

ROBOTS IN ARMS On a Search for a Future Arms Control Regime to Regulate Autonomous Weapons

MONDAY 27 - WEDNESDAY 29 JANUARY 2020
Protestant Academy Loccum

Similar to autonomous driving in the civil sector, autonomy in military weapon systems is no longer science fiction but a likely scenario for future battlefields. While there are currently no fully autonomous weapons in operation, numerous states around the globe have set up programs in order to elaborate systems that are capable to select and engage military targets without human interventions. These efforts are further accelerated by the fast technological progress that is taken place in private industry and civil research in fields of Artificial Intelligence (AI) and robotic.

In light of these developments, the number of experts who sound the warning bells is growing. The increasing interest in lethal autonomous weapons (LAWS) poses risks for escalation, arms race, and destabilizing effects on international security, they say. Moreover, there are considerable humanitarian and ethical concerns.

Given these worries, an international effort to regulate robot weapons seems to be a reasonable consequence. Steps towards that direction were already taken by a group of governmental experts who meet regularly in Geneva under the auspices of the United Nations. In this diplomatic arena, in particular, France and Germany have jointly taken steps to achieve more tangible results concerning the regulation of robot weapons. Both countries, therefore, have a certain responsibility for progress in that field. But how could a future arms control regime on LAWS look like? What will be its building blocks?

This Loccum conference is aiming to contribute to the emerging international discussion on how to proceed with regulations in the field of robot weapons. Choosing the format of an interactive "idea workshop", the conference brings together not only interested members of the general public but also experts from different fields that are relevant to elaborate core functions of a future LAWS control regime – namely, arms control, nonproliferation, and military experts, diplomats, activists, AI-related scholars and industry representatives.

This is a preview program and as such may be subject to change. The conference will strictly follow the Chatham House Rule.

German-English translation will be provided during the plenary sessions (workshop phase is exclusively in English).

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THIS CONFERENCE IS FUNDED BY:



Corvinus-Stiftung



DAY 1 MONDAY 27 JANUARY 2020

13:30 REGISTRATION

Guests who travel from abroad are welcomed to arrive the day before (Sunday, 26 January 2020)

14:00 WORDS OF WELCOME

Thomas Müller-Färber, Program Director International Affairs, Protestant Academy Loccum

14:10 KICK-OFF LECTURE | What Are Lethal Autonomous Weapons (LAWS)?

While there is yet no universally accepted catch-all definition of lethal autonomous weapons (LAWS), there is at least an emerging understanding of what LAWS are about. The purpose of this kick-off lecture is to give an introduction into the field of LAWS, clarify some key concepts, and throw out some general ideas about LAWS as food-for-thoughts for the following discussion at the conference. • What are LAWS? • How advanced is the research and development of these weapons? • What does F2T2EA mean? • When will LAWS be fielded and by whom? • Is it necessary to regulate LAWS and is it after all possible? • Etc.

Marcel Dickow, Head, International Security Research Division, German Institute for International and Security Affairs (SWP) and head of the International Panel on the Regulation of Autonomous Weapons (iPRAW), Berlin

--- Followed by Q&A ---

15:00 COFFEE & CAKE

15:30 PLENARY FORECAST DISCUSSION | What Are the Drivers Behind the Development, Production, and Future Use of Autonomous Weapons

There is a reason why states around the world have started to develop autonomous weapons. In this forecast discussion, we want to explore the technological as well as the military drivers behind armed robots and how these dynamics might impact on the future development of autonomous weapons. The purpose of this session is to assess the future development, production and use of autonomous weapons • What are the crucial drivers and how will they evolve in the future? • How do these drivers affect the development of LAWS? • What are important obstacles to the advance of autonomy in weapon systems? • Where are the relevant innovations are taking place? • Etc.?

Part I: TECHNOLOGICAL PUSH – How Does the Progress in the Field of Artificial Intelligence (AI), Robotic, Sensoric, etc. Drive the Current and the Future Development of Autonomous Weapons?

Moå Peldan Carlsson, Emerging Military and Security Technologies Project, Stockholm International Peace Research Institute (SIPRI)

Frank Ole Flemisch, Head of Department, Fraunhofer Institute for Communication, Information Processing and Ergonomics (FKIE), Wachtenberg

--- followed by plenary discussion ---

17:00 Coffee & Tea Break

17:15 Part II: MILITARY PULL – How Does the Changing Nature of Warfare Affects the Development of Autonomous Weapons?

Gerald Funke, Brigadier General, Head of Division Strategic Defence Planning and Concepts, Federal Ministry of Defence, Berlin

Jean-Christophe Noël, Associate Research Fellow, Security Studies Center, IFRI (Institut Français Des Relations Internationales), Paris

--- followed by plenary discussion ---

18:30 **DINNER**

19:30 **PLENARY FORECAST DISCUSSION | What Are the Consequences of Autonomous Weapons – Now and in the Future?**

LAWS are weapons of the future given that most of the applications are still in a state of development. Without a crystal ball it is difficult to make judgments. Nevertheless, in this evening talk, we would like to ask the what-if-question. While the previous discussion was aiming to explore the drivers behind LAWS and their future development, the purpose of this forecast panel is to assess future consequences that autonomous weapons might have. In the discussion, we would like to look into three different fields – strategic stability, the conduct of war, and peace ethics – in which LAWS are believed to have a considerable impact for the future. How would these fields be affected if LAWS become more available and relevant in the future?

CONSEQUENCES ON ...

... STRATEGIC STABILITY

Frank Sauer, Senior Researcher, Bundeswehr University Munich

... CONDUCT OF WAR & INTERNATIONAL HUMANITARIAN LAW

Henning Lahmann, Senior Researcher, Digital Society Institute (DSI), ESMT (European School of Management and Technology), Berlin

... ETHICS OF PEACE AND WAR

Peter Asaro, Associate Professor at the School of Media Studies at The New School, New York Co-Founder and Vice-Chair of the International Committee for Robot Arms Control (ICRAC), New York

--- followed by plenary discussion ---

21:00 **FINALE AND COME-TOGETHER**

DAY 2 TUESDAY 28 JANUARY 2020

8:30 **BREAKFAST**

9:30 **PLENARY DISCUSSION | What Happen So Far in Geneva – and Beyond? And What Might Happen in the Future?**

In 2016, the Fifth Review Conference of the Convention on Certain Conventional Weapons (CCW) established an open-ended Group of Governmental Experts (GGE) on emerging technologies in the area of LAWS. Since then, the GGE is meeting regularly in Geneva. But also outside the meeting halls in Geneva, governmental as well as non-governmental experts have discussed ways and means to regulate autonomous weapons. The purpose of this panel is to give an overview of these past and current debates. • What are the most prominent concepts and ideas that were proposed so far? • Are there emerging “avenues of consensus” and future “fields of cooperation” among the relevant players and stake parties? • What are the issues and topics that have caused major contradiction and diverging interests? • Who is proposing what? • What will happen in the future until the next CCW Review Conference in 2021? • Etc.?

With a Kick-Off Impuls by:

Mary Wareham, Coordinator, Campaign to Stop Killer Robots, Washington D.C.

InLjupčo Jivan Gjorgjinski, Ambassador, former Chairman of the Group of Governmental Experts on Lethal Autonomous Weapons Systems (LAWS) to the Convention on Certain Conventional Weapons (CCW) and Minister Counsellor, Chargé d’Affaires of North Macedonia, Geneva (preliminary confirmed)

Anja *Dahlmann*, International Security Research Division, German Institute for International and Security Affairs (SWP), Berlin

--- followed by plenary discussion ---

11:00 **Coffee & Tea Break**

11:15 **ANALOGY DISCUSSION | Exploring Analogies for the Regulation of Autonomous Weapons: What Lessons Can Be Drawn from Other Arms Control Regimes?**

The history of arms control is mixed. While some attempts to control weapons have succeeded in the past, others have failed or remained incomplete. In this panel discussion, we want to explore the chance for future arms control initiatives on autonomous weapons by drawing lessons from arms control regimes in other fields. This panel is, therefore, direct preparation of the following “idea workshop”. • What are the differences and similarities between other weapon systems and LAWS and what can we learn for future regulatory efforts on robot weapons? • What are the building blocks and core functions that are crucial to these regimes and are they relevant for the debate on LAWS? • What were the major drivers that led to the emerging of these arms control regimes and what does that mean for our debate on a future control regime on autonomous weapons? • In light of these analogies, is arms control at all an option for LAWS? • Etc.?

EXPLORING ANALOGIES WITH ...

... BIOLOGICAL WEAPONS & THE BIOLOGICAL WEAPONS CONVENTION (BWC)

Elisande Nexon, Senior Researcher, Fondation Pour La Recherche Stratégique (FRS), Paris

... CONVENTIONAL ARMS CONTROL

Wolfgang Richter, Senior Associate, Security Policy Research Division, German Institute for International and Security Affairs (SWP), Berlin

--- followed by plenary discussion ---

12:30 **LUNCH**

IDEA WORKSHOP: On A Search for The Core Functions of a Future Arms Control Regime for Autonomous Weapons

The debate on a future arms control regime for LAWS has recently circulated on regulative configurations and was narrowed down to a considerable degree on the controversial question of whether or not to ban autonomous weapons completely. The purpose of this idea workshop is instead to take a step back and focus primarily on the core functions that a future LAWS control regime must possess – regardless of what actual configurations such a future arrangement might have in the end. Regulations for transparency and information sharing or proliferation prevention are, for example, such core functions which are very common in the field of arms control and, therefore, are likely to be relevant for future regulative efforts on LAWS too.

PARTICIPATING EXPERTS AT THE IDEA WORKSHOP (in addition to the speakers already mentioned at the program)

Jürgen Altmann, Lecturer/Researcher, Department of Physics at Technische Universität Dortmund, Co-Founder of the German Research Association for Science, Disarmament and International Security (FONAS) and of International Committee for Robot Arms Control (ICRAC), Dortmund

Daniel Amoroso, Professor of International Law, Università di Cagliari

Kolja Brockmann, Researcher, SIPRI Dual Use and Arms Trade Control Programme, Stockholm International Peace Research Institute (SIPRI)

Reinhard Grünwald, Head, Assessment Project on Autonomous Weapons Systems, Office of Technology Assessment at the German Bundestag, Berlin

Anna Katharina Ferl, Peace Research Institute Frankfurt (PRIF/HSFK)

Ann-Sophie Fischer, Center for Security Studies (CSS), Zürich (invited)

Florian Keisinger, Airbus Defence and Space, Berlin

Bernhard Koch, Deputy Director, Institute for Theology and Peace (ithf), Hamburg

Wolfgang Koch, Director, Fraunhofer Institute for Communication, Information Processing and Ergonomics (FKIE)

Markus Hüpflinger, Head, Research Project of "Unmanned Mobile Systems" Armasuisse, Federal Department of Defence, Switzerland

Thea Riebe, Researcher, Technische Universität (TU) Darmstadt

Olaf Theiler, Head, Future Analysis Branch, Bundeswehr Planning Office, Berlin

Maaïke Verbruggen, Researcher, International Security, Institute for European Studies, Vrije Universiteit Brussel

14:00 INTRODUCTION | What Will Happen During the Idea Workshop? (Procedures, Timing, Method, etc.)

Thomas Müller-Färber, Program Director International Affairs, Protestant Academy Loccum

SPEED-DATING OF IDEAS (PLENARY-SESSION) | Visions on Core Regime Functions of A Future LAWS Control Regime

The objective of the first phase of the idea workshop is to present briefly key ideas and proposals about core functions that a future regulative regime on LAWS might have – namely the regulative principle, transparency regulations, outreach and openness, and proliferation prevention. • What ideas are currently debated in the field? • How relevant, effective, and inventive are these proposals? • What are ideas on the future regulation of LAWS one has thought of yet? • Etc.?

(1) REGULATING PRINCIPLE – How to Operationalize Human Control?

Initial impulse by: *Daniel Amoroso*, Professor of International Law, Università di Cagliari

Comment by: *Thea Riebe*, Researcher, Technische Universität (TU) Darmstadt

--- followed by discussion ---

14:30 **(2) TRANSPARENCY – How to Organize Information Sharing in Order to Build Confidence and Increase Transparency?**

Initial impulse by: *Jürgen Altmann*, Lecturer/Researcher, Department of Physics at Technische Universität Dortmund, Co-Founder of the German Research Association for Science, Disarmament and International Security (FONAS) and of International Committee for Robot Arms Control (ICRAC), Dortmund

Comment by: *Olaf Theiler*, Head, Future Analysis Branch, Bundeswehr Planning Office, Berlin

--- followed by discussion ---

15:00 COFFEE & CAKE

15:30 **(3) OUTREACH & OPENNESS – How to Involve Crucial Stake Parties (Civil Society, Science, Private Industry, etc.)? How to Assure that A Future Arms Control Effort is Regularly Adapted to the Scientific Process?**

Initial impulse by: *Maaïke Verbruggen*, Researcher, International Security, Institute for European Studies, Vrije Universiteit Brussel

Comment by: *Bernhard Koch*, Deputy Director, Institute for Theology and Peace (ithf), Hamburg

--- followed by discussion ---

16:00 **(4) PROLIFERATION PREVENTION – How Develop a Concept of AI-Related Export Control that is Preventing Misuse without Hampering Scientific, Technological, and Economic Progress?**

Initial impulse by: *Kolja Brockmann*, Researcher, SIPRI Dual Use and Arms Trade Control Programme, Stockholm International Peace Research Institute (SIPRI)

Comment by: *Florian Keisinger*, Airbus Defence and Space, Berlin

--- followed by discussion ---

17:00 Coffee & Tea Break

17:15 **SCENARIO WORKSHOP (Breakout-Session) | Testing the Proposals and Ideas on a Future Regulative Regime on LAWS**

The second part of idea workshop will focus on the crafting of a scenario. In this part we will put the ideas and proposals that were outlined in the previous speed-dating session to the test.

18:30 DINNER

19:30 Scenario Workshop continues

20:30 FINALE AND COME-TOGETHER

DAY 3
WEDNESDAY 29 JANUARY 2020

8:30 BREAKFAST

9:30 PLENARY DISCUSSION | Presentation of Workshop Results

--- followed by Q & A ---

11:00 Coffee & Tea Break

11:15 PLENARY DISCUSSION | Way Ahead: Key Take-Aways of the Conference and What Shall We Do With It?

With Kick-Off Impulses by:

Peter Beerwerth, Ambassador, German Foreign Office, Permanent Representative to the Conference on Disarmament, Geneva

Anja Dahlmann, International Security Research Division, German Institute for International and Security Affairs (SWP), Berlin

Mary Wareham, Coordinator, Campaign to Stop Killer Robots, Washington D.C.

--- followed by discussion ---

12:30 GOODBYE LUNCH

13:20 DEPARTURE | Shuttle Service to Wunstorf Train Station & Hannover Airport (HA)

FORMAT:

Conferences at the Protestant Academy Loccum provide forums for open-minded discussions on urgent and pressing issues. They endeavor to establish dialogues between actors from different fields and backgrounds with the intention to provide impetus to "think out of the box". The Protestant Academy Loccum hosts meetings over 48 hours/two nights for between 60 to 80 participants and is open to those with the expertise to share or an interest in the subject.

ARRIVAL/DEPARTURE:

Loccum is located 50 kilometers west of Hanover in Lower Saxony, Germany. The nearest airport is Hanover (HAJ). The nearest train stations are in Wunstorf, Stadthagen, Minden and Nienburg. Detailed travel directions will be sent to all registered participants.

SHUTTLE BUS:

(Please book a seat in advance!): Monday, 27 January, departing in Wunstorf train station at 12:30 (please follow the station exit marked "ZOB"). Wednesday, 29 January, arriving in Wunstorf at approx. 14:00 p.m. For those who arrive at Hannover Airport, we organize individual pick-up.

ACCOMMODATION & FEE

Participants who are not listed as speakers are welcomed to lodge at the conference venue (<http://www.tagungsstätte-loccum.de/>).

- For a two-night stay including all meals (breakfast, lunch, cake, dinner) we charge **205 Euro**.
- For students, we offer a reduced fee of **100 Euro**.

Conference fees are to be paid in cash at the check-in or transferred in advance to: Kirchliche Verwaltungsstelle, IBAN DE36 5206 0410 0000 0060 50, Evangelische Bank eG Kassel, SWIFT/BIC GENODEF1EK1. When choosing transferal, please include your name and the reference number **13197**.

REGISTRATION:

Please register with name, email, address, institution/organization by e-mail to Miriam Kamber (Miriam.Kamber@evlka.de). Registrations will be confirmed by email. Should you need to cancel, please contact us as soon as possible. **Cancellations after 12 January 2020 will cause compensation of 25 % of the fee.**