

The Confusion & Distraction of Full Autonomy

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Mr. Chairman, Ladies and Gentlemen:

I want to thank Ambassador Biontino for the opportunity to contribute to the important discussion on lethal autonomous weapons or LAWS.*

My remarks address how framing LAWS in terms of full autonomy both confuses and distracts from CCW's humanitarian focus.

Ultimately I suggest CCW States Parties refocus on the critical functions of selection and engagement of targets without further human intervention.

First, full autonomy confuses the discussion.

The start point for this confusion is the inherent challenge in discussing machine or system autonomy.

A constructive dialogue on LAWS requires a shared understanding of autonomy from and upon which the conversation can progress. In previous CCW weapons systems discussions, States parties generally knew what was meant by, for example, blinding lasers. So the fact that the definition of "blinding laser" may not have been finalized until the end did not preclude a constructive conversation.

* Special thanks to Nisha Baruah of the Permanent Representation of the Federal Republic of Germany to the Conference on Disarmament in Geneva and Elena Finckh of the United Nations Institute for Disarmament Research for their time and efforts in coordinating my participation.

Far different, and problematically, the CCW LAWS discussion thus far has lacked a consensus of even what it is that is being discussed. Not surprisingly, indeed inevitably, the results have been circular in nature.

Autonomy is not a discrete property. Autonomy reflects task allocation between human and machine across several spectrums. And depending on the system, functions are performed concurrently as well as sequentially and with varied allocations to human and machine.

As has been demonstrated over the last two years, trying to objectively define autonomy has proven illusive. The inability in precisely defining autonomy is certainly not for a lack of effort or good intentions, but because autonomy is descriptive or a characteristic of technology.

Similarly, because of the dynamic nature of functions within a system, attempting to quantify levels of autonomy oversimplifies and though superficially attractive is, in the end, unhelpful.

The implicit difficulty in discussing machine or system autonomy does not need further complication, yet adding full autonomy does just that.

To underscore this increased complexity and enhanced confusion, consider that there is no consensus on even threshold questions including:

- What does fully autonomous mean?
- Will we ever reach that point?
- And if so, when?

The result is a challenging foundation upon which to engage in a constructive dialogue.

Moreover, and turning to my second point, full autonomy distracts the LAWS discussion away from CCW's humanitarian focus.

Lets momentarily set aside that we don't know if or when full autonomy could be reached.

[SLIDE 2]

Consider a fully autonomous weapon system. Such a weapon system presumably performs all manner of functions as depicted by the ovals, and all without human intervention.

There is a delta or space between the functions of selecting and engaging targets, which is depicted in red, and full autonomy. That space is occupied by other functions, possibly including by way of example: self-navigation, self-diagnostic testing and even repairs, and self fueling or charging, which are depicted in blue.

To ground the LAWS dialogue in full autonomy requires articulating what is concerning about weapons systems beyond the capability to select and engage targets without further human intervention.

[Slide 3]

Consider two hypothetical weapon systems

Weapon system "A" is self-driving, self loads ammunition, self-repairing weapon system, but a human operator selects and engages targets.

Weapon system "B" is the inverse. Humans drive the system, they load the ammunition, and they repair it. But the weapon system selects and engages targets without further human intervention.

None of the functions System A performs without human intervention cause unnecessary or unjustifiable suffering to combatants or affect civilians indiscriminately. And those functions are not a "specific weapon". While there may well be concerns about such autonomous, non-weapons, functions, they are not most appropriately addressed within the CCW.

CCW provides a forum for States Parties to discuss

1) Certain Conventional Weapons

2) Which are deemed to be excessively injurious or indiscriminate

Framing the LAWS discussion in full autonomy terms introduces non-weapons functions that are outside CCW's purview. Full autonomy confuses an already complicated area and distracts from CCW's humanitarian focus, banning or restricting the use of *specific* types of weapons that cause unnecessary or unjustifiable suffering to combatants or indiscriminately affect civilians.

I encourage States Parties to consider what it is about a weapon system that is concerning beyond the capability to select and engage targets without further human intervention? And then ask whether those concerns are appropriately considered at CCW?

I renew my suggestion that the focus of any CCW LAWS discussions should be on weapons systems that perform the critical functions of selecting and engaging targets without further human intervention.

These critical functions do not provide the answer, but a more manageable framing of the question, and one that is within the scope of the CCW.

Thank you