however, will remain in the Middle East, South Asia and North East Asia, all thanks to classic perceptions of threat, national security and regional security. Perhaps we should now add Eastern Europe to that list?

In the long run, however, decision-makers in the 21st century will become more and more preoccupied with the global challenges of climate change, the need for more and more energy, the competition for less and less natural resources, environmental degradation, natural disasters, and massive displacement of people internally or across national boundaries because of natural or man-made disasters. Our classic perceptions of national, regional and global threats will continue to evolve accordingly, albeit very slowly. In this context, the non-state actor is becoming a more significant force, be it in the form of violent warlords in East Africa, civil war in Syria or Mali pitting rebels against the State, independence movements in Xinjiang, Kashmir or the Philippines, or Sunni-Shiite clashes in Iraq to name a few. All are breeding grounds for terrorism. Taliban, el Qaeda, Boko Haram, Hizbollah, their proxies and their imitators, these non-state actors are the trendsetters of the 21st century. Their motivation: the deadly, zealous combination of political, religious, cultural, and social extremism. Their means: acts of terrorism using any instrument, including CBRNe weapons if possible.

And now I want to turn to CBRN/WMD conundrum.

**Weapons of Mass Destruction**

Apparently Robert Oppenheimer coined the phrase “weapon of mass destruction” when he gave a lecture about atomic energy at the US State Department in 1947. The term WMD continues to apply to nuclear, chemical, biological and radiological weapons but, I submit, there is only one real WMD: Nuclear. Over the intervening years the vocabulary has changed, but not the issues. We have gone from NBC warfare to CBRNe events, according to the overview provided for this conference. We have gone from an expectation, if not certainty, of total war to potential “events”.

My basic thesis: the military (and I use the term in a generic sense), the military who are trained for war to respond to the worst case scenario, will always hold on to their
weapon systems until they become convinced that a particular weapon’s military utility has been marginalized, has disappeared or has been replaced by a superior weapon system – muskets for long-bows, 12-pounders for catapults. Fast forward to the late 20th/early 21st Century: While there may be legal and humanitarian considerations to proscribe an entire class of weapons, military utility will also be a consideration, perhaps the primary consideration, before any treaty is signed.

Some examples:

From the conventional side: anti-personnel mines and cluster munitions come to mind. But it is on the CBRN side that the situation continues to evolve.

Chemical Weapons: used extensively in WWI, last used military-to-military in large quantities during the Iran-Iraq war (1980 – 88). Now there is a Chemical Weapon Convention in force since 1997 after years of negotiation. Why? The military has proven that chemical weapons are a bigger nuisance than a war-winning solution. Unfortunately state actors such as Iraq and Syria have used CW against their own people.

Issue: Israel signed the CWC in 1993 but has not ratified. Egypt and North Korea have not signed. North Korea’s CW stocks remain a serious concern. (But if North Korea ever decides to use CW against South Korea, I expect that retaliation would be an overwhelming conventional response and not CW use.) The prolonged existence of CW stocks will continue to be of interest to terrorist organizations. Concerns about Syrian CW stocks falling into terrorist hands are just the latest such manifestation. Globe and Mail headline on 03 May: “Chemicals in striking distance of rebels”. Even as Syria has cooperated with OPCW to remove chemical weapons there have been stories of the use of chlorine gas by the Assad regime.

Biological Weapons: we have gone from dead horses as siege weapons in medieval times to the Biological and Toxin Weapons Convention of 1972 which bans the development, possession and use of biological weapons. Why? Because, despite once being prepared to use BW, the military has figured out that BW is a bigger hassle than a war-winning solution.

Issue: Egypt and Syria have signed the BTWC but have not ratified. Israel is a non-signatory. North Korea, ironically, has been a Party since 1975. There are, however, too many ancient agricultural labs in the old Soviet Republics and elsewhere, that are not as secure as they should be. An anthrax outbreak perpetrated by a terrorist organization would cause some casualties and mass terror.

By the way, in October 2009 the bipartisan US Commission on the Prevention of WMD Proliferation and Terrorism noted that the threat of bioterrorism is real and concluded “that terrorists are more likely to be able to obtain and use a biological weapon than a
nuclear weapon”. I agree, particularly in the light of the growing sophistication of global biotech, including synthetic biotech.

**Radiological Weapons or Radiological Dispersion Devices** do not exist. They would exist, however, if the military thought that they would be useful weapons. They seem not to be, and there is no RWC. A terrorist organization, however, may find a primitive RW device a feasible weapon if it could get a hold of even a small amount of nuclear matter. It would not take much to cause mass panic, but not mass casualties.

**Nuclear Weapons**: Political, and dare I say, military thinking has evolved from the Cold War period of tens of thousands of warheads per side for mutual assured destruction to the cliché that the only use for nuclear weapons is to deter. The trendline in warhead stocks is ever downward, even though military doctrines reserve their right of use. Eventually the military will be convinced that nuclear weapons are not usable at all. As an aside, I would argue that the two “spaces”, cyber and outer, will be the main strategic battlegrounds in the future. Terrorist organizations already use the internet to spread their propaganda and recruit true believers to their cause.

A whole category of nuclear weapons, the intermediate range nuclear forces (INF), has been dismantled by the US and Russia because they were simply, too fast, too dangerous and ultimately unusable. This, however, has not stopped non-Parties to the INF such as China, India, Pakistan, Iran and North Korea from continuing to develop missiles for all ranges, and possibly warheads.

Similar questions are asked about the utility of **tactical or non-strategic nuclear weapons**. The use of one tactical nuclear weapon would have serious global consequences. Why bother with them? Does NATO really think that they have a military role? Or does NATO hang on to them because Russia does? They may simply be a liability to terrorist attack.

*(Note: Cold War: NATO nuclear deterrent against massive Warsaw Pact tank formations. Today: Russian military doctrine, ironically and disingenuously, stresses the need for a nuclear deterrent in face of “superior” NATO conventional forces. NATO now professes the need for “an appropriate mix of nuclear and conventional capabilities.”)*

Politicians, however, now dare to think about a “nuclear global zero”. The military certainly has to think about it and prepare its worst case scenario of no nukes - and a world safe for conventional war. In this context conventional weapons are becoming more accurate, more destructive and potentially more prone to strategic use where once the military DS solution was a nuclear strike.

The trend lines for greater nuclear weapon reductions will continue bilaterally between Russia and the United States despite current tensions. What will be interesting to watch is when France, China and the United Kingdom will join these negotiations. Of equal
importance will be what to do with India, Pakistan, North Korea and Israel, three of whom have demonstrated various levels of nuclear weapon capabilities and their means of delivery. All find themselves to be leading causes of security uncertainty in their respective regions. And then there is Iran.

It will also be interesting to see if the UN disarmament machinery, designed essentially for a bi-polar world, will cope with real multilateral nuclear disarmament in a multipolar world. I somehow doubt it.

States, hopefully, will muddle through in their bilateral and multilateral security relationships. With the possible exception of the DPRK, regional security challenges appear impossible to resolve from the outside. At best, the US, Russia and perhaps China can act as security enhancers with their respective clients.

It is the terrorist non-state actor, however, who will be the challenge. His is already a global presence. He is the global trendsetter, the global threat. He is the one who would love to get his hands on nuclear, chemical or biological stocks. There may be consensus on the potential use of CBRN by terrorists. But who is a terrorist? Is the militant Uighur in Xinjiang a terrorist or a freedom fighter?

The faster militaries can get rid of their non-usable CW and nuclear weapons and the faster biolabs are made secure, the safer the world will be from massive terrorist attack by means of CBRN events. Unfortunately, even if all WMD are safely stowed or destroyed, there is no guarantee that a terrorist will not sprinkle anthrax into a city’s water supply or steal some nuclear fuel to spread in a city.

Finally, the Boston Marathon bombing last year has reminded us to pay close attention to the small “e” in CNBRe which is not so small. I suspect that explosive devices have killed thousands more people in Iraq, Pakistan, Afghanistan, Sri Lanka and elsewhere than all the terrorist CBRN events combined.

Wide-ranging initiatives such as the G-8 initiated Global Partnerships Program, the work flowing out of the Nuclear Security Summits, the Global Initiative to Combat Nuclear Terrorism and the Proliferation Security Initiative are all vital to the war on terrorism. But are they living up to their objectives? Are they enough?

One final comment about the global security context: I am not sure if we can resolve differences in thinking on threats, national security and perceptions of national security interests, the role of CBRN/WMD, and how to deal with global terrorism; but we need to have an informed conversation such as at this conference.