Civil Society Responds to the AWS: Growing Activist Networks and Shifting Frames

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Abstract

This article tracks the emergence and growth of advocacy around autonomous weapon systems (AWS). By looking at the ways in which activists problematize autonomous weapons and at the growing members of the alliance to ban killer robots, the subtle shifts in issue framing and configuration of the network are outlined. It is argued that the advocacy against AWS emerged from an epistemic community and grew to include significant non-governmental organizations such as Human Rights Watch. It is further argued that autonomous weapons were initially conceptualized as 'killer robots' that threaten international security and the security of civilians during armed conflict. This framing later came to be supplemented by ideas that AWS may emerge as a new form of weapon of mass destruction that could be used to threaten citizens living in Western countries. The changes in the network that seeks to ban AWS and the shifting ways of problematizing them indicates that transnational activism is in flux. Discordant ways of approaching AWS may risk the formation of a broad-based coalition to ban AWS. This study complements studies that focus on norms of and government policies towards future warfare.

In an article written in 2007, Noel Sharkey, a well-known professor of robotics, argued that with the use of the 'first armed battlefield robots' in Iraq by the United States, humanity is entering a new phase (Sharkey, 2007). We are, it seems, at the beginning of a slippery slope where the introduction by the military-industrial complex of autonomous vehicles that can use lethal force will have unexpected consequences. The main concern according to Sharkey was that the robots were assuming the capacity to decide on the use of force despite the fact that there was no legal framework to regulate the conduct of these devices. This could also easily lead to a fundamental ethical problem where machines have 'the power of life and death . . . without reason or conscience'. Not everyone agreed with Sharkey. There were others who thought that autonomous weapons, if properly regulated and programmed with 'ethical autonomy', could be helpful in reducing civilian casualties and even improving civilian safety (see for instance Arkin, 2015; McKendrick, 2018, for a critique of these views see Bode, 2018; Garcia, 2015b and Roff, 2016). Sharkey and many others did not find these arguments compelling enough and their efforts later led to the formation of the 'Campaign to Stop Killer Robots' (CSKR) in the first decade of the new millennium. In this contribution, I seek to analyze the trajectory of advocacy to ban autonomous weapons systems (AWS).

The threats posed by AWS has generated significant amount of academic work. My contribution focuses on non-state actors and shows the ways in which they problematize AWS. This complements studies (e.g. Haas and Fischer, 2017) that focus on governmental policies towards AWS or those that focus on the impact of AWS on international norms (e.g. Bode and Huelss, 2018). The paper specifically deals with what Mathur (2011) calls 'humanitarian practices', namely the engagement of humanitarian actors with arms control and disarmament. As Docherty (2013) shows, modern disarmament efforts that started in the 1970s have shifted from being primarily focused on international security to humanitarian disarmament where the main concern is protecting civilians from the scourge of war. The success of advocacy against landmines was deepened with the ban on cluster munitions (Borrie, 2009) and a new model of humanitarian legislation that concerned civilians and remedial action for victims emerged. This new model sought outright bans of specific types of weapons rather than just limiting them. In this vein, the CSKR seeks a preemptive ban on the AWS.

Below, I argue that there have been two significant changes in the practices around AWS. 'Killer robots' were originally seen as a problem of international security and of the safety of civilians during armed conflict and the network relied mostly on an epistemic community. Later 'killer robots' were constituted as a technology that could endanger the safety of civilians in situations beyond international armed conflict. Early advocacy often used the epitome of a robot mistaking a small child for a soldier. Recently however, we see an emphasis on scenarios where swarms of mini-drones kill people on purpose: a shift from erroneous decision-making to evil intent. At the same time, the advocacy network shifted to include celebrities such as Elon Musk and the late Stephen Hawking.

An evolving transnational network

The CSKR is currently at the center of the transnational network seeking to ban AWS. Early proponents of the ban were often scientists and engineers. The campaign traces its

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pedigree back to the above mentioned article by roboticist Noel Sharkey which was published in 2007 in *The Guardian* (Sharkey, 2007). In 2009, physicist Jürgen Altmann, bioethicist Robert Sparrow, and philosopher Peter Asaro joined Sharkey to found the International Committee for Robot Arms Control (ICRAC) (Fleming, 2009). In its mission statement, ICRAC stated that military technology was developing very rapidly, and the political and legal structures of regulation were lagging behind. ICRAC called 'upon the international community to urgently commence a discussion about an arms control regime to reduce the threat posed by these systems' (ICRAC, 2012a). The Committee later organized an expert workshop in Berlin in October 2010, and a similar statement was published. With this statement, the ICRAC coalition sought to expand, while essentially preserving the professional composition of the founders.

Two years after the Berlin Workshop, concerned NGOs met in New York and formed the Campaign (CSKR, 2018a). This was a turning point for the emergence of the AWS issue. Initiated by a small group, the AWS problem was being adopted by significant players like Human Rights Watch (HRW) (Carpenter, 2014). This was followed by the publication of the flagship *Losing Humanity* report (Human Rights Watch, 2012). The report still reflected the original alliance of experts working on different aspects of robotics. Support from Noel Sharkey was acknowledged at the end of the report, while the text itself conceded that those who were discussing the topic of autonomous weapons were 'military personnel, scientists, ethicists, philosophers, and lawyers' (Human Rights Watch, 2012, p. 1). The Campaign itself was launched in London in April 2013 (CSKR, 2013). The steering committee included ICRAC, HRW, PAX, and several other NGOs. In the campaign videos, argumentation was made on the basis of expertise in robotics and international security (CSKR, no date a).

First signs of changes in the network appeared in May 2014. In this month, Nobel peace laureates published a call for 'preemptive ban on "killer robots"'(Nobel Women's Initiative, 2014). The fact that the signatories included personalities such as former President Lech Walesa and Archbishop Desmond Tutu indicated a tendency towards involving public figures. This was the first time that such persons were supporting the call to ban AWS. A further attempt to popularize the campaign came in November 2014. On the initiative of PAX, a 'interreligious declaration calling on states to work towards a global ban on fully autonomous weapons'(PAX, 2014b) was released. This call again included well-known religious figures such as Desmond Tutu and Patriarch Fouad Twal. The Tibetan spiritual leader (Dalai Lama) also later joined the chorus calling for a ban on killer robots (CSKR, no date b).

The inclusion of high profile figures in the Campaign did not mean that the emphasis on robotics and international law was put on the back burner. Efforts along these lines continued but there was also a concern to reach wider publics through celebrities and also through popular websites such as Buzzfeed (Topol, 2016). A significant milestone that deepened the Campaign's emphasis on communities beyond the professions of science, ethics and law was the open letter organized by the Future of Life Institute (FLI), a 'volunteer-run' think tank focusing on artificial intelligence. While the FLI is not a formal member of the Campaign, there is an exchange between the two. For instance, the Campaign supported another open letter issued as the outcome of a conference organized by the FLI in Puerto Rico on the 'Future of Artificial Intelligence' in January 2015 (CSKR, 2015). The open letter indicated that research into artificial intelligence (AI) should make sure that 'increasingly capable AI systems are robust and beneficial' (Future of Life Institute, 2015). Another indicator of the close relationship between the FLI and the Campaign was that Heather Roff, who is a member of the ICRAC, was invited to the Puerto Rico conference organized to talk on AWS (CSKR, 2015). Moreover, some of the ICRAC scholars were funded by the FLI.[1]

Framing the problem: from international security to terrorism?

While the nodes of the network shifted in time to include celebrities, there was also a parallel shift in the way the AWS issue was framed. The original call to action penned by roboticist Noel Sharkey in 2007 reflects the initial position of the network. According to Sharkey, the main problem with the possibility of deployment of autonomous robots was the lack of 'ethical codes or guidelines in place'(Sharkey, 2007). This created a legal loophole where long standing emphasis on responsibility in the law of warfare was being undermined by technological developments. Sharkey used the figures of 'little girl [with an] ice cream' or 'buses carrying . . . schoolchildren' to underline the difficulty of distinguishing between targets for robots. His main concern and point of reference was not the use of autonomous weapons in civilian contexts but the difficulty of regulating unmanned warfare. In this early article, Sharkey did not call for a ban of AWS but seemed to demand regulation of these weapons. While international security was the main frame, at this stage, ICRAC was still facing a 'frame soup' as it did not focus on a single message in the hopes of attracting support from different actors in the human security community (Carpenter, 2014, p. 104).

The ICRAC mission statement was concerned with international security, understood mainly as inter-state security, as can be seen from the reference to an 'arms control regime'(ICRAC, 2012b). In the 2010 Berlin statement by the Committee, there was an acknowledgment that non-state actors could use AWS and thus 'reduce the security of citizens'(ICRAC, 2012b). Similarly, HRW noted the risk that AWS could be used by repressive regimes for 'violent suppression of peaceful protests' (Human Rights Watch, 2014, p. 7). However, domestic or transnational use of AWS was not the main point emphasized by the Campaign. The Campaign website focused on international security and the relations between powers with high technology capabilities. If one of these powers (US, China, Israel, S. Korea, Russia and UK) deployed autonomous weapons, 'others would be

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compelled to abandon (. . .) restraint.' Likewise, PAX, another member of the Campaign, emphasized international security and international humanitarian law by focusing on government use of AWS (PAX, 2014a).

With the formation of the CSKR, the frame shifted towards humanitarian disarmament. In *Losing Humanity*, the flagship report of the Campaign published by HRW in 2012, AWS were problematized again from a perspective of international security. AWS were considered as a problem for the 'battlefield'(Human Rights Watch, 2012). The main concern was 'the impact fully autonomous weapons would have on the protection of civilians during times of war'(Human Rights Watch, 2012, p. 1). The report makes frequent references to international humanitarian law (IHL). While IHL covers internal armed conflict as well, the report mainly frames the problem as an international issue. This is clear from the fact that the report highlights responsibilities of states in complying with the IHL. A representative section the report reads: 'states should consider prohibitions under existing weapons treaties (. . .). States must then evaluate whether a weapon runs counter to other treaties or customary law'(Human Rights Watch, 2012, p. 22). Similarly, another HRW report published in 2015 maintained this focus on state responsibilities and agency while acknowledging the potential risks of acquisition by non-state actors (Human Rights Watch, 2015, p. 11).

Since 2016, the concern about killer robots seems to focus more and more on the acquisition of such weapons by non-state actors and the framing of the problem starts to shift from international security and compliance with IHL towards terrorism broadly understood. One of the first signs of this is found in an UN informal meeting in April 2016. This meeting was mandated by the contracting parties to the Convention on Conventional Weapons (CCW) in 2015 (UN, 2016). An unnamed expert in the informal meeting argued that 'terrorists are in fact actively seeking [autonomous weapon] systems'(UN, 2016, p. 12). This statement was reported by many mainstream media outlets such as *The Sun* (Hamill, 2016) and the *Daily Mail* (Beall, 2016) with attention-grabbing catch lines.

A significant sign of this shift towards a concern about transnational security is the fictional movie *Slaughterbots*, prepared by AI expert Professor Stuart Russell and funded by the FLI (Stop Autonomous Weapons, 2017). The movie was released in November 2017 and quickly gained wide circulation on the web. The movie was also shown in a CCW side event hosted by the Campaign, indicating the relations between the FLI and the Campaign. The movie depicts the presentation of a tiny drone armed with face recognition and explosives that is able to eliminate targets. The high point of the movie is the deployment of hundreds of drones by shady individuals to kill 3,000 university students across 12 campuses in the UK. Apparently, the students are targeted because they 'liked' or shared a movie about human rights violations on social media. Previous considerations around IHL or the ability to distinguish between combatants and civilians were not visible. The autonomous weapons were problematized not because they constituted a threat to international security and civilians in war but because they posed a significant problem to the security of citizens. Now the killer robots were (possibly) being used as tools of terrorism against civil society. As Professor Russell stated at the end of the movie, 'allowing machines to choose to kill humans will be devastating to our security and freedom'. The video was ambiguous enough to be read also as highlighting the threat of an imminent police state armed with autonomous robots. A recent *Scientific American* editorial article also advanced a similar position when it said that robots could be a 'novel threat wielded by smaller nations or terrorists' (Editors, 2019).

Since 2016, attempts to popularize the message of the Campaign through online channels became more visible. In August 2016, *Buzzfeed* published a long article starting off with an interview with HRW campaign coordinator Mary Wareham (Topol, 2016). The article replicated a significant amount of information from the *Losing Humanity* report of 2012. There was strong emphasis on the lethargy of multilateral institutions and the author stressed the need to be aware and be concerned: 'killer robots will shortly be arriving at your front door for free courtesy of Russia, China, or the US, all of which are racing to develop them'(Topol, 2016). Interestingly, the essay also noted how lack of victims affected activism. The Campaign was looking for a preemptive ban and without the ability to appeal to the emotions of the public, it was difficult to engage in activities beyond lobbying the political elite and the research and technology community. The circulation of the *Slaughterbots* movie should also be contextualized in this need to mobilize public opinion.

Conclusions

The transnational network around killer robots is still in formation. While discussions around meaningful human control of AWS has advanced, the framing strategy has not yet crystallized. The campaign led by HRW continues to emphasize the international security, humanitarian and human rights aspects of AWS, while it also mentions risks emanating from non-state actors and repressive regimes. Despite significant advances since 2012, many middle powers (except for Austria and Brazil), who are seen as significant for the success of humanitarian security regimes (Garcia, 2015a; Rutherford, 2010), are still not supporting a ban (CSKR, 2018b). This is seen as a significant obstacle as previous humanitarian disarmament campaigns gained traction when middle-sized Western countries poured their support in. Emphasizing the risks of violent attacks on Western civil societies alludes to notions of 'real' weapons of mass destruction, where swarms of drones are used to kill civilians in a relatively short time. This way of framing AWS has led to a greater public awareness and created salience. However, since this representation is not in line with the dominant framing of the CSKR, it risks creating confusion. Moreover, the focus on AWS as a threat to Western civil societies may run the risk of alienating the potential members of an international coalition to ban AWS.

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The above discussion may prompt questions about the extent to which actors seeking to ban killer robots can still be conceptualized as a network in the classical sense of transnational advocacy networks (Keck and Sikkink, 1998). Noting the fact that Goose and Wareham (2016) refer to the campaign as an 'international movement', the transnational alliance can still be considered as a network where multiple framings of the AWS are emerging. There are shared values, a significant degree of interaction among the nodes, and broad overlaps in discourse. There is hardly any indicator that differences have led to a 'frame dispute' (Keck and Sikkink, 1998, p. 10). However, developments in this domain should be closely watched as studies on the Arms Trade Treaty show that effective transnational campaigns in part rely on the 'information flow' within the network (Whall and Pytlak, 2014, p. 461), which makes it possible to put across a unified message.

Note

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1. I thank the anonymous reviewer 2 for this information.

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