

2016-2017
Graduate Research Awards
for Disarmament, Arms Control and Non-Proliferation



AWARD WINNERS SEMINAR

Global Affairs Canada Headquarters
Lester B. Pearson Building, Ottawa, Canada
February 9, 2017

A joint project of:



and the **International Security Research and Outreach Programme**
of **Global Affairs Canada**

Executive Summary

The ***Graduate Research Awards for Disarmament, Arms Control and Non-proliferation*** (GRA) programme was initiated in 2003 by Dr. Jennifer Allen Simons, President of The Simons Foundation, in partnership with the [International Security Research and Outreach Programme \(ISROP\)](#) of Foreign Affairs and International Trade Canada (now [Global Affairs Canada](#)). The primary objective of the Awards is to enhance Canadian graduate level scholarship on non-proliferation, arms control and disarmament (NACD) issues.

Since its inception, the Graduate Research Awards programme has provided over \$305,000.00 in scholarships to Canadian graduate students working on policy-relevant NACD issues and has helped to encourage a new generation of young Canadian scholars dedicated to further expanding their knowledge and expertise on these critical issues.

The original programme offered three Doctoral Research Awards of \$5,000.00 and four Master's Research Awards of \$2,500.00 each year to support research, writing and fieldwork leading to the completion of a major research paper or dissertation proposal on an issue related to disarmament, arms control and non-proliferation.

In order to allow a greater number of students to participate, the GRA competition was later restructured to consist of a series of debates on timely issues. The eight students who made the strongest argument in support of their position, as determined by an expert review panel, were selected to receive a Graduate Research Award of \$3,000.00 and required to defend their position in person at the GRA Debates held at the Department of Foreign Affairs headquarters in Ottawa.

The 2015-2016 competition was revised to simplify the application process and increase the value of the cash awards. A total of four awards of CAD\$5,000 are now available to Canadian Master's and/or Doctoral candidates to support the research and writing of an academic paper responding to a specific Non-Proliferation, Arms Control and Disarmament (NACD) topic. Awards also include travel support to Ottawa where successful candidates presented their completed papers during a special seminar held at Global Affairs Canada headquarters on February 9, 2017.

The GRA Seminar in Ottawa provided a unique opportunity for exchange among departmental officials, Canadian opinion-leaders and the next generation of experts in the NACD field. International Security and Political Affairs and Non-Proliferation and Disarmament Division officials attended the sessions and Global Affairs Canada hosted a lunch in honour of the GRA recipients following the presentations.

This year, students were given the option of writing on the following topics:

1. *Some speculate that a decline in public concern about the impact of nuclear weapons since the Cold War has undermined the political will required to advance efforts for nuclear non-proliferation and disarmament. Assess the overall impact of public opinion about nuclear weapons on non-proliferation and disarmament efforts – how does it rank as a factor in achieving a world free of nuclear weapons?*
2. *The number of countries considering, or constructing, nuclear power plants continues to increase. Some of these are developing countries with weak control regimes. Will this trend increase the risk of weapons-useable fissile material being misplaced, acquired or diverted to clandestine purposes, or are current international verification and control mechanisms sufficient to address this risk?*
3. *In light of recent developments in the Middle East and North Africa, has the Chemical Weapons Convention proven to be an effective instrument in eliminating chemical weapons, or should it be strengthened? Explain.*
4. *What are the key legal issues pertaining to space debris remediation? How are they affecting the development of active debris removal technology, and how can they be addressed to promote new space debris remediation initiatives?*

We are pleased to congratulate the 2016-2017 Graduate Research Awards recipients who each received a cash award of \$5,000.00 from The Simons Foundation as well as travel support to Ottawa to participate in the GRA Seminar.

- Farzan Sabet Sarvestani
Doctoral, International History, The Graduate Institute – Geneva
- Patrick Segsworth
Master of Arts in Global Governance, Balsillie School of International Affairs, University of Waterloo
- Jennifer Smith
LLM, Human Rights and Humanitarian Law, European University – Viadrina
- Justin Young-Stewart
Master of Arts, Graduate School of Public and International Affairs,
University of Ottawa

We also wish to recognize Chris Conway and James McNee of Global Affairs Canada's International Security Research and Outreach Programme and Elaine Hynes of The Simons Foundation for their work to coordinate and execute the programme this year.

The 2017-2018 Graduate Research Awards competition will be launched in fall 2017.



(From left: Martin Larose, Director of the Non-Proliferation and Disarmament Division (IGN) of Global Affairs Canada, Patrick Segsworth, Farzan Sabet Sarvestani, Jennifer Smith, Justin Young-Stewart, and Dr. Jennifer Allen Simons, President of The Simons Foundation.

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Opening Remarks

MARTIN LAROSE

Director, Non-Proliferation and Disarmament Division
Global Affairs Canada

Good morning / *Bonjour*.

My name is Martin Larose. I am the Director of the Non-Proliferation and Disarmament Division here at Global Affairs Canada, and I have the honour to outline today's programme for you.

Bienvenue à la cérémonie 2016-2017 de remise des Bourses de recherche aux cycles supérieurs pour le désarmement, le contrôle des armes et la non-prolifération.

The first item on the agenda will be opening remarks by Mr. Mark Gwozdecky – Assistant Deputy Minister, International Security and Political Affairs, Global Affairs Canada – and by Dr. Jennifer Allen Simons – President of *The Simons Foundation*.

Following this, is the highlight of today's event: presentations by the four winning Graduate Students and an opportunity to ask them questions.

Next, we will welcome distinguished guest speaker Dr. M.V. Ramana, *The Simons Foundation* Chair in Disarmament, Global and Human Security at University of British Columbia, who will speak for approximately 15 minutes.

Closing off the event will be short concluding remarks and the award presentation ceremony by Dr. Simons.

Please note that today's proceeding will take place under the Chatham House Rule, meaning that any remarks made here are not for attribution.

Sans plus tarder, it is my great pleasure to invite Mark Gwozdecky, Assistant Deputy Minister, International Security and Political Affairs to deliver his opening remarks.

MARK GWOZDECKY

Assistant Deputy Minister, International and Security and Political Affairs
Global Affairs Canada

On behalf of the Department's International Security Research and Outreach Programme – ISROP – and the Non-Proliferation and Disarmament Division, I am pleased to welcome you to the 2016-17 Graduate Research Awards for Disarmament, Arms Control and Non-Proliferation.

Since 2003, when Dr. Simons created the Graduate Research Awards in partnership with the Department, these awards have been a key component of Global Affairs Canada's academic outreach in this important policy area.

L'objectif de ces bourses est de former la prochaine génération de chercheurs canadiens sur des enjeux liés à la sécurité internationale, notamment la non-prolifération, le contrôle des armements et le désarmement.

Today, I particularly want to acknowledge and thank Dr. Jennifer Simons both for her personal leadership on peace and security issues, and for *The Simons Foundation's* continued support of the Graduate Research Awards program. The Department is proud to be a partner with this leading Canadian voice on issues of global importance.

Since its inception, the Graduate Research Awards programme has granted over \$285,000 in scholarships to Canadian graduate students working on policy-relevant non-proliferation, arms control and disarmament (NACD) issues, encouraging new generations of young Canadian scholars to expand their knowledge and expertise on these critical issues.

I would now like to recognize the four recipients of this year's awards:

- **Farzan Sabet**, from The Graduate Institute Geneva, and Stanton Nuclear Security Fellow at the Center for International Security and Cooperation, Stanford University;
- **Justin Young-Stewart**, from the Graduate School of Public and International Affairs at the University of Ottawa;
- **Patrick Segworth**, from the Balsillie School of International Affairs at the University of Waterloo; and
- **Jennifer Smith**, studying Human Rights and Humanitarian Law at the European University in Viadrina.

Congratulations all, on your winning papers. Your work exemplifies what these Awards are all about, and we very much hope that you will continue your academic engagement on issues of disarmament, arms control, and non-proliferation in future.

We are very pleased to have you with us today and look forward to your presentations. I would also encourage you to engage with some of the experts and policy officers joining us today – both in the question and answer session following your presentation, and over lunch.

It is also my distinct pleasure to welcome Dr. M.V. Ramana, who holds *The Simons Foundation* Chair in Disarmament, Global and Human Security at the Liu Institute for Global Issues, University of British Columbia. He is also a joint recipient of the 2014 *Leo Szilard Lectureship Award* from the American Physical Society, and a member of the International Panel on Fissile Materials.

Before we proceed to the presentations, I thought it would be helpful to remind everyone of the winning themes of this year's Awards:

- the adequacy of the international nuclear safeguards regime;
- the role of public opinion in generating political commitment for nuclear disarmament; and
- the effectiveness of the Chemical Weapons Convention given recent chemical weapons use in the Middle East.

These are the important questions that we asked award recipients to investigate this year, and we look forward to hearing their findings. These questions were developed by policy officers in the Non-proliferation and Disarmament Division, many of whom are joining us today, and I am certain that your insights and conclusions will be of great interest to them.

In conclusion, congratulations again to the winners and special thanks to Dr. Simons and *The Simons Foundation* for supporting this important programme. I am afraid that I am unable to stay, but I will leave you in the good hands of my colleagues: Director General, Heidi Hulan, Director, Martin Larose and members of their team.

Merci.

MARTIN LAROSE

Director, Non-Proliferation and Disarmament Division, Global Affairs Canada

Thank you, Mark. I would now like to formally introduce Dr. Simons.

Dr. Jennifer Allen Simons is the President and Founder of *The Simons Foundation*, based in Vancouver, British Columbia. The Foundation, under the leadership of Dr. Simons, has been a leader in research, advocacy, and action to advance a number of important issues, including; nuclear disarmament, peace, human rights, and global cooperation.

Today's event is a testament to the continuing importance of our collaboration. We are pleased to again welcome Dr. Simons to Ottawa.

Dr. Simons, the floor is yours.

Opening Remarks

JENNIFER ALLEN SIMONS, C.M., PH.D., LL.D.

Founder and President

The Simons Foundation

Good Morning,

It is a pleasure to be here, participating again, in the annual Graduate Research Awards seminar, a programme in which the Department of Global Affairs and The Simons Foundation have partnered for fifteen years.

I would like to thank Chris Conway of the Global Affairs, and Elaine Hynes, from The Simons Foundation, for their excellent organization and management of, what I believe is, a unique partnership programme.


Disarmament education is an essential requirement in the modern world yet remains there are few educational initiatives in schools and universities for research and education on the negative effects of weapons – from handguns to nuclear weapons to 21st century weaponry - essential education to counter the one of the most lucrative of all businesses.

Weapon development has gone far beyond the needs of national and international security. Each new development is followed by its counter – spiraling upward to a catastrophic destruction potential.

I am very pleased – therefore - to welcome to Canada Professor M.V. Ramana, our Keynote Speaker who has just become the new Simons Chair in Disarmament, Global and Human Security at the University of British Columbia - the only Disarmament Chair in Canada. Professor Ramana, with his knowledge and expertise in disarmament, will be a great resource in Canada, for the government, the universities and the community at large.

And I welcome, and congratulate the recipients of the Graduate Research Awards; and commend you for your choice of study - for your specialization in issues of weapons of mass destruction - nuclear weapons, nuclear proliferation, and chemical weapons, which despite the Chemical Weapons Ban, are being used and remain a cause of concern. I hope that you will continue to focus on these, and pursue career paths in academia, the foreign service, politics or the NGO world in civil society.

I welcome the appointment of the Honourable Chrystia Freeland to Foreign Minister. I understand that the reason for this appointment is her expertise in trade negotiations, and connected to the renegotiation of NAFTA. It is my hope that the government will not prioritize trade relations over human rights and human security issues - will not compromise deeply held



Canadian principles and values; and will also support Mexico, Canada's good friend and partner, to prevent the US Administration from destroying its economy.

It is heartening that Prime Minister Trudeau spoke out for an "open society and open immigration" and to "welcome refugees regardless of faith," in response to the human rights abuses perpetrated by the new U.S. Administration. It is most important, as well, that the larger human security issues - particularly nuclear disarmament - be treated as priority issues.

Of most concern to me is the danger of nuclear war – deliberate or inadvertent – of a nuclear detonation by miscalculation, accident or intention which could result in nuclear attack and retaliatory counter-attack; the consequences of which would be catastrophic. I imagine we all know that the Atomic Scientists Doomsday Clock moved forward 30 seconds to two-and-a-half minutes to Midnight and aware of the reasons for this. 1

The current political climate adds to this danger – the politically troubling world of growing nationalism, xenophobia, deteriorating relations between Russia and United States, their nuclear sabre-rattling; and disintegrating international relations caused by a new aggressive U.S. Administration.

The Graduate Research Awards for Disarmament, Arms Control and Non-Proliferation programme began in 2003, - during the Liberal era – at a time when Canada's Foreign Policy was grounded in Human Security. The Cold War had ended and we imagined a future of global peace, and believed that we would see the end of nuclear weapons. The weapons numbers have come down but enough remain to destroy life as we know it.


Nuclear disarmament has stalled. The nuclear weapons states are upgrading their weapons and infrastructure, planning for their retention into the distant future; developing new capabilities for the weapons, with Russia developing new weapons. Pakistan and India are in a constant state of tension. North Korea is rapidly becoming a serious nuclear threat.

The will of the majority of Canadians - and the right – is to live in a nuclear weapon free world.

Like so many Canadians, I was disappointed – and disheartened - that Canada voted against the UN Resolution to negotiate a nuclear ban treaty; and that Canada had not, at least abstained from the vote - like fellow NATO member, The Netherlands.

My preference, however, like that of the Government of Canada, would have been for a Nuclear Weapons Convention, which held the expectation that - at some point - the nuclear weapons states would join.

It is my hope, however, that Canada will actively engage in the upcoming negotiations for the ban treaty.



Former Foreign Minister Dion, in his October 28th speech justified Canada's "NO" vote citing concern about weakening the Nuclear Non-Proliferation Treaty and stated Canada's preference – its support for - the so-called incremental step-by-step approach prioritized by the nuclear weapons states, NATO and other US Defence allies.

Yet it is the non-nuclear weapons states which, so far, provide the strength to the NPT. The treaty is weakened by the nuclear weapons states which are not eliminating their weapons. Not only that! They are upgrading, developing new capabilities, funding, and planning for their indefinite retention. And Russia is said to be developing new weapons. - Furthermore, Russia and the United States are threatening to use them. This repudiation of their commitment seriously weakens the treaty.

And the nuclear weapons states themselves, are the obstacles in the step-by-step path.


The three steps Mr. Dion named – NPT Universality, Comprehensive Test Ban Treaty Entry-into-Force, and the Fissile Material Cut-off Treaty - have been – for the most part – repudiated by the nuclear weapons states and support for these steps seems like empty rhetoric - dissimulation.

Take universality of the NPT: four out of nine states with nuclear weapons - almost half - are not party to the NPT. Israel refuses to confirm that it has nuclear weapons; North Korea has withdrawn. Pakistan and India refuse to join as non-nuclear weapons states – they want to be part of what India called the “nuclear weapons club”. Yet it is not a club.

The reason that there are nuclear weapons states within the NPT is that five states possessed nuclear weapons when the NPT was initiated and entered into force. At this time, in order to stop nuclear weapons proliferation, these states committed to eliminate their arsenals (Pillar 1 of the Treaty) in exchange for commitment that other states would remain nuclear weapon free (Pillar 2) but would be able to obtain nuclear technology for peaceful purposes (Pillar 3).

TAKE the Comprehensive Test Ban Treaty [the CTBT]: Four nuclear weapons states, North Korea, Israel, India and Pakistan have not signed the CTBT. Eight more states must ratify the CTBT before it can enter into force. Six of the nine nuclear weapons states – two-thirds - the United States, China – both NPT parties - , North Korea, Israel, India and Pakistan - have not ratified the Treaty.

TAKE the Fissile Material Cut-off Treaty, [the FMCT]: Canada is putting its efforts into advancing the negotiations of the FMCT which Pakistan has long opposed. Yet Canada's latest endeavour – a praiseworthy initiative - calls for consensus rather than a UN Majority Vote and it is most likely that opposition again from Pakistan will result in another failure.



Until the nuclear weapons states remove their stumbling blocks from the step-by-step plan nothing will change. And I cannot understand why Canada continues to support this.

On October 17th, before the vote for the nuclear weapons ban and eleven days prior to Mr. Dion's speech, the United States presented a Non-Paper, entitled Defense Impacts of Potential United Nations General Assembly Nuclear Weapons Ban Treaty, to NATO member delegations to urging them to vote against negotiations for a nuclear weapons ban treaty, and further, if negotiations do commence to "refrain from joining them".

According to this leaked document, a ban treaty, would "delegitimize the concept of nuclear deterrence" policy and theory. And even prior to its entry into force, the ban treaty would seriously affect and curtail the current ability for nuclear weapons nuclear defence operations.

The Non-Paper lists twenty-one nuclear war planning elements which would be affected, and include the development, testing, production, acquisition, possession, stockpiling, some of which, like nuclear sharing is already prohibited.²

John Burroughs, International Lawyer and Simons Fellow, agrees that the Ban Treaty "could impact non-parties as well as parties" to the treaty; that it would, however, further the process of nuclear disarmament. "A prohibition treaty," he says, would have the beneficial effect of erecting a further barrier to the spread of nuclear weapons." It could "strengthen non-proliferation obligations. It could perhaps "prohibit the development of nuclear weapons" or "prohibit the production of plutonium and highly enriched uranium." If nothing else, it would reinforce the norm against nuclear weapons use.³

It seems as though the writing is on the wall, the death knell of nuclear weaponry and nuclear war.

It is in the best interests of Canadians – and I am sure the will of the majority of Canadians - for Canada to actively engage in the nuclear weapon ban negotiations – and to negotiate in good faith. However, the successful negotiation of the ban treaty would be the first step only.

It is distressing that the ban treaty falls short of the ultimate goal. The current nuclear weapons arsenals will not be eliminated. And consequently, the nuclear dangers remain: the thousands of deployed nuclear weapons - with 800 on hair trigger-alert and targeted for immediate launch; cyber attacks on nuclear command and control systems; the tinderbox tensions between India and Pakistan; North Korea's determination to be a nuclear power; the deteriorating relations between Russia and NATO, between Russia and the U.S; the destruction by the new US Administration of the status quo of current international relations; and uncertainty of U.S. President's intentions regarding nuclear issues.

The only solution for true guaranteed human security to prevent, what we know would be catastrophic consequences, is the total elimination and ban for all time of nuclear weapons.

It is imperative that the essential elements for nuclear security, missing from the Ban Treaty, be addressed immediately.

And I call on Canada to undertake this – to spearhead activity to propose a second complementary Treaty. For Canada to promote Point 1 of Ban Ki Moon’s Five-Point proposal for nuclear disarmament for, either the negotiation of a “Nuclear Weapons Convention backed by a strong system of verification” and transparency measures, or for the nuclear weapons states to forge “agreement on a framework of separate, mutually reinforcing instruments.”

Nuclear disarmament cannot - and will not - move forward without the participation of the states with the weapons. Yet, the ban will make it impossible for the US and NATO to continue with the current nuclear war planning and related practices.

Because of the U.S.’s failure to stop the ban, it is crucial that Canada, NATO and Asia-Pacific allies turn the tables on the United States - with its Non-Paper - and strongly encourage the United States and the other nuclear weapons states to support either a Nuclear Weapons Convention; or to encourage them to engage in a framework agreement to safely and securely eliminate their arsenals – that is, to encourage the United States and Russia to return to their programme of bi-lateral reductions, to bring the weapons down to par with the other nuclear weapons states in order to engage in multilateral negotiations to eliminate to zero within a time-bound framework.

Global Zero’s Action Plan is compatible with Point 1 of UN Secretary General Ban Ki Moon’s Five-Point plan for nuclear disarmament. It is a practical four-phase blueprint of concrete steps, which includes a negotiated and signed legally binding international agreement for verified dismantlement of all nuclear arsenals and the elimination of all nuclear weapons by 2030. 4 The Global Zero Action Plan could serve as a foundation for the framework process.

Meanwhile, advocacy to reduce the risks must continue, - and Canada can support this – 1) the promotion of No First Use as a global norm; 2) the de-alerting of nuclear weapons to reduce the risks of accidental or unauthorized use; 3) for the US and Russia to eliminate launch on warning from their operational strategy; 4) for US-Russia to return to the bi-lateral steps to reduce their arsenals further including and multi-lateral steps to stabilize the world’s Nuclear Force Postures.

It is essential to move forward from the attempts to manage and control proliferation and to engage in effective development and enforcement of nuclear weapons elimination measures.

I call on the Government of Canada to step up its role in nuclear disarmament; to return to the active nuclear disarmament agenda of the previous Liberal government, in order to support humanity which is stake, and forced to live on the brink of catastrophe.

Thank you very much!

¹ Deteriorating relations between U.S and Russia; stalled nuclear disarmament modernizations, new Russian weapons in U.S. and new capabilities; Pakistan and India tensions, North Korea; Unpredictability of new US President

² United States Non-Paper *Defense Impacts of Potential United Nations General Assembly Nuclear Weapons Ban Treaty, 2-1 October 17th, 2016*

³, *Changing the Landscape: The U.N. Open-Ended Working Group on Nuclear Disarmament*, The Simons Foundation Briefing Paper, September 2016, www.thesimonsfoundation.ca. My emphasis.

⁴ Phases 1 and 2 of the Action Plan call for bilateral action on the part of the US and Russia – to agree to each reduce their arsenals to 1,000 by 2018 and to further reductions to 500 warheads each by 2021. The U.S. and Russia would ratify a bi-lateral accord and require the other nuclear weapons states to commit to a cap on their existing stockpiles and to participate in multilateral negotiations for proportionate reductions of their stockpiles following the Russian and US reductions to 500 each until 2021.

The Action Plan requires “a rigorous and comprehensive verification and enforcement system is implemented, including no-notice, on-site inspections, and strengthened safeguards on the civilian nuclear fuel cycle to prevent diversion of materials to build weapons.”

Phase 3 of Action Plan requires all “the world’s nuclear-capable countries negotiate and sign a Global Zero Accord: a legally binding international agreement for the phased, verified, proportionate reduction of all nuclear arsenals to zero total warheads by 2030. [compatible with UN Secretary General Ban Ki Moon’s 5-point plan for nuclear disarmament]

And Phase 4 “The phased, verified, proportionate dismantlement of all nuclear arsenals to zero total warheads is complete by 2030. The comprehensive verification and enforcement system prohibiting the development and possession of nuclear weapons is in place to ensure that the world is never again threatened by nuclear weapons.

Graduate Research Award Presentation 1

FARZAN SABET SARVESTANI

Doctoral Candidate

The Graduate Institute, Geneva and Stanton Nuclear Security Fellow at CISAC Stanford

Farzan Sabet is a PhD candidate in International History at the Graduate Institute, Geneva, and a Stanton Nuclear Security Fellow at CISAC Stanford. His research interests include the Iranian nuclear program, U.S. foreign policy, and the nonproliferation regime.

TOPIC: The number of countries considering, or constructing, nuclear power plants continues to increase. Some of these are developing countries with weak control regimes. Will this trend increase the risk of weapons-useable fissile material being misplaced, acquired or diverted to clandestine purposes, or are current international verification and control mechanisms sufficient to address this risk?

The Nuclear Renaissance & Non-Proliferation Regime in 2017

While trends in the nuclear arena are a cause for concern, the growing number of nuclear power plants in the developing world will not necessarily cause weapons-useable fissile material to be acquired or diverted to clandestine purposes, namely for the proliferation of nuclear weapons. While a perfect system of nuclear control is impossible, history shows that existing innovative tools can achieve significant victories. In particular, the nuclear nonproliferation community, composed of interested states and non-governmental organisations, should focus on preventing the spread of indigenous nuclear fuel cycles, especially enrichment, reprocessing, and fabrication, rather than nuclear power plants.

Correctly identifying the connection between nuclear energy and risks is now more important than ever. The “nuclear renaissance” of the last few years has seen an increasing number of states with existing nuclear energy programs expanding them and states with little or no nuclear history looking to build programs virtually from scratch. Certainly, the Fukushima Daiichi nuclear disaster, like the Three Mile Island and Chernobyl disasters before it, has led some states like Germany to reconsider the place of nuclear energy in their energy mix. However, climate change, insecurity from reliance on foreign sources of energy, and the recent experience of high crude oil prices have led states to press on with their nuclear ambitions.¹ For example in the Persian Gulf, a conflict prone region endowed with the greatest petroleum resources on the planet, Saudi Arabia and the United Arab Emirates are pursuing major new nuclear projects. Meanwhile Iran, although presently constrained by the terms of the Joint Comprehensive Plan of Action (JCPOA) of 2015, has nonetheless announced plans to expand its program once key elements expire.

As before, nuclear weapons also remain attractive for security, domestic politics, and normative reasons.² Researchers are now also beginning to identify new connections between nuclear energy and international relations. The latest scholarship suggests that nuclear latency – defined as mastery of the nuclear fuel cycle – can provide deterrence benefits and therefore raise the attractiveness of nuclear energy programs that incorporate the fuel cycle.³

Meanwhile, the threat of nuclear terrorism remains a major concern. As highlighted by the Nuclear Security Summit process (2010-2016) initiated by U.S. President Barack Obama, the prevalence of existing nuclear stockpiles and materials, and the inability of many states to properly secure them, raises the spectre of nuclear terrorism by non-state actors.⁴

Together, these trends raise serious concerns. However, the historical record suggests we should not assume negative outcomes are inevitable. Given the number of states with nuclear power plants, as well as the number of state and non-state actors with nuclear weapons ambitions, we should not underestimate the triumph of international verification and control mechanisms in limiting the number of nuclear weapons states to nine.

While we have no “magic bullet” for preventing nuclear proliferation, we can achieve significant victories in a continuing “cat and mouse game” in which the nonproliferation community battles determined proliferators. In other words, instead of seeking the “single, effective system of nuclear safeguards applied worldwide” which some early nonproliferation advocates had hoped,⁵ our best tools may take the form of ad hoc measures to address specific, contingent, proliferation threats.

Although U.S. President Dwight Eisenhower and the early International Atomic Energy Agency (IAEA) attempted to incentivise “Atoms for Peace” versus “atoms for war”,⁶ the six countries that built nuclear weapons before the creation of the Nuclear Nonproliferation Treaty (NPT) did so in a relatively politically, legally, and normatively permissive environment.⁷ The risks posed by nuclear proliferation to world peace, the ability of the superpowers to project power, and West German nuclear aspirations to the delicate balance in Europe during the Cold War, led to the negotiation and widespread adoption of the NPT, which imposed increased political, legal, and normative costs on the pursuit of nuclear weapons.⁸

The NPT, coming as it did at the dawn of the “Second Nuclear Age” in which access to sensitive nuclear technology and material has become more widespread,⁹ incentivised countries interested in nuclear weapons latency or hedging to use peaceful nuclear energy programs as a fig-leaf for their ambitions.¹⁰ NPT member states were able to use nuclear energy programs to disguise their interest in nuclear weapons, as my doctoral dissertation has uncovered about Iran under Mohammad-Reza Shah Pahlavi. The NPT also proved inadequate for preventing proliferation by states that refused to voluntarily adopt it, resulting in proliferation by states outside of the NPT beginning with India and its “Smiling Buddha” peaceful nuclear explosion (PNE) of 1974.

In response, the IAEA formulated more stringent safeguards and nuclear exporters created the Nuclear Suppliers Group (NSG) in 1975 as a multilateral mechanism outside of the NPT to restrict the diffusion of potentially dangerous technology and material. These measures, backed by a more muscular U.S. nonproliferation policy under presidents Gerald Ford and Jimmy Carter during the seventies that employed carrots like military assistance and sticks like withholding aid, arguably staved off or delayed weaponisation in the case of countries like South Korea and Pakistan, respectively.

This means that credible commitment and action by nuclear weapons states toward further fulfilling their own obligations under the NPT, namely nuclear disarmament, will likely be an important parallel element of any strong global action on nonproliferation. Whether such action actually materialises, perhaps using the Joint Comprehensive Plan of Action as a model, will help determine whether or not our current phase of nuclear energy expansion continues to be a nuclear “renaissance” or becomes a “dark age”.¹¹

However, by the nineties it had become apparent that existing measures were inadequate. For instance, Iraq and North Korea had both secretly violated their comprehensive safeguard agreements (CSA) with the IAEA by engaging in undeclared nuclear activities aimed at producing nuclear weapons. This led the IAEA, with the backing of the international community, to create the Additional Protocol (AP) in 1997 as an instrument to address gaps in information and access the nuclear facilities of states to better detect undeclared activities.¹²

As with all prohibitions, increasingly restrictive nuclear supplier controls have given impetus for the emergence of an illicit market for nuclear technology and materials that networks like the one headed by A.Q. Khan have exploited. This risk has encouraged the United States and its allies, especially in the aftermath of the terrorist attacks of September 11th 2001, to create a sophisticated system of surveillance and sanctions that has had considerable success in disrupting state and non-state proliferation smuggling networks.¹³

Yet despite the innumerable innovations of the evolving system of international verification and controls in the proliferation cat and mouse game, at least one fundamental problem remains: Any state with the will and resources can eventually master the fuel-cycle and gain access to weapons-useable fissile material. While the question of whether this is permitted by the NPT remains the subject of debate, countries like Iran have shown that de facto such a status can be achieved.

Which begs the question: Will the nuclear renaissance and projected rise in the number of nuclear power plants entail the acquisition of the indigenous fuel-cycle by more countries, as in the case of Iran, or the normalisation of highly restrictive arrangements, like the U.S.-U.A.E. 1-2-3 nuclear cooperation agreement?¹⁴ Many of the nuclear power plants coming online in the next few years, especially in non-weapons states, are likely to be turnkey projects under stringent bilateral cooperation and fuel supply arrangements and the IAEA “safeguards by design” approach that maximise nonproliferation, security, and safety.¹⁵

This means we should focus our concern on states developing an indigenous fuel-cycle, military technologies that lend themselves to proliferation like ballistic missiles, and/or refusing to accede to the Additional Protocol. Military action, like the Israeli strikes on Iraqi (1981) and Syrian (2007) nuclear facilities, and strong global action, as seen in the Iranian nuclear crisis (2002-2015), provide two sets of tools to freeze or reverse the development of independent fuel-cycles. Yet the potential of military action to actually incentivise proliferation and the experience of the Iraq War (2002-2010) raise serious questions about the long-term efficacy and desirability of wars of nonproliferation.

This means that strong global action, especially by the United Nations Security Council permanent five members and their key allies on nonproliferation, remains the best option to arrest the pace and scope of the spread of indigenous nuclear fuel-cycles and ultimately weapons. Attempts to do so harken back to the efforts of the Ford and Carter administrations but, as an infringement on state sovereignty and NPT rights, are likely face the same backlash as efforts during the seventies.

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Graduate Research Award Presentation 2

JUSTIN YOUNG-STEWART

MA Candidate

Graduate School of Public and International Affairs, University of Ottawa

Justin Young-Stewart is a second-year M.A. candidate in Public and International Affairs at the University of Ottawa. As part of his studies, he participated in an exchange program with the Paris School of International Affairs and is currently an intern at the Permanent Mission of Canada to the International Organizations in Vienna. He has an Honours B.A. in International Relations and Peace, Conflict, and Justice Studies from the University of Toronto. His research interests include nuclear affairs, diplomacy, and European affairs.

TOPIC: In light of recent developments in the Middle East and North Africa, has the Chemical Weapons Convention proven to be an effective instrument in eliminating chemical weapons, or should it be strengthened? Explain.

The Chemical Weapons Convention of 1993 (CWC) has long been regarded as the most effective amongst non-proliferation and arms control regimes.¹ Recent developments in the Middle East and North Africa (MENA), however, are putting this to the test. In its latest report released on October 28th 2016, the Joint Investigative Mechanism (JIM) found that the Syrian Arab Armed Forces had used toxic chemicals as weapons in Qminos in 2015, a violation of Syria's obligations after its accession to the CWC in 2013.² In addition, a new report by IHS has concluded that the Islamic State has used chemical weapons (CW) at least 52 times in Iraq and Syria since 2014.³ Finally, a recently released report by Amnesty International has accused Sudan of having used chemical weapons in Darfur.⁴

Despite these developments, it would be inappropriate to disregard the CWC as having been ineffective. Ultimately, assessing the CWC's effectiveness in eliminating CW depends greatly on the benchmark of success we establish. If, for instance, we go by the CWC's purpose, that is to completely ban the use, development, possession, and transfer of CW, then the recent developments in MENA seem to contradict the logic of an effective CWC. A more nuanced perspective, however, tells a different story. While disconcerting, Bashar al-Assad's and ISIS' continued use of chemical weapons obscure the larger picture: the CWC has been moderately successful considering it has been able to eliminate Syria's most deadly CW stockpiles. In addition, the taboo against CW remains strong in the international community. That said, it would be a mistake to suggest that the CWC does not need strengthening—challenges remain in terms of addressing dual-use chemicals and chemical terrorism.

Fundamentally, the CWC has still proven to be a useful instrument in eliminating chemical weapons. While the CWC's credibility has taken a hit with continued reports of CW use in Syria, it should be noted that the removal and destruction of Syria's declared 1,300-ton stockpile of CW, what was once the largest CW arsenal in the Middle East, is a significant achievement in and of itself. Not only was the CWC framework vindicated by the huge international cooperative effort, but the Organisation for the Prohibition of Chemical Weapons (OPCW), the CWC's compliance verification organization, was able to carry out the verification and removal of Syria's declared CW stockpiles and facilities in the challenging environment of an ongoing conflict.⁵ Thus, as David Martin notes, the Syrian episode has proven that "the CWC framework

does indeed have the technical capability to inspect, verify, and destroy a state's CW in a short amount of time."⁶

Crucial to the CWC's success in Syria has been the destruction of most (if not all) of Syria's military-grade VX gas and sarin gas stockpiles. Granted, concerns linger on that Assad may not have rid himself of all of these weapons. On May 9th 2015, the OPCW announced that its inspectors had found traces of chemicals used to produce sarin gas and VX gas at a military research facility not previously declared.⁷ That said, in investigating the allegations of Syrian CW use since its accession to the CWC, the JIM reports have so far only listed the use of barrel bombs filled with chlorine, a relatively primitive and ineffective CW. While not insignificant, chlorine pales in comparison to the more deadly VX and sarin gases—large doses are required to have severe effects, it dissipates quickly, and it is both visible and produces physical symptoms at lower doses, which signal to victims to flee and thus avoid inhaling larger doses.⁸ Seen from this perspective, the CWC has at the very least been effective in destroying Syria's most deadly CW and its most sophisticated delivery systems. This conclusion should also remain valid if Syria is found to have cheated. As Bleek and Kramer note, "these developments do not wholly undermine the remarkable achievement that much of the regime's CW capabilities have been *cooperatively* destroyed."⁹

A larger view of the CWC's efforts also reveals its effectiveness in eliminating CW. The CWC has achieved near-universality, more than can be said of the Nuclear Non-Proliferation Treaty and the Biological Weapons Convention. With Syria's accession to the CWC, there now remains only four states that have neither signed nor acceded to the treaty: Egypt, North Korea, Palestine and South Sudan (Israel has signed but not ratified the treaty).

Overall, it is noteworthy how few instances there have been of CW use.¹⁰ In spite of CW use in Syria, such norms as the non-acquisition norm, non-use norm, and non-transfer norm continue to hold in much of the world.¹¹ The use of CW in Syria is the first significant use in a conflict since the Iran-Iraq War of 1988 and is therefore very much an exception. Furthermore, thus far, the CWC has destroyed 90 percent of the world's declared stockpile of CW and 57 percent of the world's declared chemical munitions.¹² Meanwhile, the countries with the largest CW arsenals, Russia and the United States, will have the remaining of their CW destroyed by 2023 at the latest.¹³

Despite these achievements, the Syrian episode does point to one particular shortcoming within the CWC—dual-use chemicals. This is certainly not a new challenge—drafters of the CWC also had to wrestle with this question.¹⁴ But this challenge is becoming more critical to address. Arguably, the 'loophole' of dual-use chemicals is partly responsible for the situation in Syria today. Chlorine is used in large amounts for a variety of civilian purposes, including water purification, and is therefore not listed within the CWC as a declarable substance.¹⁵ Consequently, because chlorine was never part of Syria's formal chemical weapons program, it was not included in the international destruction effort,¹⁶ an error that the United States is trying to rectify with its recent push in the UN to destroy Assad's chlorine and other industrial toxic chemicals.¹⁷ Granted, the CWC bans the use of any chemicals in warfare, whether or not the specific chemicals are listed on the three chemical annexes of the treaty.¹⁸ Nonetheless, Syria's continued use of chlorine filled barrel bombs reveal a significant shortcoming that needs to be addressed without unduly compromising the peaceful purposes of chemistry. This task will become all the more urgent as new developments in chemistry and life sciences continue to emerge.¹⁹

In addition to insufficiently addressing the ‘loophole’ of dual-use chemicals, one particular weakness may lie in combatting chemical terrorism. Reportedly, ISIS has used chemical weapons 52 times since 2014 and there is a risk that it may use CW to slow down the Coalition’s current effort in Mosul.²⁰ Though the CWC’s provisions do contribute to the fight against chemical terrorism (such as Article X obligating member states to provide emergency assistance and protection to any state party that is attacked or threatened with chemical weapons²¹), the CWC still does not explicitly address chemical terrorism.²² As it stands, because they have no legal standing, the use of CW by non-state actors is dealt with through the implementation of National Authorities. But this process lags behind. As of July 2012, only 47 percent of State Parties had legislation covering all activities prohibited under the CWC.²³ In essence, this means that CW can be produced in a country without the slightest knowledge of the authorities.²⁴ This is particularly problematic as the international landscape has fundamentally changed since the CWC’s drafting in the 1990s with the rise in importance of non-state actors.

In conclusion, while far from perfect, the CWC has been an effective mechanism in eliminating chemical weapons. The destruction of Syria’s declared CW stockpile and Syria’s accession to the CWC are significant victories in eliminating the global use of CW. In addition, the CWC’s norms continue to hold in much of the world. Finally, the CWC’s effectiveness may further be vindicated in the near future. Reportedly, France and Great Britain are pressing to sanction those responsible for Syria’s CW use.²⁵ If successful, it would be a significant step in enforcing the CWC, something that has been lacking. Further, it can be argued that the CWC has not been used to its fullest potential in Syria. Article IX of the CWC grants a State Party to request an on-site challenge inspection of any facility or location under the jurisdiction of another State Party in order to verify compliance. Regrettably, however, no challenge inspection has so far been initiated. Thus, if anything, the problem lies not so much with the CWC framework but with political will and the enforcement mechanism (or lack thereof) within the UN Security Council.

Nonetheless, the CWC should be strengthened. Dual-use chemicals and the use of CW by non-state actors do not appear to be adequately addressed. These shortcomings are becoming increasingly important and may represent the single most dangerous risk to the continued effectiveness and relevancy of the CWC. Developments will therefore have to be closely monitored in the coming years and a serious look should be given towards adapting the CWC to new realities on the ground.

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Graduate Research Award Presentation 3

PATRICK SEGSWORTH

MA Candidate

Balsille School of International Affairs, University of Waterloo

Patrick Segsworth is a graduate student in the Global Governance program at the Balsillie School of International Affairs. Through a combination of academic research, and previous work experiences at the Centre for International Governance Innovation (CIGI) and Project Ploughshares, Patrick has developed an avid and growing interest in the field of non-proliferation and disarmament. Such interests and experiences have led him to his current position at Global Affairs Canada, where he now works as a Junior Policy Analyst in the Non-Proliferation and Disarmament Division. Patrick hopes to continue working at Global Affairs Canada upon finishing his Master's degree this winter.

TOPIC: Some speculate that a decline in public concern about the impact of nuclear weapons since the Cold War has undermined the political will required to advance efforts for nuclear non-proliferation and disarmament. Assess the overall impact of public opinion about nuclear weapons on non-proliferation and disarmament efforts – how does it rank as a factor in achieving a world free of nuclear weapons?

As John F. Kennedy famously remarked at the U.N. General Assembly in September of 1961: "Every man, woman and child lives under a nuclear sword of Damocles, hanging by the slenderest of threads, capable of being cut at any moment by accident or miscalculation or by madness."¹ Yet despite Kennedy's grave warning in 1961, the dangers posed by nuclear weapons and their continued proliferation on Earth still remain an omnipresent threat to global human security. Nine states are now in possession of nuclear weapons: Russia with 7000; the United States with 6800; France with 300; China, 260; the United Kingdom, 215; Pakistan, 140; India, 110; Israel, 80 and; North Korea with roughly ten, though exact figures are unknown.² In addition to state actors in possession of nuclear weapons, underground, black-market trading networks have emerged with the purpose of trading illicit nuclear material to "any willing buyer" – be it state, or non-state actor.³ Adding even more stress to an increasingly grave situation is the possibility that using just one-hundred nuclear weapons (or less than one percent of the current global stockpile) may be sufficient in causing a widespread, global catastrophe. As discussed in a recent study examining the environmental and climatic impacts of a limited nuclear exchange, the use of just one hundred nuclear weapons over large urban areas would force enough soot and debris into the atmosphere to temporarily block-out the sun, causing a sudden drop in global temperatures.⁴ Nearly a billion lives would be put at risk as a result of ozone depletion, increased UV radiation, and agricultural, terrestrial, and aquatic ecosystem devastation from the ensuing fallout.⁵

Yet despite the known – and still unknown – dangers posed by nuclear weapons, public concern over the role and use of such weapons remains apathetic and fractured. In a recent survey conducted by the University of Oklahoma, a significant proportion of Americans were found to believe global nuclear abolition desirable, but were unconvinced that complete abolition was feasible – nor immediately appropriate.⁶ In contrast to a growing number of "elites" – such as George Shultz, Henry Kissinger, and more recently Barack Obama – who have publicly declared non-proliferation and disarmament as vital, the survey results have shown a clear and systemic

fault amongst public and elite concerns over global nuclear security. While it is difficult to discern the origins of such disparate views on non-proliferation – a topic well deserving of significant academic attention, but beyond the scope of this paper specifically – public concern appears to be at an impasse over the future of nuclear disarmament. Further compounded by the pervasive apathy shown towards nuclear disarmament following the end of the Cold War, it is becoming increasingly apparent that alternative methods for advocacy and education should be implemented to facilitate greater non-proliferation and disarmament efforts once more.

When public opinion sways in favour of a perceived threat or foreign policy objective, the resultant impact on government decision-making can be substantial. In the context of the Vietnam War, for example, a direct correlation can be observed between heightened public outcry and Senate voting patterns which led to the withdrawal of U.S. forces.⁷ Similarly, during the early 2000s, public opinion actively constrained the Bush administration's plans to invade Iraq until significant advances were made against al Qaeda in Afghanistan first.⁸ Moreover, as the author Richard Sobel suggests, public opinion has played a critical role in influencing foreign policy objectives throughout the twentieth century – from such conflicts as the Persian Gulf War to the crisis in Bosnia to name a few.⁹

In regards to nuclear weapons, many argue that public opinion has played a pivotal role in policy directives surrounding non-proliferation and disarmament efforts as well. As the author Thomas Graham maintains, public opinion was paramount in influencing the United States and the Soviet Union to agree on limited nuclear weapons testing; eventually leading to the ratification of the *Limited Test Ban Treaty* (LTBT) in 1963.¹⁰ Similarly, others suggest that the “nuclear freeze movement” of the early 1980s directly influenced future arms control negotiations between the U.S. and the Soviet Union. Culminating in one of the largest political movements in American history, the freeze movement sought for a bilateral moratorium on the testing, production, and deployment of nuclear weapons. While the movement failed to convince then-President Ronald Reagan that a bilateral freeze with the Soviet Union should be adopted, the movement did succeed in convincing legislators to resume bilateral negotiations and pursue non-proliferation and disarmament efforts once more.¹¹ Such negotiations resulted in no small part to the signing of the *Intermediate-Range Nuclear Forces Treaty* – leading to the elimination of all medium-range nuclear weapons from both Eastern and Western Europe in 1987¹² – and to the eventual ratification of the *Strategic Arms Reduction Treaty* (START) in 1991.¹³ Although never fully negotiated, Gorbachev and Reagan also contemplated a broader policy objective of abolishing all nuclear weapons by the year 2000.¹⁴ Public opinion, as such, has played a significant role in not just military interventions or domestic policy decisions, but with the management of nuclear weapons as well.

Yet despite the success of public opinion in actively swaying government decision-making, at the time of writing, public opinion appears to be inconclusive, fractured, and apathetic towards the dangers posed by nuclear weapons. While blame could be directed towards diminishing public activism, it is important to recognize the context in which public opinion has influenced government policy. As observed through the above mentioned examples, public concern over nuclear weapons was at its height when humanity was visibly threatened most by their use and continued proliferation on Earth. In the case of the LTBT being signed, the world was just recovering from near Armageddon through the Cuban Missile Crisis – and was thus more aware, and motivated to act by the inherent dangers posed by such weapons and their continued proliferation on Earth.¹⁵ Similarly, when President Reagan decided to forego an arms control policy in the early 1980s, the U.S. and the Soviet Union were reaching one of the highest moments of arms build-up throughout their tenuous histories.¹⁶ Choosing to forego an arms

control policy signaled to an already worried public that nuclear proliferation may very well continue, unabated, until a devastating event eventually occurs.

However, with the collapse of the Soviet Union, and continued efforts to reduce the amount of nuclear weapons on Earth, the immediacy of arms control and disarmament efforts has lost traction in the minds of many. As Chapin Boyer, a millennial author for *The Bulletin of the Atomic Scientists* suggests: “My generation grew up believing that the problem of nuclear weapons had been solved. The United States’ main nuclear opponent, the Soviet Union, is no more... We see them [nuclear weapons] in movies or in games. Sometimes we talk about nuclear weapons in school, but almost always in history class. We talk about them as if they are fictional, or past threats that no longer apply.”¹⁷ If nuclear weapons are overwhelmingly deemed as “fictional” or historical threats, as Boyer would suggest, there seems to be little hope that public opinion will suddenly galvanize in the way the nuclear freeze or LTBT movements developed in the past. With that said, mounting tension on the Korean Peninsula, Eastern Europe, and elsewhere, could once again inspire renewed public interest in non-proliferation and disarmament. Whether such attention contributes to another mass disarmament movement, however, will ultimately depend on how each conflict continues to unfold, as well as sufficient recognition amongst the general public towards the inherent dangers posed by a global nuclear conflict.

Notwithstanding the role of a nuclear conflict, or an arms race acting as a ‘push factor’ for concerted disarmament, waiting for another Cuban Missile Crisis or a conflict on the Korean Peninsula to reignite global interest in non-proliferation and disarmament runs the risk of millions – if not billions – of lives being threatened as a result. It is imperative, as such, that greater attention is pre-emptively directed towards education and advocacy so that humanity is better equipped to understand the apparent dangers in nuclear weapons and how best to approach such weapons when another ‘Cuban Missile Crisis’ or an uncontrolled arms race occurs once more. Investing in organisations, such as N Square – a “multimillion dollar initiative designed to stimulate innovation in the fields of nuclear disarmament, non-proliferation, safety and security”¹⁸ – may be one step towards sustained public engagement. Committing greater attention in education will help increase public awareness and greater transparency towards the real dangers posed by nuclear weapons and their potential use on Earth. Promoting creativity in the arts, furthermore, with such projects as the 1983 film *The Day After* or the 2016 multi-media installation *The Bomb*, will help engender wider public attention and awareness as well. While the path towards complete nuclear disarmament may be daunting, increased public awareness will help illustrate that nuclear weapons are not simply a historical or fictional danger, but an imminent threat to the prolonged survival of humanity on Earth. With such motivation in mind, public opinion may once again sway in the manner of the nuclear freeze or LTBT movements in pushing for continued and concerted efforts to reduce and eventually eliminate nuclear weapons on Earth.

Notes

¹ John F. Kennedy, “Address by President John F. Kennedy to the UN General Assembly,” U.S. Department of State, September 25, 1961, <http://www.state.gov/p/io/potusunga/207241.htm>, accessed October 31, 2016.

² “Nuclear Weapons: Who Has What at a Glance,” *Arms Control Association*, updated January 2017, <https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat>, accessed February 3, 2017.

³ David E. Sanger, “The Khan Network,” paper presented at the Conference on South Asia and the Nuclear Future (Stanford Institute for International Studies, 2004) 1-2.

⁴ Michael J. Mills, Owen B. Toon, Julia Lee-Taylor, and Alan Robock, “Multidecadal global cooling and unprecedented ozone loss following a regional nuclear conflict,” *Earth’s Future*, vol. 2, no. 1, 2014: 161-162.

⁵ Mills et al., 161-162.

⁶ Joseph T. Ripberger, Thomas M. Rabovsky, and Kerry G. Herron, “Public opinion and nuclear zero: a domestic constraint on ditching the bomb,” *Politics & Policy*, vol. 39, no. 6, 2011: 910-911.

⁷ Paul Burstein and William Freudenburg, “Changing Public Policy: The Impact of Public Opinion, Antiwar Demonstrations, and War Costs on Senate Voting on Vietnam War Motions,” *American Journal of Sociology*, vol. 84, no 1, 1978: 116-117.

⁸ Douglas Foyle, “Leading the Public to War? The Influence of American Public Opinion on the Bush Administration’s Decision to Go to War in Iraq,” *International Journal of Public Opinion Research*, vol. 16, no. 3, 2004: 269.

⁹ Richard Sobel, *The Impact of Public Opinion on U.S. Foreign Policy Since Vietnam: Constraining the Constraining the Colossus* (New York: Oxford University Press, 2001) 5-10.

¹⁰ Thomas W. Graham, *The Politics of Failure: Strategic Nuclear Arms Control, Public Opinion, and Domestic Politics in the United States: 1945-1980* (Massachusetts: Massachusetts Institute of Technology, 1989) 168.

¹¹ Ripberger, 895.

¹² Tad Daley, “Thirty Years Ago Today, at the Nuclear Freeze Rally in Central Park, We Saved Ourselves From Ourselves,” *The Huffington Post*, August 12, 2012, http://www.huffingtonpost.com/tad-daley/nuclear-war-protest_b_1588344.html, accessed October 30, 2016.

¹³ Ripberger et al., 895.

¹⁴ Daley, “Thirty Years Ago Today.”

¹⁵ Graham, 196.

¹⁶ Hans M. Kristensen, and Robert S. Norris, “Nuclear Notebook.” *The Bulletin of the Atomic Scientists*, updated January 2017, <http://thebulletin.org/nuclear-notebook-multimedia>, accessed November 3, 2016.

¹⁷ Chapin Boyer, “Why young people think nuclear weapons are history,” *The Bulletin of the Atomic Scientists*, March 11, 2016, <http://thebulletin.org/why-young-people-think-nuclear-weapons-are-history9229>, accessed November 5, 2016.

¹⁸ *N Square Collaborative: The Crossroads for Nuclear Security Innovation*, updated January 2017, <http://www.nsquarecollaborative.org/about-us/>, accessed November 2, 2016.

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Graduate Research Award Presentation 4

JENNIFER SMITH

LLM Candidate

Human Rights and Humanitarian Law, European University, Viadrina

Jennifer Smith is an LLM candidate in International Human Rights and Humanitarian Law at European University, Viadrina in Frankfurt (Oder), Germany, and recently graduated with a Master of Arts in Political Science from Dalhousie University in Halifax. She also holds a BA Honours from McGill University. In 2015-16 she received an inaugural Canada Graduate Scholarship to Honour Nelson Mandela in order to carry out her MA research, which focused on the interplay of civil society activism and EU conditionality in Ukraine's recent democratic reforms. Prior to graduate studies Jennifer had a 15-year career in politics, labour and a global non-profit.

TOPIC: In light of recent developments in the Middle East and North Africa, has the Chemical Weapons Convention proven to be an effective instrument in eliminating chemical weapons, or should it be strengthened? Explain.

The Chemical Weapons Convention: Still Fit-For-Purpose?

The ban on the use of chemical weapons in warfare is a norm with deep roots closely tied to the original aims and principles of international humanitarian law, including the prohibition on means and methods of warfare which cause superfluous injury or unnecessary suffering and the prohibition on the use of indiscriminate weapons.¹ States have codified this ban in the Chemical Weapons Convention (CWC), the most widely ratified treaty in the realm of weapons control. The Convention stands out in its clarity, centering as it does on a commitment by states to *never under any circumstances* develop, produce, stockpile, transfer or use chemical weapons.²

In the quarter-century since the convention was negotiated, however, the nature of modern conflict has changed and with it, the nature of the chemical weapons threat. Recent events in the Middle East and North Africa have brought new challenges into sharp focus, prompting some observers to question whether a treaty rooted in the norms and context of WWI and the Cold War is adequate in a world in which states use chemical weapons against their own nationals, armed or otherwise; non-state armed groups have the ability to acquire or synthesize chemical weapons; and states feel the need to hedge against growing global uncertainty by circumventing their obligations under the convention.

This essay will assess whether the CWC still provides an effective framework for addressing these challenges and highlight opportunities to strengthen the Convention and its implementation.

Non-international armed conflicts

As the traditional state-to-state model has given way to a proliferation of complex internal conflicts, the transferability of norms in both IHL and weapons law has been tested. States have traditionally been reluctant to place limits on the sovereign prerogative to deal with internal conflict. The Chemical Weapons Convention, with its roots in the fundamentals of customary IHL and its use of the unequivocal phrase “never under any circumstances,” has been seen as a successful example, helping to extend the ban beyond state-to-state conflicts and into the realm of internal conflicts. The International Committee of the Red Cross and the International Criminal Tribunal for the Former Yugoslavia have referred to the Convention, and to the international reaction to Iraq’s use of chemical weapons against the Kurds, in concluding that “there [has] undisputedly emerged a general consensus in the international community on the principle that the use of those weapons is also prohibited in internal armed conflicts.”³

Other commentators, however, perceive areas of weakness in the norm, and suggest that the “red line” is in fact more rhetorical than legal when applied to conflict not of an international character.⁴ There may be doubt as to whether use of chemical weapons by a state against its own citizens constitutes justification for Chapter 7 intervention or incurs individual liability under international criminal law. And although the Geneva Protocol of 1925—and before it, the Hague Declaration of 1899—helped establish a strong taboo against the use of chemical weapons by states against other states, both were silent in the case of conflict not of an international character.⁵ In fact, many states lodged reservations making clear that they retained the right to use such weapons in conflict against enemies not party to the convention. Several of these reservations still stand today. All of this weakens the case that the customary norm extends to non-international conflict, particularly for those states that remain outside the Convention.

There are a number of steps states could take to remove any lingering uncertainty about the applicability of the prohibition in conflict of any kind and cement it as a customary norm. These include withdrawing reservations to the 1925 Protocol and ratifying the 2010 amendment to article 8 of the Rome Statute of the International Criminal Court, which would make use of chemical weapons a war crime in conflict not of an international character.⁶ Thus far, only 32 states have ratified this amendment: Canada is not amongst them.

Non-state actors

With the growing sophistication of non-state armed groups, chemical weapons are no longer the preserve of states alone. Allegations have emerged of the capture of chemical weapons facilities and the use of agents like mustard gas and chlorine by groups—notably, Islamic State—in both Syria and Iraq.⁷

The CWC was forged by states to bind one another, and does not directly create obligations for non-state actors. Furthermore, non-state groups are more likely to acquire chemical weapons through small-scale facilities or synthesize them using readily available precursors—a model much different from the industrial production primarily anticipated by the convention and its verification framework.

However, the CWC contains a number of provisions to prevent the acquisition and use of chemical weapons by non-state groups.⁸ States Parties are prohibited from assisting any group to obtain chemical weapons and their precursors. They must destroy stockpiles, preventing chemical weapons from falling into the wrong hands, and regulate transfers of dual-use products often used by non-state groups. And they must implement domestic laws that would criminalize the use or acquisition of such weapons, giving new legal tools to domestic law enforcement.⁹

Unfortunately, states have been slow to implement these obligations. By the end of 2014, only 114 of 192 States Parties had put in place domestic legislation.¹⁰ The OPCW has assisted States Parties to meet this obligation by providing training, legal assistance and model legislation, and this work deserves continued support. Implementation of national legislation is also an area in which NGOs can assist the “norm cascade” through domestic advocacy.

Investigating and combating the use of chemical weapons in areas controlled by non-state groups remains a serious problem, as demonstrated by the difficulties encountered by the Joint Investigative Mechanism (JIM) investigation team in Syria. Full implementation of the convention, however, would reduce the chances of non-state groups acquiring chemical weapons in future.

Secret stockpiles

At the end of 2014, five States Parties remained in possession of declared chemical weapons. Some—notably the USA and the Russian Federation—have pushed back deadlines for destruction of outstanding weapons and facilities, and a small number of States Parties have yet to submit initial declarations.¹¹ Even more insidious, however, is the likelihood that some states maintain secret stockpiles like those discovered in post-Gadhafi Libya and exposed by the OPCW-UN Joint Investigative Mechanism’s critical analysis of Syria’s first round of declarations.

The convention contains mechanisms to address such cases. In particular, article IX provides each State Party with the right to request clarification and, if necessary, to initiate a “challenge inspection” when concerns arise about the compliance of another state. That the Joint Investigative Mechanism was able to fulfill its mandate in Syria under difficult circumstances attests that the OPCW has the capacity and expertise to carry out challenge inspections when needed.

States Parties have thus far been hesitant to trigger challenge inspections, preferring dialogue and cooperation. While this non-confrontational approach has helped move the convention toward universality and kept delinquent states engaged, suspicions of grave

violations might call for stronger action. A challenge inspection would carry greater legal and political weight than the fact-finding missions undertaken thus far, and a finding of violation would compel the state in question to respond or face sanctions. It would also raise the stakes of subsequent Security Council resolutions and make vetoes in that forum politically untenable.

Opportunistic and dual-use weapons

Despite being required to declare and destroy its holdings of Schedule I chemicals—those, such as nerve agents, clearly intended for use as weapons—upon accession to the convention, Syria was permitted to retain quantities of chlorine, which has important civil and industrial uses. Evidence has since emerged of the use of barrel bombs filled with chlorine, indicating opportunistic use of chemicals still at hand.¹²

This does not mean, however, that the convention is powerless to address such violations. The so-called “general purpose criterion” set out in the convention is crafted to ensure that dual-use products and new chemicals or technologies are covered by the prohibition whenever they are employed as a method of warfare, or when stocks are maintained for that purpose. States Parties are empowered to initiate challenge inspections and other measures in such a scenario.

Conclusion

The CWC as it stands today is a sound platform from which to address the changing nature of the chemical weapons threat. It provides a legal basis for norms against the use of such weapons in internal as well as international conflicts, and includes tools to combat the acquisition of weapons by non-state actors. Its purpose-based definition of chemical weapons prevents it from being overtaken by technological advances or the opportunistic use of industrial chemicals, and its inspection regime allows for targeted and responsive investigations in cases where secret stockpiles are suspected. In contrast with some other conventions dealing with weapons of mass destruction, the CWC has been lauded for its strong institutions and non-discriminatory structure. It offers states a sophisticated balance of obligation, assistance, protection, and economic incentive that has helped it to achieve near-universality.

Amending the international law of armed conflict is exceptionally difficult. Opening the convention now, even to strengthen it, could invite states to re-evaluate their commitments, putting both the convention and the customary norm at risk.¹³

Instead, the task is to make full use of the convention’s norms and institutions in a way that addresses today’s chemical weapons threat. Building on recent lessons, States Parties and advocates for the convention should prioritize actions including a) cementing the norm against the use of chemical weapons in non-international armed conflicts through declarations, ratifications, and state practice; b) fully implementing domestic legislation to eliminate safe havens and back-channels for non-state groups seeking to acquire chemical weapons, and c) employing underused mechanisms like the challenge inspection to investigate insidious violations such as secret stockpiles and opportunistic use. All this

needs to be accompanied by ongoing capacity building with member states, cooperation with the chemical industry, and mechanisms to establish trust and remove perceived barriers to full and open declarations. Finally, efforts to achieve universality must continue.

The conflict in Syria has posed a difficult test for the CWC's norms and institutions. The inability of the Security Council to respond decisively to repeat violations has prompted concern about a weakening of the norm against the use of chemical weapons. It is equally true, however, that advances in international humanitarian law have often followed events that shocked the conscience of the international community. The gravity and global impact of the conflict in Syria has the potential to re-energize efforts to "exclude completely the possibility of the use of chemical weapons,"¹⁴ and the CWC offers a forum for concerned states to reinforce the norm and make clear that violations will not be tolerated.

Notes

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² Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, 1974 UNTS 45

³ *Prosecutor v. Dusko Tadic aka "Dule" (Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction)*, IT-94-1, International Criminal Tribunal for the former Yugoslavia (ICTY), 2 October 1995, paragraph 124. See also Rule 74 of: International Committee of the Red Cross. Customary IHL Database. Available at: <https://ihl-databases.icrc.org/customary-ihl/eng/docs/home>

⁴ Asada, Masahiko. "A Path to a Comprehensive Prohibition of the Use of Chemical Weapons under International Law: From The Hague to Damascus." *Journal of Conflict & Security Law*, vol. 21 no. 2, 2016, pp. 153–207. See also Gioia, A. "The Chemical Weapons Convention and its Application in Time of Armed Conflict" in M. Bothe, N. Ronzitti and A. Rosas (eds.), *The New Chemical Weapons Convention: Implementation and Prospects* (Kluwer Law International: 1998) 384.

⁵ Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, Geneva, 94 LNTS 65, entered into force Feb. 8, 1928 and Art. 23(a) of Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land. The Hague, 18 October 1907.

⁶ UNTS 2868 p.195, Resolution [RC/Res.5](#) of the Review Conference of the Rome Statute (also known as the Kampala Amendments).

⁷ Murkovič, Tomaž. "IS likely used chemical weapons in Syria, Iraq; could use them elsewhere, OPCW head says (interview)." *Slovenia Press Agency*. Ljubljana, 11 May 2016. Available at: <https://www.opcw.org/is-likely-used-chemical-weapons-in-syria-iraq-could-use-them-elsewhere-opcw-head-says-interview/>

⁸ Tucker, Jonathan B. "The Role of the Chemical Weapons Convention in Countering Chemical Terrorism." *Terrorism and Political Violence*, vol. 24, no.1, 2012, pp. 105-119.

⁹ Article I, §1(d); art. V, art. VI and art. VII respectively.

¹⁰ Organization for the Prohibition of Chemical Weapons. “Report of the OPCW on the Implementation of the convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction.” C-20/4. 2 December 2015.

¹¹ Organization for the Prohibition of Chemical Weapons, 2015. *Ibid*

¹² Executive Council of the OPCW. “Decision on the Reports of the OPCW Fact-Finding Mission in Syria.” EC-M-48/DEC1 4 February 2015.

¹³ Robinson, J. P. Perry. “Difficulties Facing the Chemical Weapons Convention.” *International Affairs* vol. 84, no. 2, 2008, pp. 223–239.

¹⁴ The goal expressed in the preamble of the convention.

Keynote Address

M.V. RAMANA, Ph.D.

Simons Chair in Disarmament, Global and Human Security
The University of British Columbia

Dr. Ramana made an address about the material, personnel, and institutional connections between nuclear energy and nuclear weapons and argued that, in a future world with few or no nuclear weapons, presence of facilities associated with nuclear energy and fuel chain will be a source of concern and cause instability. (Transcript not available.)

Expert Review Panel

Andrea Berger is a Senior Research Associate and a Senior Program Manager, based in London. Her research interests include North Korea's WMD programs, sanctions and export controls, countering proliferation finance, and nonproliferation and disarmament diplomacy. Andrea conducts detailed investigations into illicit networks using open-source intelligence techniques, in support of counterproliferation efforts. She is also a regular contributor at Arms Control Wonk, 38 North, and NK News.

In addition to her full-time position with the CNS, Andrea is currently a Visiting Fellow in the Centre for Science and Security Studies (CSSS) at King's College London, as well as an Associate Fellow at the Royal United Services Institute.

Christopher Penny is Assistant Professor of International Law at the Norman Paterson School of International Affairs, Carleton University. Prior to joining the full-time faculty, he taught as a sessional lecturer at NPSIA as well as at the University of Ottawa Faculty of Law (where he also coordinated the International Law program). Professor Penny is a member in good standing of the Law Society of Upper Canada. In addition to his position at NPSIA, he is also a reserve legal officer (Army Lieutenant-Colonel) with the Canadian Forces, serving in the Directorate of International and Operational Law in the Office of the Judge Advocate General.

In addition to his academic work, Professor Penny also has substantial practical experience with the development and application of international law in this field. He has participated as a member of the Canadian government delegation to numerous multilateral treaty negotiations, both within and outside of the United Nations framework, and has also provided legal advice in operational military environments relating to NATO operations in Afghanistan and Libya.

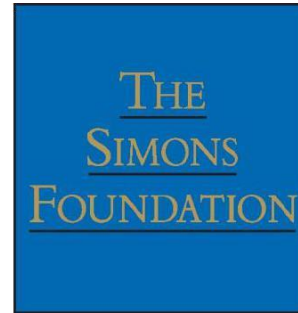
M.V. Ramana (Ph.D. Boston University; M.Sc Indian Institute of Technology Kanpur) is the Simons Chair in Disarmament, Global and Human Security at the Liu Institute for Global Issues, UBC. His research interests are in the broad areas of international security and energy supply, with a particular focus on topics related to nuclear energy and fissile materials that can be used to make nuclear weapons. He combines technical skills and interdisciplinary methods to address policy relevant questions related to security and energy issues. Ramana is the author of *The Power of Promise: Examining Nuclear Energy in India*, Penguin Books, New Delhi (2012).

His work has been recognized through honors such as a Guggenheim Fellowship in 2003 and the Leo Szilard Award from the American Physical Society in 2014. He is a member of the International Panel on Fissile Materials and on the editorial board of *Energy Research & Social Science*.

Annex 1

ISROP
INTERNATIONAL
SECURITY RESEARCH
AND OUTREACH
PROGRAMME

PRISI
PROGRAMME
DE RECHERCHE
ET D'INFORMATION
DANS LE DOMAINE
DE LA SÉCURITÉ
INTERNATIONALE



Graduate Research Awards for Disarmament, Arms Control and Non-Proliferation 2016-2017 competition

February 9th 2017

10:00- 12:15pm

Room A9-26

10:00 Opening Remarks

Mark Gwozdecky – Assistant Deputy Minister, International Security and Political Affairs
Martin Larose – Director, Non-Proliferation and Disarmament Division

10:05 Remarks by Dr. Jennifer Allen Simons – President of The Simons Foundation

10:20 Presentation of Winning Submissions and Q&A

1. **Farzan Sabet Sarvestani**
PhD candidate, The Graduate Institute, Geneva and Stanton Nuclear Security Fellow at CISAC Stanford.
2. **Justin Young-Stewart**
MA candidate, Graduate School of Public and International Affairs, University of Ottawa.
3. **Patrick Segsworth**
MA candidate, Balsillie School of International Affairs, University of Waterloo.
4. **Jennifer Smith**
LLM, Human Rights and Humanitarian Law, European University, Viadrina.

11:45 Expert Briefing and Q&A – Dr. M.V. Ramana Simons Chair in Disarmament, Global and Human Security, University of British Columbia

12:15 Closing Remarks and presentation of awards to GRA Recipients

Dr. Jennifer Allen Simons – President, The Simons Foundation
Martin Larose – Director, Non-Proliferation and Disarmament Division

12:30 Lunch

2016-2017 GRADUATE RESEARCH AWARDS *for Disarmament, Arms Control and Non-Proliferation*

\$5,000

Competition Details

Graduate Research Awards for Disarmament, Arms Control and Non-Proliferation are offered by The Simons Foundation and the International Security Research and Outreach Programme (ISROP) of Global Affairs Canada (GAC).

A total of **four awards of CAD\$5,000** are available to Canadian Master's and/or Doctoral candidates to support the research and writing of an academic paper responding to a specific Non-Proliferation, Arms Control and Disarmament (NACD) topic. Awards also include domestic travel support to Ottawa where successful candidates will present their completed papers during a special event at Global Affairs Canada Headquarters in February 2017 (date to be advised).

Deadline for applications:	December 5, 2016
Selection of four award recipients:	January 11, 2017
Presentations at GAC Headquarters in Ottawa:	February 2017

HOW TO APPLY:

Applications should be sent to Elaine Hynes at The Simons Foundation by email to: ehynes@thesimonsfoundation.ca by the close of business (PST) on December 5, 2016.

Your application must include:

- Your resume, including proof of citizenship status.
- A complete, official transcript of your grades (electronic copies of official transcripts are acceptable).
- An academic paper (1,500 words) responding to one of the specific Non-Proliferation, Arms Control and Disarmament topics shown below.

ELIGIBILITY:

The competition is open to Canadian citizens and Canadian permanent residents/landed immigrants currently enrolled in a graduate programme. Graduate students studying outside Canada are eligible to apply but please note that funding to cover the cost of successful applicants' travel to Ottawa for the event at Global Affairs Canada in February is limited to domestic travel within Canada (or the equivalent).

Previous recipients of a Graduate Research Award are not eligible in order to expand the community of Canadian scholars working on non-proliferation, arms control and disarmament (NACD) issues.

SELECTION PROCESS:

Applications will be reviewed by an Expert Review Panel made up of three experts and academics working in this field who will recommend four award winners for final approval by representatives of The Simons Foundation and ISROP. Successful candidates will be notified on January 11, 2017.

PRESENTATIONS AT GLOBAL AFFAIRS CANADA HEADQUARTERS:

Award winners will present their papers at a special event hosted by Global Affairs Canada at GAC Headquarters in Ottawa during February 2017 and will be asked to produce a PowerPoint deck for their presentation. The cash awards will be issued at the GRA event in Ottawa and a report, including the papers presented, will be published online by The Simons Foundation. ***Please note that attendance at the GRA event in Ottawa is a mandatory requirement of the award.*** Approved domestic travel, accommodation and meal expenses will be provided by The Simons Foundation.

TOPICS for 2016-2017

Master's and Doctoral candidates may choose to address one of the following subjects:

5. Some speculate that a decline in public concern about the impact of nuclear weapons since the Cold War has undermined the political will required to advance efforts for nuclear non-proliferation and disarmament. Assess the overall impact of public opinion about nuclear weapons on non-proliferation and disarmament efforts – how does it rank as a factor in achieving a world free of nuclear weapons?
6. The number of countries considering, or constructing, nuclear power plants continues to increase. Some of these are developing countries with weak control regimes. Will this trend increase the risk of weapons-useable fissile material being misplaced, acquired or diverted to clandestine purposes, or are current international verification and control mechanisms sufficient to address this risk?
7. In light of recent developments in the Middle East and North Africa, has the Chemical Weapons Convention proven to be an effective instrument in eliminating chemical weapons, or should it be strengthened? Explain.
8. What are the key legal issues pertaining to space debris remediation? How are they affecting the development of active debris removal technology, and how can they be addressed to promote new space debris remediation initiatives?

Suggested reading lists for each topic are available upon request. To receive a copy, please contact Elaine Hynes at The Simons Foundation by email to ehynes@thesimonsfoundation.ca or at telephone number 778-782-7779.

The primary objective of the Graduate Research Awards is to enhance Canadian graduate level scholarship on disarmament, arms control and non-proliferation issues.

2016-2017

BOURSES DE RECHERCHE AUX CYCLES SUPÉRIEURS

pour le désarmement, le contrôle des armements et leur non-prolifération

5 000 \$

Détails de l'appel de candidatures

Les Bourses de recherche aux cycles supérieurs pour le désarmement, le contrôle des armements et la non-prolifération sont décernées par la Simons Foundation et le Programme de recherche et d'information dans le domaine de la sécurité internationale (PRISI) d'Affaires mondiales Canada (AMC).

Au total, quatre prix de 5 000 CAD sont offerts aux étudiants au niveau de la maîtrise et/ou du doctorat du Canada pour soutenir la recherche et la rédaction d'une publication universitaire portant spécifiquement sur la non-prolifération, le contrôle des armements et le désarmement. Les bourses incluent les frais de déplacement au Canada des candidats sélectionnés qui seront invités à présenter leurs travaux lors d'une soirée spéciale à l'administration centrale d'Affaires mondiales Canada, à Ottawa, en février 2017 (date à préciser).

Date limite pour présenter une demande :	5 décembre 2016
Sélection des quatre boursiers :	11 janvier 2017
Présentation à l'administration centrale d'AMC à Ottawa :	février 2017

COMMENT SOUMETTRE SA CANDIDATURE

Votre candidature doit être adressée à M^{me} Elaine Hynes de la Simons Foundation par courrier électronique (ehynes@thesimonsfoundation.ca) au plus tard le 5 décembre 2016 avant minuit (HNP).

Votre dossier doit comprendre :

- Un curriculum vitae, ainsi qu'une preuve de citoyenneté.
- Un relevé de notes officiel et complet (la version électronique des relevés officiels est acceptable).
- Un exposé universitaire (1 500 mots) portant sur un des thèmes spécifiques à la non-prolifération, au contrôle des armements et au désarmement indiqués ci-dessous.

ADMISSIBILITÉ

Ce concours est ouvert à tous les citoyens canadiens, résidents permanents et immigrants admis actuellement inscrits dans un programme d'études supérieures. Les étudiants diplômés poursuivant des études à l'extérieur du Canada sont admissibles, mais veuillez noter que le financement des frais de déplacement des candidats sélectionnés pour l'événement organisé à Ottawa par Affaires mondiales Canada, en février prochain, se limite aux déplacements à l'intérieur du Canada (ou l'équivalent).

Les précédents lauréats d'une Bourse de recherche aux cycles supérieurs ne sont pas admissibles, afin d'élargir la collectivité des chercheurs travaillant sur les questions de non-prolifération, de contrôle des armements et de désarmement.

PROCESSUS DE SÉLECTION

Les dossiers de candidature seront examinés par un comité d'experts constitué de trois experts et universitaires œuvrant dans ce domaine, qui recommanderont les quatre lauréats pour approbation finale par les représentants de la Simons Foundation et du PRISI. Les candidats retenus seront avisés de leur succès le 11 janvier 2017.


PRÉSENTATION À L'ADMINISTRATION CENTRALE D'AFFAIRES MONDIALES CANADA

Les boursiers présenteront leurs exposés lors d'un événement spécial organisé par Affaires mondiales Canada, à son administration centrale, à Ottawa, en février 2017, et devront produire un diaporama PowerPoint de leur présentation. Les bourses en argent seront remises lors de la soirée *Bourses de recherche aux cycles supérieurs* à Ottawa et un rapport, incluant les documents présentés, sera publié en ligne par la Simons Foundation. ***Veillez prendre note que la participation à la soirée Bourses de recherche aux cycles supérieurs à Ottawa est obligatoire aux fins de l'obtention de la bourse.*** Les frais approuvés pour les déplacements au Canada, l'hébergement et les repas seront couverts par la Simons Foundation.

THÈMES pour 2016-2017

Les candidats inscrits à la maîtrise ou au doctorat peuvent choisir d'aborder l'un des sujets suivants :

9. D'aucuns prétendent qu'une baisse de l'intérêt public quant à l'impact de l'armement nucléaire depuis la fin de la guerre froide a miné la volonté politique requise pour faire progresser les efforts de non-prolifération des armements et de désarmement nucléaire. Évaluez l'impact général de l'opinion publique sur les efforts de non-prolifération des armes nucléaires et de désarmement – quel rang cela occupe-t-il parmi les facteurs clés de l'instauration d'un monde exempt d'armes nucléaires?
10. Le nombre de pays envisageant de se doter, ou construisant actuellement, des centrales nucléaires progresse constamment. Certains sont des pays en développement dont les régimes de contrôle présentent des lacunes. Cette tendance accroît-elle les risques que des matières fissiles utilisables pour la confection d'armes soient égarées, acquises ou détournées à des fins clandestines, ou les mécanismes internationaux de vérification et de contrôle sont-ils suffisants pour parer à ce risque?
11. À la lumière des derniers développements au Moyen-Orient et en Afrique du Nord, la Convention sur l'interdiction des armes chimiques a-t-elle prouvé son efficacité à éliminer les armes chimiques ou cet outil doit-il être renforcé? Expliquez.
12. Quels sont les principaux problèmes de nature juridique relatifs à la réduction des débris spatiaux? En quoi affectent-ils le développement d'une technologie d'élimination active des débris et comment peut-on y remédier afin de promouvoir de nouvelles initiatives d'élimination des débris et d'assainissement de l'espace?



Une liste de suggestion de lectures pour chaque sujet est disponible sur demande. Pour en recevoir copie, veuillez vous adresser à M^{me} Elaine Hynes de la Simons Foundation par courriel (ehynes@thesimonsfoundation.ca) ou par téléphone (778-782-7779).

Le principal objectif des Bourses de recherche au niveau des études supérieures est d'accroître l'érudition et le nombre de boursiers canadiens en matière de désarmement, de contrôle et de non-prolifération des armements