

UNIVERSITY OF
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The UK and the Use of the Reaper Drone: 10 years on

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Introduction

On 18 October 2017, the Institute for Conflict, Cooperation and Security (ICCS) hosted a one-day event at the University of Birmingham to mark 10 years of Reaper use in the British military. The event was organised by the ICCS¹ in partnership with Drone Wars UK² and Remote Control³.

The event was designed to serve as a forum to bring together contributions from a broad range of perspectives, including speakers and participants specialising in the ethical, legal and military aspects of military drones. It was held under the Chatham House Rule.

The day was split into four parts, starting with an opening section of presentations followed by three panels. Each section had a chair and 2-4 speakers. At the end of each section there was an opportunity for questions from the participants.

The opening presentations outlined some of the controversies and legal implications of Reapers and drone technology in general. The first panel centred on the public and political impact of military drone use in the UK. The second panel dealt with the legal and ethical considerations, and the third panel looked ahead to the probable impact of technological developments on government policy over the next ten years.

Opening presentations

The participants were given a brief history of the Reaper, charting its development from the original design of the model that became the genesis of the aircraft, through to the first Predator strike by the US in 2002. The presentation then outlined the further development of the Reaper, its introduction by the UK in October 2007, and its operational tasks over the following ten years.

Several points were made about the controversies surrounding the Reaper. Confusing terminology and negative media attention in the UK have built an image of Reapers as killer drones operated like video games. It was stressed that Reapers are primarily used for intelligence, surveillance and reconnaissance (ISR) purposes, which renders its 'killer' image not entirely fair or correct. According to the speaker, the military has been reluctant to use the terms 'drone' and 'unmanned aerial vehicle', preferring the term 'remotely piloted aircraft'. This is deemed to be more accurate as the Reaper is indeed piloted, albeit remotely. It is categorically not 'unmanned'.

Moreover, considering the much-repeated claim of a 'PlayStation mentality' among drone operators, it was noted that there was a high degree of care taken at the RAF Waddington

¹ The ICCS is a research centre at the University of Birmingham which adopts a multi-disciplinary approach to global security challenges: www.birmingham.ac.uk/iccs

² Drone Wars UK is a small NGO that undertakes research, education and campaigning on the use of drones and the wider issue of remote warfare: <https://dronewars.net/>

³ Remote Control is a project of the Network for Social Change hosted by Oxford Research Group. It consists of a small research and policy team analysing changes in military engagement with a focus on remote warfare: <http://remotecontrolproject.org/>

base, which operates the UK Reaper fleet. The RAF was praised for being a well supervised tool of government that takes all possible steps to avoid harm to civilians. Ultimately, it was stressed that it is necessary to demystify government drone activities, defend drone operators' integrity, and produce positive PR that counters the negative image.

It was made clear that current drone technology does not require any changes to be made to existing UK law. A participant raised the question as to whether drones have facilitated more frequent use of force. This was not directly refuted, and it was granted that politicians might have more adventurous legal interpretations and other priorities. It was noted that the question of whether a targeted drone strike is likely to reduce the potential of terrorist attacks is a political rather than a military judgement.

It was remarked by a participant how law lags behind technology, effectively rendering the discussion ethical rather than legal. As such, when the current perception is that drones are not used ethically it might reflect a larger issue. The difficulty in making conflict and warfare ethical was agreed upon, but it was noted how suspicion of government will always exist. Moreover, in response to a question on the necessity of measuring more long-term effects currently not considered, it was granted that as acceptability for unsatisfactory attacks decreases, a greater degree of care than that exercised in the past may be called for, even though current care is within what is considered legal and ethical.

There was also a point made on the US-UK lock-step, in which the US sets norms and precedents that the UK follows, such as in how to interpret the concept of imminence. There are indeed significant similarities in legal interpretations in the US and the UK. However, although the UK might have enjoyed added influence with the help of the US, it was also remarked that the UK has had a role to play in persuading the US to act less aggressively.

Several future developments were also discussed, most notably on automation and autonomy in drone attacks. Reapers today continue to have a 'man *in* the loop'. In the future, however, systems may be capable of making their own decisions and evaluations, with human operators merely being present and only intervening if necessary. This means systems with a 'man *on* the loop' instead. In this context, it is important to question whether the human operator is able to intervene effectively. Developing this further, the idea of drone swarms was also discussed, which raised issues of programming, supervision, and airspace control.

The notion of true autonomy, in the sense of a weapon that loiters, searches an area, identifies a target, decides to attack and engages, was agreed to remain far-fetched. Nevertheless, it remains important to discuss potential legal issues, particularly concerning whether targeting law can be delivered using autonomous technology, and the associated question about responsibility.

It was suggested that a ban on autonomy and certain 'man on the loop'-systems would be to deny drone operators an improved decision-making capability. Several questions were raised about responsibility for autonomous decisions and whether there can be an adequate system in law to deal with a situation where an autonomous decision results in the killing of civilians. However, the speakers pointed out how human errors occur and can lead to devastating

results, and that autonomy can in many cases represent an improvement on decision-making capacity. There was agreement on the need to focus on ideas of meaningful human control and weapons review, in addition to establishing guidelines and recommendations that may not be legally binding but still useful as a way forward.

It is also important to recognise the cyber vulnerability of drones and the possibility of enemy interference in any kind of drone technology. Moreover, it was stressed that it remains essential to consider ethical issues and the prospect of such technology falling into the wrong hands.

The Protector drone is the next stage of evolution from the Reaper. The Protector could potentially be used in a reinforced commitment to NATO, but new horizons should also be considered. This could include archaeological surveys and disaster relief, but could also encompass more imaginative ideas, such as neuroscience developments, mind-controlled machinery, machine-informed or machine-controlled mind, and brain-to-brain communication. In imagining how technology can or will develop, and in witnessing this development, it is important to raise questions when these advancements no longer fall within the boundaries of the acceptable, to assess whether this is reflected in current law, and if not, how the law can be developed appropriately.

In conclusion, the opening presentations clearly expressed that the Reaper represents the evolution of drone technology and military capabilities, and that it is here to stay.

Panel 1: Public and Political Impact of Drones

The topic of the second panel was on the public and political impact of drones. In particular, the lack of clarity and transparency around UK drone practices was a consistent theme.

The PR difficulties of UK military drone use was one of the first topics to be addressed. It was noted how clumsy and contradictory legal justifications for the UK drone strike on 21 August 2015 (which killed British citizen Reyaad Kahn) suggested that there were policy confusions. Indeed, the Attorney General took more than a full year to finally clarify some of the legal questions of the strike on Kahn. Moreover, the Ministry of Defence's unwillingness to talk about UK drones and the lack of information provided to the respective reports of the Joint Committee on Human Rights and the Intelligence and Security Committee indicate a lack of transparency about British drone activities. These combined factors have inadvertently led to the perception that there was something to hide. Given the US impact on UK practices, the CIA drone targeting operations in Pakistan has led to unhelpful comparisons.

It was noted how drones have become strong symbols that generate both positive and negative reactions. In terms of their positive uses, it was highlighted how UK Reapers play a supportive and protective role for Special Forces and other troops on the ground. This is part of the reason for government discretion about British drone activities. However, it was remarked that comments like 'we don't talk about these things' and 'it's off-limit' do not fit with the public expectation of transparency, accountability and responsibility of government. Nevertheless, it is important to note that many Special Forces operations are never publically

disclosed, although releasing sensitive information of such operations to responsible committees is still expected.

A participant suggested that politicians are avoiding engagement with the drone debate in public partly because of their fear that drones might be removed as a military option altogether, especially in circumstances where the public would call for the use of force by drones, for instance in revenge to a large-scale attack in the UK or against a UK target. However, another participant pointed out that it would be the government's responsibility to refrain from using drones (or any kind of force) in revenge. Moreover, it was also noted that the fear of not having drones might rather derive from the protective task they perform.

There was no consensus on the power of UK influence. While arguing that UK practices are not irrelevant, one speaker conceded that UK practices are no longer considered as important. On the other hand, another speaker stressed that UK influence does matter as it contributes to setting precedents, and potentially dangerous ones. Other states can legitimise their operations by applying existing practices. It is important to be aware that what the UK does might prepare the way for opponents to do the same.

It was also pointed out that there is always an available justification, perhaps even a democratically justifiable one. However, the issue of the British use of drones is that instead of a debate and a public reaction or call for action, there is a presupposition of public will. In this context the US is better equipped than the UK with public standards and guidelines for its drone practices, which at the very least makes debate possible.

The panel concluded with some reflections around how circumstances have changed. Governments will no longer be able to refuse access to information in the era of enhanced media reporting and instant exchanges of information, as people will not passively await proper justifications. That is not the world we live in anymore.

Panel 2: Legal and Ethical Considerations of the Use of Drones

The second panel focused on the legal and ethical considerations of the use of drones. The main topics of discussion were war lawyers, drone operators, and the role of drones as drivers for change in international law.

The first theme to be discussed was war lawyers. That is, military lawyers who have become a vital part of post-9/11 US and Israeli targeting operations in Iraq, Afghanistan, and Palestine. An interesting point was made on the introduction and continuing presence of war lawyers in the operational sphere, namely that they function as 'force multipliers' and law enablers that are there to help get the job done, not to hinder it. Military legal advice is used to reinforce the sense of justifiability in the midst of the psychological challenges of modern warfare. They might even assume a chaplaincy-like role in supporting drone operators people who are searching more for absolution than legal advice. These ideas were largely confirmed by a speaker who claimed that the presence of military chaplains is only accepted because of their psychological support function.

The ethics and ethos of RAF Reaper drone operators formed the second topic of debate in this panel, in which the complex nature of their work was made clear. After the legal questions there are still ethical issues to consider. One of the key issues highlighted was the difficulty faced by drone operators in combining work and family life, especially in situations where they go home to their families after a shift in which they may have killed someone. A disagreement on the language used in this context was noted. Whereas one participant argued that the job of RAF drone operators is not to kill but to protect and defend the UK, others advocated for using less euphemistic language in order to build trust and develop a more honest discussion.

The final broad topic that the panel addressed focused on the role of drones in changing the doctrine of self-defence and broader international law. A point was made of the importance of the integration of law into operational planning and execution routines, in order to look at how laws are operationalized and become muddled.

It is important to be aware of the lack of clarity and agreement on the doctrine of self-defence, particularly on pre-emptive or anticipatory self-defence. Conventionally, pre-emptive self-defence has only been accepted in cases where the acting state faces an imminent threat involving time pressure, in accordance with the Caroline test⁴. However, in January 2017, the UK Attorney General set out a more flexible British interpretation of the concept of imminence that no longer requires time pressure. It was remarked that, although the Attorney General's speech marked the first time that this interpretation of imminence was clearly set out, it did not differ much from the UK's position in 2004. Nevertheless, this is an important issue because, in removing the imminence criteria, the only criteria left is that of necessity. This will, in turn, create a circular reasoning for the use of force, as any justification will contain an element of necessity. Moreover, in removing the temporal aspect of the concept of imminence, low-level targets that do not pose time-pressing threats - such as ISIS couriers and bloggers - will face a greater risk of being targeted than before.

It was debated whether it should be acknowledged that international law develops through violations. In this context, it was pointed out that drones violating sovereignty could become a lesser category of transgression, as the diplomatic consequences are not the same as when there is a pilot to retrieve if the aircraft is shot down. One of the speakers asserted that this would be an aggressive interpretation of international law. Additionally, it was noted that the idea that international law bends to the will of powerful states requires caution, as there are ways to address particular issues other than insisting on changes to international law.

In terms of civilian harm caused by drone strikes, it was made clear that it is necessary to assess whether civilian harm is excessive in proportion to anticipated military achievement,

⁴ The Caroline Incident of 1837 is basis for the Caroline test, which is part of customary international law on pre-emptive self-defense. The incident occurred during the Canadian anti-British rebellion. The American ship Caroline, which was suspected of assisting Canadian rebels, was boarded, set on fire and sent over the Niagara Falls by the UK. The ensuing diplomatic correspondence between the UK and the US set out the criteria for permissible pre-emptive self-defence. See, for instance, A. C. Arend, 2003. International Law and the Preemptive Use of Military Force. *The Washington Quarterly*, 26(2), pp.90/91.

but that perhaps more attention should be paid to long-term effects (including mental) in weighing up the balance of proportionality.

Another issue that needed clarification was the question about complicity and whether governments are responsible for other governments' unlawful actions. In cases where a state is providing aid and assistance to others who are performing internationally wrongful acts and where the assisting state has knowledge thereof, it was made clear that the assisting state is indeed complicit.

Several questions were raised about the lack of clearly demarked boundaries of contemporary battlefields, as well as the UK statement⁵ about being informed by International Humanitarian Law even when using force outside an area of armed conflict. To this end, the conflict in which the UK is involved was said to be of such a global nature that the whole world has become a battlespace. However, the absence of clarity in terms of legal regimes and their applicability was noted to be a significant issue.

Panel 3: Technology and Policy: The next 10 years

The third and final panel concerned the near and far future of drone technology and policy. Several issues that need to be discussed and resolved in the near future were highlighted. Moreover, hopes and concerns were shared and discussed by speakers and participants.

The first remark made on the future of drone technology concerned proliferation. Until recently, only the US, the UK, and Israel were in the possession of military drone technology, but this has changed significantly with horizontal proliferation. Many have acquired technology from China, while others - Iran for instance - have developed such technology on their own. There is a distinct lack of interest among civil society on the relaxed drone export control mechanisms that have developed. At the same time, vertical proliferation is also expanding as drones are developed with more stealth and with greater capabilities. Consequently, further discussion and articulated decisions on the proliferation of drones are necessary.

Secondly, drone technology was described as a gateway technology to develop autonomous systems. Despite what states are saying in international fora, the industry is pushing ahead with autonomous systems. This is demonstrated by automatic and autonomous mode development in the Taranis drone. The industry has realised that it will be difficult for states to continue their resistance to autonomous drones, and that eventual deployment of these systems is likely to be inevitable. Therefore, it is important to have policy discussions with civil society and decisions made about autonomous drones now.

⁵ Joint Committee on Human Rights, 2016. *The Government's policy on the use of drones for targeted killing*. (HL Paper 141/HC 574, Second Report of the Session 2015-16) – Report, together with formal minutes relating to the report. London: House of Lords and House of Commons. p.42. Available at: <https://publications.parliament.uk/pa/jt201516/jtselect/jtrights/574/574.pdf>

Moreover, it is necessary to consider the possibility of military drones being deployed domestically in European airspace. High altitude drones can be used for ISR purposes domestically, not only by the military, but also other departments. There are a number of countries already – or on the verge of – using drones in this way.

It is also important to consider and discuss the future of the UK Reaper when ISIS is (soon to be) declared defeated. There will continue to be pockets of resistance and terrorist attacks, but once armed violence with ISIS ceases, it is uncertain what will happen to British Reaper deployment in the Middle East (although it has not been revealed how many of the 10 British Reapers are currently in use in this region). It would perhaps be sensible and pragmatic to (continue to) deploy them overseas rather than putting them in storage. However, it would be concerning if the UK continues with its lack of transparency on where and how it deploys its drones.

Drones were again described as the icon of changes in the wider legal debate of international law, particularly considering how they allow for a more permissive use and a blurring of law enforcement and warfare. Drones have already set a new precedent in their use outside of recognised battlespaces, which will be replicated by others, including enemy actors.

A further aspect of drone technology and future possibilities was also discussed, namely the use of small commercial drones. The number of small drones outnumbers the total number of military aircraft ever produced. This will be an omnipresent feature of the future. This type of drone technology will force us to rethink concepts of vulnerability, particularly that of crowded places, barriers, and borders. Small drones can fly over barriers and other defence systems in order to carry out attacks in crowded or high security places. They are already used to deliver drugs or weapons to prisons. Small drones can carry Improvised Explosive Devices (IEDs) or launch attacks in swarms. Small drones also encompass the perfect murder weapon that can be operated from a distance and subsequently retrieved and destroyed without trace. The cyber threat of small drones must also be considered, in the sense that they can be used for eavesdropping. Commercial drones can easily be bought online or in local shops. This will be a significant challenge for law enforcement, as the technology is considerably ahead of the law in terms of legislation and registration. Despite difficulties of implementing and controlling such mechanisms, small steps should be put in place rather than waiting for events to happen.

The third panel also reflected upon the technological shaping of human rationale, as facilitated by drones. There is a worry that the capabilities of machines may become the deciding factors over life and death. The impact of drone technology might not be evident, but the example of iPhones was used to illustrate the point that technology makes us do, think and become addicted to things we did not consider a vital part of our lives before. Thus, it could be the case that drone technology produces new ways of seeing things that make us act differently, which can have a significant impact on killing practices as well. Consequently, in discussing drone technology, it is important not to focus on the technology in isolation, but to consider the interplay between hardware, processes, and outcomes.

In terms of long-term future developments, examples such as the wiring of our own neurology into technology, decision-making through algorithms, and cognitive learning of Artificial Intelligence (AI) were named. However, emphasis was also made on the necessity of thinking about the dangers of what we do with technology. Production of knowledge through algorithm is already used. Despite knowing that such algorithms are flawed, an automation-bias is already making it difficult for humans to question or challenge technological authority. Consequently, the development and integration of such technology into life and death decision-making could render meaningful human control more difficult. This does not entail a romanticised view of human judgement, but it is an issue that everything can be perceived as an engineering problem with technological solutions instead of real consideration about the problem of killing.

The grounding of drones was described as perhaps a simplistic hope for the future, but the fact that in the 140 months since the first British Reaper strike in May 2008, no months have passed without further drone operations, proving that there are basic ethical questions to consider in the continuation of British military drone use.

Participants also expressed a hope of seeing a study on how drones have contributed strategically to the reduction of war or violence. There have undoubtedly been tremendously positive uses of drone technology, but it is less certain how effective drone technology has been in bringing about a more peaceful world. This is an important consideration because all of us, as participants in liberal democracies, civil society, and humanity as a whole, have an interest in bringing about peace and security for all.

Drone technology enables us to talk about particular issues, such as how technology changes human behaviour and lowers the threshold on the use of force. Consequently, it becomes imperative to facilitate such discussion and debate.

Conclusion

The event marked 10 years of the Reaper in the British military. It successfully brought together a variety of researchers and practitioners working on military drones, and facilitated important discussions on the UK's current and future use of Reapers and other drone technology in general.

The topics of discussions concerned several controversies and implications involving drone technology. A recurring topic was the lack of transparency on UK drone activities and policies, in addition to the lack of clarity on the legal justifications and regimes governing UK drone practices. The consequent lack of public debate was a highlighted issue.

Drones were also discussed as drivers for change in international law, particularly considering the doctrine of self-defence. Again, the debate emphasised the lack of clarity on the legal regimes applied as a key issue to be addressed. Several ethical questions were also discussed, perhaps most notably that of technology development.

Potential future developments and accompanying ethical and legal issues were raised throughout the day. Current drone technology was named a gateway technology to

autonomous systems. Autonomy could allow for better decision-making processes, but such technology applied to decisions of life and death could also risk setting a dangerous precedent and create issues of responsibility in the event of a disproportionate or mistaken strike.

Disclaimer

The views represented in this report were made by the individual participants and do not necessarily reflect consensus amongst workshop participants or the institutional views of the University of Birmingham or the Institute for Conflict, Cooperation and Security.