



CANADA'S CYBER SECURITY STRATEGY [P.12]

PEACEKEEPING, PREPARE FOR WAR [P.16]

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BREXIT, THE ANGLOSPHERE AND CANADA [P.6]



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ARE CANADA'S DIGITAL SECURITY POLICIES BEING DECIDED IN WASHINGTON? [P.10]



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MESSAGE FROM THE EDITOR

Globalization seems to be the primary cause of just about every malaise affecting a whole range of countries these days; much of the political upheaval we are now seeing is being blamed on it.

The UK votes narrowly for exit from the UK? Blame globalization. Donald Trump will be the Republican nominee for president of the United States? Globalization is the cause. Hillary Clinton has turned against the Trans-Pacific Partnership? **It's a reaction against globalization.**

Globalization has become the root of the world's evils especially but not exclusively on the left and all right thinking citizens need to take up the cudgels against it before it destroys even more middle class jobs, concentrates wealth even more narrowly, and cooks the planet to a crisp.

Well, no. None of this is true. Globalization is mostly an outgrowth of technological advancement that is particularly manifest in communications and transportation, economic policy which largely reflects the growth of liberal internationalism, and a marked political failure almost everywhere to channel its impact in ways that truly do raise all boats and not just contribute to the enrichment of the 1 percent of the 1 percent.

In some ways globalization – which is largely a process that is reflected in policy rather than a policy outcome – has been developing since the first families of hunter gatherers wandered from their own valley somewhere in Africa and discovered another valley of hunter gatherers living one valley over. Kill them? Trade with them? Mate with them? Nothing was possible without communication.

Since the early nineteenth century at least science and engineering, almost never directed by any empire or kingdom, took scientific advances from even earlier days and turned them into steam ships, or railways or telegraph lines, while traders and merchants eschewed the old mercantile systems and set out to find new markets to buy raw materials and sell finished products. Globalization had started to take hold since at least the late 18th century and was producing easily identifiable results by the late 19th

century. Blame the telegraph, the steamship and the railway for the great leap into the 20th century. Blame outcomes such as colonialism and huge gaps between the rich – who understood and profited from globalization – and the poor who did not.

Towards the end of the nineteenth century and into the first half of the twentieth century men and women who are **known to historians as “progressives” recognized the danger** to capitalism and began to create the welfare state in Europe and North America to close the wealth gap. They knew it was as useless to turn back the technological revolutions in communications and transportation that were allowing capitalism to gallop ahead as to order the tides to recede. But they also believed that the malevolent outputs of that unfettered capitalism both at home and abroad would inevitably prove disastrous. They saw the signs of imminent revolution in the rise of trade unionism, some of it very radical, and communism.

The great problem with globalization today is not that it exists but that most liberal democracies have done very little to mitigate its negative impacts and are now seeing pushback against the process itself. But the process will continue to march as technological revolutions in computing, transportation – of goods, but also of people – and communications continue to make it easier and more lucrative to build global value chains. There is simply no stopping it, given the proclivity of humans to find better, faster, cheaper, more efficient ways of moving goods, people, money and investment around the world to enrich themselves.

There is, however, a greater duty than ever for governments to tax the process and use the avails to do what the progressives did more than a century ago. Not re-impose **tariffs, which won't work, or to “stop” globalization, which** will work even less, but to make sure that the fruits of globalization are more evenly spread. That will take real political courage, which we have seen little of in the last few decades.

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Source: PA

BREXIT, THE ANGLOSPHERE AND CANADA

by JULIAN LINDLEY-FRENCH

The normally reliable and sensible Anne Appelbaum got it badly wrong when she suggested that Britain would not survive outside the EU and that Britain would ‘need’ to rely on illiberal powers for its future economic well-being, which could well see the British lost to the West. Utter tosh! As *Team GB* is proving at the Rio Olympics it is a big mistake to write the British off. They have a habit of proving people wrong. So, what are the real implications of Brexit, and the coming Anglosphere, particularly for Canada?

Brexit is ultimately about power. Many of those Britons who voted to quit the economically-moribund EU instinctively understood this. For too long, by refusing to turn the *directoire* into a *trirectoire*, France and Germany used the EU institutions to force the world’s fifth biggest economy and top five military actors into a form of political subservience. Whilst the British political class was not up to the challenge posed by Berlin and Paris, the British people were. “Enough is enough”, came the proud cry of millions.

Brexit is now fact (and it is) and it will lead to a profound realignment of the Global West into a Eurosphere and an Anglosphere. The Eurosphere will be organized around Germany with France reduced to the subordinate partner.

The Anglosphere will be organized around the United States with both an Atlantic and a Pacific wing, with Britain to the fore.

In truth, it is not Brexit or even the US presidential elections that will shape Canada’s strategic choices.

Britain’s post-Brexit strategic bounce is all down to fortuitous timing. The currency of economy in matters strategic is steadily being replaced by the currency of armed power as the basis for understanding who is up and who is down in the world. Sadly, the twenty-first century will not be seen through the lens of trade deals and trade pacts, but rather the burgeoning military challenge to the West posed by the illiberal powers such as China and Russia. In other words, it will be ‘strategic’ power, influence, and effect that will again come to dominate ideas of power and weakness, not trade pacts, most of which will exit stage left with Obama.

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Of all the Europeans, the British are best placed to exploit such power. The confirmed British defence investment **budget of CAD \$250bn is not far short of Russia's defence investment budget** on an economy that is at least twice the size. Yes, data points to some short-term Brexit-driven turbulence in the British economy, but nothing like the economic Armageddon so many ostensibly sensible economic commentators (oxymoron?) predicted.

The simple strategic truth of Brexit is that Britain remains too important a power to the US and too important an **economy to Europe and the wider West to be 'punished' for Brexit. Indeed, such 'punishment' would amount to a form of strategic masochism.** Moreover, given its **propensity to accept 'no questions asked' dodgy money from across the world the City of London will likely remain the world's pre-eminent dodgy money centre.**

Britain will continue to be a vital power-projecting pillar of European defence. With the new deep, joint power-projecting, and Royal Navy focused future force, Britain is building a force that will be a vital component in easing **the pressure on America's increasingly over-burdened grand strategy.** It will be a British future force at the **command core of future coalitions, the West's new/old way of organizing, deterring and disciplining power.**

With most Europeans having decided they would prefer the world to stop so they can get off and play EU, it will be again to the British the Americans will turn to for support in crises once the anti-British Obama administration is cast into history. A President Clinton (hopefully) would **only be a 'third-term' president up until the day she is elected. There is nothing in Hillary Clinton's resume that suggests she would be anybody's president except her own.**

The implications for Canada could be profound. The Anglosphere was fact in southern Afghanistan where it was Americans, Australians, Britons, and Canadians who did most of the heavy lifting for most of the time in most of the heavy places. Add a China-worried India to that mix and suddenly there could be a group of global-reach democracies, all of which have armed forces that in one way or another share the same tradition, and indeed culture.

In truth, it is not Brexit or even the US presidential **elections that will shape Canada's strategic choices. With respect, those choices are not made in Ottawa. The choice**

Canada faces and which Brexit and the Anglosphere brings into sharp relief is this; engaged strategic partner or free-riding hinterland happy to hide in the comforting but dangerous delusion that soft power is an alternative to credible hard power.

Face facts, Canadians! Canada is a three ocean power, all three of which will be contested spaces in the twenty-first century struggle between great liberal and great illiberal power. Canada can either join America, Britain, and others in contesting that struggle by helping to deter the likes of China and Russia, as it is now doing in the Baltic States. Or, it can choose to join soft-power peddling, free-riding Europeans trying to convince themselves and others that they really are serious about power.

Brexit was Britain's sovereign, democratic choice. However, Brexit and the coming Anglosphere will also hasten the forced strategic choice Canada, its government, and its people will need to make. And soon.

Julian Lindley-French is Vice-President of the Atlantic Treaty Association, Senior Fellow of the Institute of Statecraft, Distinguished Visiting Research Fellow at the National Defense University, Washington DC, and Fellow, Canadian Global Affairs Institute.



Source: Brendan Smialowski/AFP/Getty Images

THE OBAMA MOMENT—DEFENCE SPENDING DOES MATTER, EH!

by ALAN STEPHENSON

President Obama's pitch-perfect oration was delivered to a rapturous Canadian parliamentary audience on common Canadian-American progressive values in July. He celebrated the continental success in overcoming adversity in creating the "longest border of peace" in the world where too many borders are the source of conflict. His address made full use of hockey inferences, but it was an unsaid baseball euphemism about the need for Canada to 'step up to the plate' in terms of military spending that was cleverly delivered and completely lost on the adulating members of parliament. This was not simply another American President grouching about Canada's perpetual neglect of its obligations towards defence and security spending. Obama has been consistent in his multilateral view that allies are burden-sharing partners. "Free riders aggravate me."¹ Earlier, he warned the United Kingdom that special relationships are dependent on paying "your fair share" in defence of the liberal international order.²

"The world needs more Canada" - yes, but - it needs a Canada capable and willing to pull its weight.

In essence, Obama was saying the same thing to Canadians. "The world needs more Canada" – yes, but – it needs a Canada capable and willing to pull its weight. Common democratic, progressive values are of little consequence without the tools and will to defend them. Defence spending is not only a question of protecting the homeland; it is also a matter of committing the physical resources towards the maintenance of a rules-based order in the international system. Canada's view of the world was constructed from the historical experiences of nation building within the confines of a safe and secure continent. Only the United States has ever posed an external direct, existential threat to Canadian territory and sovereignty. The need to address the consequences of the American Revolution formed the foundations of contemporary Canadian national security culture.³ Negotiation and accommodation among particularistic regions and actors in 1867 established the evolutionary processes that eventually shaped the independent state of Canada peacefully. A preference for diplomacy over use-of-force in conflict resolution along with the establishment of rules-based institutions characterized the expansion of the country⁴ as well as the evolution of Canada's relationship with the United States from enemy to friend.

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Paradoxically, however, the only continuous, direct, existential threat to Canadian sovereignty and independence continues to be the assimilation of Canadian society and polity into the United States. This reality has had a significant impact on Canada's perception of national security, as Canadian society does not perceive the United States in terms of 'a direct physical threat' per se. Instead, Canadian society conceives national security in terms of state protection of acquired values that are in need of safeguarding primarily from a hegemonic neighbour and only secondarily from an inconsistent, dynamic international environment. Safe and secure in 'fortress North America', Canadian politicians are extremely aware that there are very few votes to be had in championing defence over domestic value trade-offs when it comes to expenditures. This has led successive Canadian governments to divert much needed funds from the recapitalization of key military equipment to parochial party platform promises.

Both the Prime Minister and Minister of National Defence argued in the wake of Obama's address that "spending doesn't measure Canada's true contribution."⁵ The problem is that Canada's military contributions have been premised on key equipment purchases during the Cold War that successive governments have allowed to atrophy in pursuit of international recognition at minimal cost. It is laudable that the current government wishes to pursue a soft power approach⁶ in line with Canadian national security culture as a matter of public policy, but Canada has a moral and practical obligation to ensure the international system that Canadians helped create in the aftermath of the Second World War and that sustains Canada's prosperity is stable and secure. This requires the physical means to do its part in policing a rules-based global order in an uncooperative world.

Although some commentators have argued that with no direct threat, Canada should spend more on diplomacy and development; the Liberal government should take heed of President Obama's soft but well delivered message on defence spending. Security, both national and international, is a singular priority in the United States as American defence budgets prove. In a world where most of the economies of Canada's allies are in duress, Canadian goodwill gestures in pursuit of a United Nations Security Council seat will also be judged against Canada's defence commitments to its allies. The next President of the United States⁷ may be more willing to 'carry a big

stick' and send a less than subtle message that Canada needs to take on more of the moral and financial burden in keeping international society secure. "The world needs more Canada", not only in promoting progressive values, but in sharing the financial burden of responsibility as well.

Alan Stephenson is a Fellow with Canadian Global Affairs Institute, holds a PhD from Carleton University, and is a veteran of the Canadian Armed Forces with 3600 fighter hours flying third generation CF-104 Starfighters and fourth generation CF-18 Hornets. He has held senior appointments in National Defence Headquarters, NATO and NORAD.

¹Jeffrey Goldberg, "The Obama Doctrine: The U.S. president talks through his hardest decisions about America's role in the world", *The Atlantic*, April 2016, found online at <http://www.theatlantic.com/magazine/archive/2016/04/the-obama-doctrine/471525/>

²Ibid.

³Alan Stephenson, *Canadian National Security Culture: Explaining Post 9/11 National Security Policy Outcomes*, Ottawa: Carleton University, unpublished PhD dissertation, May 2016.

⁴Although the brief 1885 North-West Rebellion was resolved with military use-of-force, it had long-term political consequences with respect to the anglo-francophone relationship that greatly influenced national security culture and should be viewed in historical context as an anomaly in domestic conflict resolution rather than the norm.

⁵Catherine Tunney, "Harjit Sajjan says NATO spending doesn't measure Canada's true contribution", *CBC News*, 09 July 2016; Matthew Fisher: Trudeau insists there are other ways to help NATO rather than just simply spending money", *National Post*, 09 July 2016.

⁶Margaret Wendt, "Justin's dilemma: soft power, hard world", *The Globe and Mail*, 16 July 2016.

⁷Donald Trump also spoke of 'free riders' to which Minister Sajjan responded. See Lee Berthiaume, "Harjit Sajjan defends Canada's military budget after Donald Trump slams NATO 'free riders'", *Ottawa Citizen*, 10 April 2016. Hillary Clinton is also known to want greater defence spending amongst allies - <http://money.cnn.com/2016/07/08/news/nato-summit-spending-countries/>



Source: US Coast Guard

ARE CANADA'S DIGITAL SECURITY POLICIES BEING DECIDED IN WASHINGTON?

by NEIL DESAI

Much has been written about the Government of Canada's decision to allow for the sale of \$15-billion worth of light armoured vehicles (LAVs) to Saudi Arabia by General Dynamics Land Systems Canada (GDLSC), based in London, Ontario. This is despite that country's human rights record. Both the previous Conservative Government and the current Liberal Government highlighted the potential economic fallout if the deal were to be cancelled. Foreign Affairs Minister Stéphane Dion has said cancelling the deal would cost Canada 2,000 jobs and would have no impact on human rights.

But as the LAV deal continues to garner negative attention, another major story over export controls of military goods went largely unreported in Canada, while south of the border it reverberated all the way to the White House. Multiple US federal departments and security agencies there have been involved in a vigorous debate over international limits on the sale of surveillance (or "hacking") software.

The attention to the issue and all its complexities, especially domestic economic interests, by the United States government stands in sharp contrast to the way that Canada handles questions of military exports. Here,

Global Affairs Canada is the main analyst, negotiator and executor, with interests largely taking a backseat.

Canada, the United States, and 39 other countries are currently parties to the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies. This regime, brought in after the collapse of the Soviet Union, focuses on providing transparency and responsibility in arms exports, as opposed to establishing a rigid export-control regime for the purpose of geopolitical containment during the Cold War.

In 2013, the members of the Wassenaar Arrangement agreed to expand the list of dual-use technologies that were covered to include Internet-based surveillance systems.

The number of items covered by the arrangement has grown, and now includes more "dual-use" technologies or equipment designed — intentionally or not — for civilian

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as well as military applications. Examples of such products include nuclear materials, aerospace, and information security technologies. Amendments to this arrangement work on consensus-basis among its members, giving each a de facto veto.

The reality is that this forum, like almost all multilateral forums, is subject to geopolitical jockeying. The intertwined security and economic interests of the powerful members of the arrangement seem to be taking precedence over the broader interests of the members. The US, as a major developer, consumer, and exporter of dual-use goods, drives the agenda at the Wassenaar Arrangement. Where it cannot get consensus, it can utilize domestic regulations and laws to shape global norms and markets. It is safe to assume that General Dynamics, an American firm, is able to build LAVs in Canada for Saudi Arabia, through a subsidiary, only with the US **government's approval.**

In 2013, the members of the Wassenaar Arrangement agreed to expand the list of dual-use technologies that were covered to include Internet-based surveillance systems. This included intrusion software designed to **circumvent a computer or network's security measures** to extract data. It also listed Internet-protocol network surveillance systems.

The United States was a driving force behind the amendments – the annual US Intelligence Community Worldwide Threat Assessment has moved cyber-threats ahead of terrorism as the leading threat to the United **States' security and economic interests.**

Ironically, even though the US backed the inclusion of hacking software at the Wassenaar Arrangement table, it **hasn't enforced the amendments at home.** Industry heavyweights such as Symantec, Google, Cisco, Boeing and Raytheon raised the alarm, saying their businesses could be hurt by the vague Wassenaar language, which they said would only create bureaucratic impediments and require cumbersome export licenses. The Obama administration said it would renegotiate the measures around surveillance software when the Wassenaar meets in December 2016.

It should be emphasized that in the US, the lead agency in implementing the Wassenaar Arrangement is the Department of Commerce. Its general outlook is contributing to American prosperity. It is clear from this

that the US sees its military and dual-use exports (such as cybersecurity technologies) as contributing to its national wealth today and in the future.

If the US is unable to soften the language in December, it will find a way to allow its industry to flourish regardless, leaving countries like Canada at a strategic disadvantage. Our homegrown, innovative cybersecurity companies might have limited international markets to pursue, or be required to go through extensive regulatory processes to receive an export permit for every piece of software they want to sell abroad.

Global Affairs Canada should be as shrewd as the United States when it negotiates and implements further amendments to Wassenaar. Given the speed of change in this field, it is essential for governments to draw on the expertise of departments and agencies that have an understanding of dual-use technologies, including National Defence, Public Safety Canada, and police forces. The national security analysis must be balanced with domestic economic considerations, so that a geopolitical **monopoly on cybersecurity technologies isn't formed,** whether inadvertently or strategically.

Neil Desai is an Executive with Magnet Forensics and a Fellow of the Canadian Global Affairs Institute and Munk School of Global Affairs at the University of Toronto. He previously served in Senior Roles with the Government of Canada.



Source: Georgia National Guard

CANADA'S CYBER SECURITY STRATEGY: TIME FOR A RESET!

by JOHN ADAMS

Computers and information systems have become a fundamental part of Canadian life. Day to day activities, commerce, and statecraft have gone digital. The associated information technology underpins nearly all **aspects of today's society. They enable much of our** commercial and industrial activity, support our military and national security operations and are essential to everyday social activities.

A vast amount of data is constantly in motion and an astronomical quantity is being stored in cyberspace. What is cyberspace? Cyberspace is an operational domain whose distinctive and unique character is framed by the use of electronics and the electromagnetic spectrum (EMS) to create, store, modify, exchange, and exploit information via interconnected information and communication technology-based systems and their associated infrastructures.

There are several characteristics of cyberspace worthy of note:

- The cost of entry into cyberspace is cheap;
- For the time being, offence is easier than defence in cyberspace;

- Defence of IT systems and networks rely on vulnerable protocols and open architectures and the prevailing defence philosophy emphasizes threat detection, not elimination of the vulnerabilities;
- Exploits occur at great speed, putting defences under great pressure, as an attacker has to be successful only once, whereas the defender has to be successful all the time;
- Range is no longer an issue, since exploitations can occur from anywhere in the world;
- The attribution of exploits is particularly difficult, which complicates possible responses; and
- **Modern society's overwhelming reliance on** cyberspace is providing any exploiter a target-rich environment, resulting in great pressure on the defender.

Persons with expertise in software programming and manipulation concentrate their actions on exploiting the intricacies of computer networks and terrorizing IT systems.

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The Government of Canada has responded to cyber **exploitations with its “Cyber Security Strategy”**. Published in 2010, the strategy is noteworthy for the fact that it limits itself to strengthening the Government's capability to detect, deter and defend against cyber attacks while deploying cyber technology to advance Canada's economic and national security interests. It did not militarize cyber security, cyber attacks (exploitations intended to destroy material and/or kill personnel) were not on the table. Some may have despaired of this approach believing the best defence to be a good offence. That aside, cyber defence was the focus because the concept of cyber war had not yet sufficiently matured to warrant militarization.

What has changed since 2010 such that one should revisit our 2010 Cyber Strategy?

Many now consider cyberspace to be the newest and most important addition to the global commons, which comprise four domains: maritime, air, space and now **cyber**. **Cyberspace is now used by a quarter of the world's** population and that number continues to expand. It has become the centre of gravity for the globalized world, and for nations, the centre of gravity for all aspects of national activity, to include economic, financial, diplomatic, and other transactions including military operations.

In essence, digitization is now so pervasive that cyberspace is indispensable for transportation systems, electrical transmission grids, weapons systems, command and control systems, inter alia. It is, therefore, a very real concern that successful cyber attacks within cyberspace **would have disastrous effects on nations' ability to function**.

Accordingly, it is essential that Canada fully embrace the concept of Cyber Security Operations. As highlighted above, **Canada's current Strategy limits its activities to:**

- Computer Network Exploitation: retrieving intelligence-grade data and information from enemy computers by information and communications technology (ICT); and
- Computer Network Defence: all measures necessary to protect your own ICT and infrastructures from hostile Computer Network Attack and Computer Network Exploitation.

The current reality is such that the GOC must now include the final pillar of cyber operations, namely:

- Computer Network Attack: operations designed to disrupt, deny, degrade, or destroy information resident in computers or computer networks, or the computers or networks themselves;

Computer Network Attack is still in its infancy, but its importance has increased immensely since 2010 and it will certainly increase considerably in the coming years. Some proponents think that cyber war will sooner or later replace kinetic war. More frequently, cyber war is presented as a new kind of war that is cheaper, cleaner, and less risky for an attacker than other forms of armed conflict. In either case, the Canadian Armed Forces has a responsibility to not only protect their own systems but to have the authority to direct offensive action, in the form of cyber attacks, if that is what it takes to blunt an ongoing catastrophic attack on critical infrastructure at home.

It behooves the GOC to rethink Canada's Cyber Security Strategy and in so doing ensure that all aspects of Cyber Security Operations are included therein.

Major-General John Adams (Ret'd) is the former Chief of the Communications Security Establishment Canada and Associate Deputy Minister of National Defence and a Fellow of the Canadian Global Affairs Institute.

Source: spacenews.com



TIME FOR CANADA TO SHINE IN SPACE DIPLOMACY

by CHARITY WEEDEN

On the morning of February 10th, 2009, the unthinkable happened.

High above Earth, in a heavily-populated orbit, two satellites with a combined mass of 1,400 kg collided at nearly 42,000 kilometers per hour.

This was not a weapon test; one of those had happened two years prior with the Chinese conducting target practice on an old weather satellite in an orbit just 80 km higher. This was an extremely low-probability unintended event between a functioning and a non-functioning satellite that surprised all concerned. The collision shattered both satellites, and created nearly 2,000 pieces of debris larger than 10 centimeters that quickly spread out around Earth in rings. Hundreds of those pieces remain in orbit today and will be there for the next few decades, posing a hazard to other satellites.

The accidental collision in 2009 was not a one-off event. Rocket stages have exploded in orbit, satellite fragments have been shed, and there have been hundreds of warnings of potential collisions with active satellites, including some that require astronauts to seek shelter in

the Soyuz escape vehicle attached to the International Space Station.

Canada is not immune to this threat. As told by Michel Doyon of the Canadian Space Agency at the Canadian Smallsat Symposium last February, an active and unmanoeuvrable Canadian satellite came very close to collision with a Bulgarian satellite on the morning of December 23rd, 2015. The closest approach was predicted **at 27 meters, a hair's width when it comes to the expanse** of space and a frighteningly high chance of generating a large scale space debris event – this time involving Canada. The inoperable Radarsat-1, which died in its operational orbit in 2013, also happens to be in proximity to the 2009 collision fragments and the near miss last December. That is 2.7 metric tons of sitting duck that could become a lethal hazard.

Debris generating events are a major concern for all nations. This is because of the increasing value that satellites play in our modern society. Economies flourish, nations are more secure, the public reaps the technological and inspirational benefits – all because of nearly 1,400 operational satellites in a handful of orbits that are

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becoming increasingly congested. Meanwhile, governments and commercial companies are planning to launch thousands of additional satellites over the next several years.

This growing realization of our dependence on space, woven into the fabric of our everyday lives, has spurred greater international attention to the long-term **sustainability of Earth's orbits. However, there is little** consensus on what to do about it, how to manage it, or to even define what responsible space operations look like in order to prevent the long-term degradation of the space environment or future catastrophic events.

For this fundamentally global problem, preventative measures are also applied unevenly; some countries regulate more heavily than others in order to mitigate potential for a collision. The Inter-Agency Space Debris Coordination Committee (IADC) voluntary guidelines are one of the very few agreed upon by major space players, including Canada. Still, properly disposing of a satellite 25 years after its end of life (an IADC guideline) does not address the new reality of smaller, more numerous satellite constellations, many of which have a life design of under 5 years, nor does it address the tens of thousands of existing debris objects.

On the road to long term global solutions stands a unique opportunity for Canada. As well respected diplomats and **communicators, Canada's middle space power status** influences both emerging space nations who are just beginning to learn and benefit from indigenous space programs and satellite applications, as well as established space powers that are looking to sustain and advance their space capabilities.

Canada has operated in space for 54 years, has been part of satellite tracking alongside the United States within NORAD and now at the Joint Space Operations Center with United States Strategic Command, and has had its own ground-based and space-based satellite tracking **capability. Canada's position and open dialogue within the** United States, Europe, and the Commonwealth puts this country in the middle of the orbital debris conversation.

For the first time, a Canadian, Dr. David Kendall, is chairing the full United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), setting the tone for future global dialogue and sharing mechanisms of

space data during this critical period. A major agenda item for COPUOS is developing guidelines for the long-term sustainability of space activities, which has its roots in a proposal by Canadian Karl Deutsch, former Chair of the Scientific and Technical Committee of COPUOS in 2004. If ever there were stars aligning for Canada to ramp up efforts and shine in space diplomacy, that time is now.

Canada needs to commit to being a beacon for the long term sustainable use of space, commit to the technologies that enable better prediction and warning of potential collisions, commit the human resources needed to support bilateral, multilateral and international space diplomacy efforts, and commit to lead by example in responsible space operations.

At the end of the day, this issue is not about space. It is about managing natural resources, providing national security, connecting Canadians, enabling educational and medical services via distance, being able to innovate in science and technology, growing an economy based on **these innovations, and inspiring Canada's youth to** become the explorers of tomorrow – all things that are **dependent on Canada's use of Earth orbit now and into** the future.

Charity Weeden is a veteran air and space operator of the Royal Canadian Air Force. She is now Senior Director of Policy at the U.S. based Satellite Industry Association (SIA) and Fellow of the Canadian Global Affairs Institute. The views expressed are solely those of the author and do not represent the views of current or former employers.



Source: forces.tv

FOR TODAY'S PEACEKEEPING, PREPARE FOR WAR

By ELINOR SLOAN

Asked in a Senate hearing last May what the UN needs for its peacekeeping missions the Under-Secretary-General for Peacekeeping answered “attack helicopters”. The response is telling. If Canada deploys to a UN operation in Africa, something the Trudeau government seems intent upon, it will have to be prepared for war. And with large commitments already in Europe and Iraq, it will have to make some choices.

Peacekeeping missions of the Cold War era operated according to three principles. The UN force acted at all times impartially, used force only in self-defence, and deployed only with the consent of the parties to conflict. The principles worked because the fighting parties were usually state actors that could control what their military forces did. It meant that in most cases risks to peacekeepers were relatively low and that they could be lightly armed to carry out their mission.

Driven by events, each of these principles has fallen away. Impartiality was abandoned in the Congo in 2013 when the UN deployed an intervention brigade to carry out targeted offensive operations against Congolese rebels. Peacekeepers have had to use force beyond self-defence in the Congo and also to protect civilians in places like South Sudan. The UN makes a distinction between host nation

consent and tactical consent, arguing strategic consent is what's necessary. But the practical reality of UN forces facing rebels and terrorists reveals the distinction's fallacy.

When the three principles don't work then peacekeepers become a party to the conflict themselves, with predictable results. In Africa, UN forces are being targeted and killed by gunfire, rocket fire, mortar shells, suicide car bombs, and improvised explosive devices (IEDs).

In this environment, what are Canada's options for peace support in Africa? One is training. Canada could help a state build competent military and police forces so that it can address its own internal security. Canada's expertise here includes training the Afghan national army and Iraqi security forces. Security sector reform takes many years but is vital for stabilizing a country.

Another option is enabling. Canada could provide high-end capabilities like signals, logistics, intelligence, engineering and air transport to assist UN combat arms units already in an African mission. But there are challenges. Our signals technology is digital, for example, while the UN mostly uses analogue. The interoperability

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that Canada takes for granted in NATO does not exist in the UN. Canada would need to place officers in the UN force headquarters to ensure enablers are effectively used. And it also needs these enablers in Europe and Iraq, presenting the real possibility of an overstretched force.

Finally, Canada could conduct an operation, deploying Canadian combat arms along with enablers. The force would need Chinook helicopters for troop transport, an armed escort to protect the Chinooks, drones for intelligence, surveillance, and reconnaissance, reinforced armored vehicles, lethal firepower, and protective body armor. A special concern is medical support and casualty evacuation since, unlike in other places, we cannot rely on the US military.

Canada has light armored vehicles, upgraded to withstand IEDs. But its Chinooks are not at full operational capability, nor are its tactical armored patrol vehicles. Canada has only a limited number of low-flying drones, no armed helicopters like the Apaches used by many of our allies, and no medium altitude long-endurance drones. Again, what is necessary for a high-risk African mission is also in demand elsewhere.

The concurrency challenge goes beyond specific capabilities to include strategic command and control and logistics. If Canada goes into Africa it will be supporting three large geographically dispersed operations at once, placing significant demands on operational staffs in Ottawa.

The Trudeau government will have to prioritize. It will have to decide where it thinks Canada can have the greatest effect. And if it decides on a major mission in Africa, it will have to be ready for war.

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Source: Ottawa Citizen

NATO AND CANADA'S NATIONAL INTERESTS

by MIKE DAY

As the world sits back and watches Putin continue to play around on NATO's Eastern front, Canada continues to quietly deploy its military to Ukraine in a demonstration of solidarity and support. It is important to repeatedly remind ourselves that Ukraine isn't in NATO, even as we consider whether it is in Canada's national interest to be there.

The decision to participate in NATO's presence in Latvia is easier to understand. As a mark of deterrence, it demonstrates NATO's resolve, and by extension, Canada's determination to continue to play an active role within NATO. Dismiss with impunity the criticism regarding the size of the force. The deterrence is not in the size but the presence, the force is a reminder of a larger commitment. This is not to say that it will deter Russia's "Little Green Men" strategy, but it would stop the wholesale movement of a massed Russian military force into the Baltics as was seen in both the Crimea and in Eastern Ukraine. Ignore any protestations to the contrary: those actions were executed by the Russian military apparatus. Claims by Moscow to the alternative are patently, and demonstrably, ridiculous. By this measure, the positioning of a force in the Baltics is good geopolitical strategy and concurrently allows for continued military cohesion within NATO at a price that avoids being a road block to that cohesion.

...the questions abound as to why Canada is there and what we hope to achieve.

But with all of this strategic underpinning (logic and cunning within NATO) the rationale for the current approach in Ukraine stands out in even greater contrast. Plagued by continued internal corruption with ongoing reports of service members and officials selling donated defence equipment; hampered by not being a member of NATO; and seemingly unable to create internal cohesion in its dialogue with Russia, the questions abound as to why Canada is there and what we hope to achieve. Canada's military should rightfully be considered a strategic tool for its government, the NATO mission in the Baltics provides a templated example of this. What then is the call for continued presence in Ukraine? We are "training" the Ukrainian military, a force which fought alongside its allies in Iraq and indeed was a partner in training the Iraqi military. Our military presence, well to the east of any conflict, will neither deter nor be physically and legally in a position to respond to the easily

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conceivable next step by Putin. Is the potential downside of appearing toothless in the face of aggression part of the strategic calculus?

We should never be against using our military as an expression of our national interests...

In light of the most recent saber rattling from Putin, coupled with uncertain American policy from both main party presidential nominees, the questions remain: What national security objectives are we meeting in Ukraine and what price are we willing to pay? The question is neither academic nor one for the future. We should never be against using our military as an expression of our national interests nor be reluctant for them to play their part in supporting a coherent grand strategy to achieve national objectives. With regards to our continuing presence in the Ukraine, a reasonable argument can be made for and against supporting the Prime Minister's comments on "having to fight for democracy." Equally, there is room to explain its limitations so as to mitigate, in

some degree, the potential downsides. Both arguments, to date, have been noticeably absent.

After a year in office, it is reasonable to state that the policy of a physical military presence in the Ukraine is no longer an extension of a prior government's commitment, but rather the active going forward policy of the Liberal Government. In addition to hearing the arguments from both sides, the debate could also serve as an expression of how we think about "peace support operations" in the larger sense. It is time to talk about our national objectives in the Ukraine and what role our military might or might not play in that strategy. Putin likely doesn't care (and won't be waiting for Canada to sort itself out) Canadians, however, should.

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Source: MCpl David McCord



Source: DND

REVIEWING THE SUMMER OF THE DEFENCE REVIEW

by STEPHEN SAIDEMAN

It is all over but the writing and editing. From the late spring until the middle of summer, Canada's defence community was fixated on the Defence Review that Minister of Defence Sajjan initiated. As this image tweeted by the Department of National Defence indicates, the consultation did engage the interested audience.



Source: voiceline.com

However, despite enthusiastic engagement by Canadian defence scholars, retired military officers, think tank analysts and others, there was a steady skepticism reported at the various events, suggesting that the Review

was already mostly written. This is probably unfair, but reflects perhaps an unconscious recognition of a basic reality: there is not much wiggle room in Canadian defence policy.

That is, Canada is paradoxically completely free and utterly constrained when it comes to defence issues. Canada faces very few immediate threats due to geography and a friendly neighbor (Trump is not winning, so worry not). The only way that Canada is immediately threatened is via cyber-attacks, and cyber defence (and offence) received much attention at the various informal and formal meetings this summer. While Russia is more aggressive in Eastern Europe and that has meant more Canadian commitments to NATO, Russia's threat to the Canadian homeland is about the same as it has been for some time. China's threat to the sea lanes in the South China Seas is important, but there is nothing Canada can do about that. Homegrown terrorists, ISIS-inspired or not, are mostly not military/defence threats but law enforcement/domestic intelligence problems. The lack of immediate threats means that Canadians feel little compulsion to invest more in defence.

And this leads to the most important constraint—no one is expecting a major increase in the defence budgets. The

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panelists were given no budgetary targets, and most of the defence community assumed, quite logically, that the Liberals will spend about as much as the Conservatives had planned. There is no public pressure to commit more resources, nor any campaign promises or mandate letters suggesting a change. With defence inflation always higher than the national rate of inflation, anything less than significant increases in the defence budget put real pressure on the military.

The second most important constraint are personnel costs, which account for almost fifty percent of the budget. This gets almost no attention, but significantly limits how much Canada can adapt. Indeed, even before the Defence Review started, Defense Minister Sajjan ruled out personnel cuts as an option. Given that recruitment is problematic according to many commentators, it is extremely doubtful that this category of spending will go in any other direction but up. The big procurement plans—the National Shipbuilding Procurement Strategy and whatever fighter plane gets chosen—suck up much of the rest of the dollars to be spent in the years ahead.

Most watchers of Canadian defence will almost certainly not be surprised either by what was discussed this summer or by what will appear in the Defence Review. Most instructive for me was a recent mostly academic workshop on the review: the Pan-Canadian Defence Review held at Carleton University by the Centre on Security, Intelligence and Defence. I learned much for two reasons. First, each set of themes and discussions were exposed to two sets of red-teaming efforts, which could have produced much innovative thinking, but largely produced most of the same answers as before. What will **Canada's missions be? Defence of Canada, defence of North America, NATO, and some UN missions.** This is the basic reality not just for the old Harper government but for any Canadian government. While there is much flexibility over which UN missions, these categories are fundamental, which leaves Canada with no real ability to think outside the box.

The second reason why this workshop informed me so is that it included several scholars, particularly Kim Richard Nossal of Queens and Jim Ferguson of Manitoba, who remember all of the past Defence White Papers. According to what I heard, most of the previous defence assessments **came to the same basic conclusions about what Canada's role is in the world and what kind of basic investments**

Canada needs to make to keep up with its commitments. Why? Because Canada has few threats, several binding commitments, and not much support for doing a great deal more.

Alas, there was one big recurring theme in the larger discussions over the summer: a split between the academic defence community advocating hard choices and much of the retired military community seeking to avoid such decisions. In the discussions, many (not all) **retired military speakers conflated “full spectrum” or “flexible” with “combat capable,” making it appear that** any choices to have less of one kind of capability would mean that the Canadian Armed Forces would not be able to do combat. With increased budgetary pressures, DND and the CAF need to figure out what they do well and what they do poorly. And if they live by their own doctrine, reinforce success and not failure. This is, obviously, quite difficult, but doing nothing, making no decisions, will be more dangerous. Why? Because there are no advocacy groups for spending money on readiness, exercising, and maintenance. Those are the areas that will surely get cut, if no hard decisions are made, and messing those areas up will get people killed.

So, we can expect that the Defence Review will produce more of the same. CAF will push back against making hard choices. The Defence Minister has already indicated he will go along with that with his statements on personnel and bases. The missions will not change, nor will the spending patterns. This does not mean that the Review itself was a waste of time and effort. Canadians will know better what its defence community thinks, what the CAF can do and what it is likely to do. Perhaps Canadians will have a better appreciation for how little **room Canada's defence sector has to maneuver.**

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Source: AFP 2016/ADEM ALTAN

THE INEVITABLE END OF THE TURKISH-WESTERN ALLIANCE

by KYLE MATTHEWS

It is difficult not to be pessimistic about the direction in which Turkey is headed. The coup against President Recep Tayyip Erdogan in July may have failed but the fallout continues, shaking the country's political system to the core and extending far past the country's borders. Turkish-Western relations are at an all-time low.

In a recent interview with the French newspaper *Le Monde*, Erdogan laid bare his frustration with Western countries, the United States in particular. "What more do Americans need? Their strategic ally is facing a coup and it takes them 45 days before sending anyone over? This is shocking." Erdogan fumed.

In order to soothe Turkish concerns and mend a fractured relationship, U.S. Vice President Joe Biden travelled to Ankara in late August. Discussion topics included the extradition of Muslim cleric Fethullah Gulen, who lives in the United States and is alleged by Turkey to be the mastermind of the failed coup, the crisis in Syria, and the fight against the Islamic State in Iraq and Syria (ISIS).

Biden's arrival came just hours after the Turkish military crossed the border into Syria, backed by rebel groups, to capture the town of Jarablus, which had been occupied by ISIS. While Turkish officials argued that this was being done to clear ISIS from the country's border as a response

to a deadly terrorist attack against a Kurdish wedding in Gaziantep, others have suggested the real aim is to preempt Kurdish rebels in Syria from capturing more territory.

Western countries, including the U.S., Canada, the United Kingdom and Germany, have come to depend on the Kurds as the most reliable partner in fighting ISIS on the ground. Their NATO-member ally Turkey, however, doesn't show the same enthusiasm and views the Kurds, not ISIS, as the real threat and is targeting them within Syria. Ankara has rebuffed the U.S. diplomatically for expressing concern that military action should be focused against ISIS exclusively.

...we are witnessing diverging and incompatible interests between Turkey, the U.S. and a large number of European states ...

Perhaps the most worrisome sign emerging is Erdogan's continued push towards authoritarianism and religiosity that is leading to a fundamental clash with Western states.

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In fact, we are witnessing diverging and incompatible interests between Turkey, the U.S. and a large number of European states in general. These diverging interests apply not only to the Syrian conflict and the fight against **ISIS, but remain heavily concentrated on Erdogan's policies within Turkey itself.**

Even before the coup against him, Erdogan displayed authoritarian tendencies and began to go to great lengths to silence his political and ideological opposition. Since becoming president in 2014, Erdogan has brought just under 2000 lawsuits against people who have insulted him, including political opposition leaders.

Turkey's position on Syria and ISIS
then becomes very problematic...

His government has waged an overt campaign against the media, imprisoning journalists and shutting down media outlets like no other in modern Turkish history. In May, Ankara bureau chief Erdem Gul and editor-in-chief Can Dundar of opposition Cumhuriyet newspaper were sentenced to five years and five years and 10 months in prison, respectively. Their crimes? They reported on the Turkish intelligence service delivering arms and weaponry to Islamist rebels in northern Syria.

Turkey's position on Syria and ISIS then becomes very problematic, given that the jihadist group has targeted European civilians and is committing genocide in areas under its control. Erdogan has long called for a regime change in Damascus and appears to have provided supported some of the most anti-western militants fighting in Syria.

Just after the terrorist attack in Nice, France, French Foreign Minister Jean-Marc Ayrault publicly questioned **Turkey's willingness to fight ISIS. "There are questions that are being asked and we will ask them. [Turkey] is partly viable but there are suspicions as well. Let's be honest about this."**

In August Germany's Ministry of the Interior released a report that confirmed French suspicions. The report noted that "As a result of Ankara's domestic and foreign policy that has been Islamized step-by-step above all since 2011,

Turkey has developed into the central platform of action **for Islamist groups in the Middle East region" and that** furthermore "the numerous statements of solidarity and action of support for the Egyptian Muslim Brotherhood, Hamas and groups of armed Islamist opposition in Syria by the ruling party AKP and President [Recep Tayyip] Erdogan underline their ideological affinity to the Muslim Brothers".

Turkey is at a crossroads. The path Erdogan has chosen could very well lead to the inevitable end of the Turkish-Western alliance. If this happens, he will have no one to blame but himself.

Kyle Matthews is the Senior Deputy Director of the Montreal Institute for Genocide and Human Rights Studies at Concordia University and a Fellow at the Canadian Global Affairs Institute.



Source: Mychaylo Prystupa, National Observer

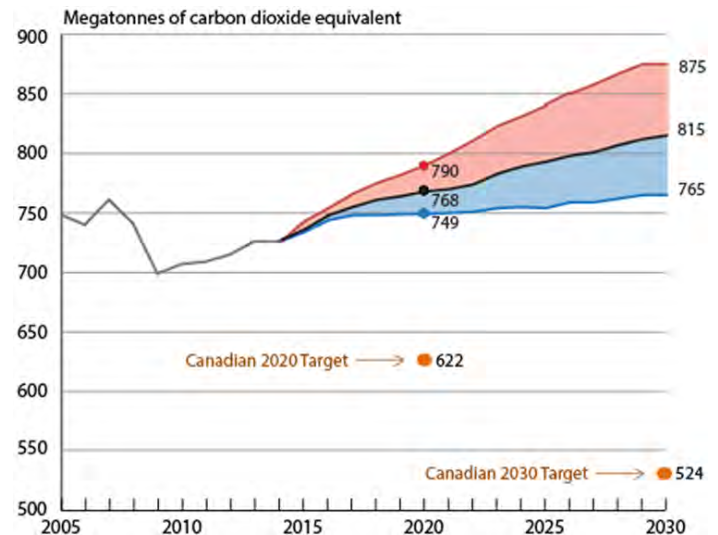
NEW CANADIAN GOVERNMENT TALKING THE TALK ON CLIMATE CHANGE

by DAVID MCLAUGHLIN

So far, Prime Minister Justin Trudeau's climate change success has been all international. His new Liberal government burst onto the global stage in the weeks before last year's Paris COP 21 meeting with a dazzling display of high-powered climate change rhetoric, unheard of from his Conservative predecessor. With no time to craft substantive change on Canadian climate policy, Mr. Trudeau deliberately sought to change the tone and direction of policy.

It worked. Canada's presence and participation at the Paris talks were both highly regarded and highly visible. This prime minister's evident mastery of using symbols to show his different approach was manifest at the conference. There was no doubt, when it was over, that he and his government were committed strongly to doing more on climate change.

The substantive part has been longer in crafting. A first, telling move, was to recommit Canada to the 2030 emission reduction targets set by the Harper government. Canada would strive to reduce emissions by 30% below 2005 levels by 2030. A shared target but, as yet, no plan in place to achieve it.



Historical greenhouse gas emissions and projections to 2030 with measures as of September 2015, Canada, 2005 to 2030 [source: Environment Canada website]

The international dimension of climate change action is both environmental and economic. All polluting countries spew carbon into the atmosphere in a classic 'tragedy of the commons'. Each acts independently according to economic self-interest, contrary to the common

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environmental good bestowed by a clean atmosphere. The Trudeau government has staked its colours firmly to the mast of the common environmental good.

Now it is turning to the rather heavier lifting of resolving how Canada actually does meet its 2030 commitments. Despite the embracing of the original Harper target (criticized by some as unambitious), the current federal government knows it is, in fact, a difficult target to actually achieve. To its credit, it is actually seeking ways to do so.

This will not be easy. Leaving aside the querulous intergovernmental bargaining our federation knows, the reality in identifying sufficient domestic emission reductions to make up the difference to 2030 is even more contentious.

First, the new government has inherited a patchwork policy approach to climate action across the provinces and territories. Different policy mechanisms working at different speeds is the most anodyne but accurate description. There are more differences than commonalities at present across jurisdictions.

Second, federal levers to intervene, nudge, cajole, or otherwise knit a pan-Canadian climate framework together are either too blunt (a nationally-imposed carbon tax) or inadequate in the face of provincial jurisdiction and actions to date.

Third, climate action has always been more about regional **political economy than political rhetoric. Canada's largest** source of emissions growth has been in the oil and gas sector in Alberta and Saskatchewan, which is now experiencing a dramatic slump. Imposing new, higher costs on this sector is difficult in the short term and makes dramatic new climate action equally contentious.

The Vancouver Declaration on Clean Growth and Climate Change by First Ministers in March 2016, is a signal shift in stated attitudes and approaches by governments to the idea of carbon pricing and low-carbon economic transformation as a mutually-tied means to an end. Its purpose has been to kick-start a process to “...develop the pan-Canadian framework for clean growth and climate change, a concrete plan that will also allow us to meet our **international commitments.**”

That process is now underway. The next UN climate change meeting - COP 22 – is set for November in Morocco. The Trudeau government would like to take this **agreed “pan-Canadian framework” to the meeting. Doing** so would seal the deal (so to speak) with a sufficient national plan to match the Paris commitments.

To do so, the federal government may well have to look offshore to make the final difference in potential emission reductions for 2030. Independent analysis conducted by the Canadian Deep Decarbonization Pathways Team showed a gap of at least 91 MT in 2030 to the target after all potential measures have been contemplated. There are only two ways to make up that difference: more stringent domestic action to get more Canadian emission reductions, or purchasing international carbon offsets (from reductions in other countries) to fill that gap

The former has both an economic and political cost that may prove too high for jurisdictions to agree. The latter means some Canadian carbon investment is directed outside the country rather than here. There is sound environmental cost-effectiveness in purchasing carbon offsets; after all, the atmosphere does not care where the carbon comes from as a common pollutant, it just wants less of it. Doing so would moderate the economic impacts on Canadian industry and consumers of more stringent carbon pricing action, for example. On the other hand, it also means that we are paying others to do what some think should be done here in Canada by Canadians.

If all politics is local, climate change presents a paradox of global, national, and regional calculations and considerations that, so far, has humbled concerted **international action until last year in Paris. Canada's** international stature has risen significantly on this file in less than a year. But it is what happens locally, in Moncton or Medicine Hat, not Marrakech that will truly **determine Canada's commitment to act on climate change.**

David McLaughlin, a Fellow with Canadian Global Affairs Institute, is public policy leader with 30 years of experience in government, political, and private sector settings at national and provincial levels and is a recognized Canadian policy expert on energy, economy, environmental, and intergovernmental policy issues.

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