HITTING THE TARGET?

How New Capabilities are Shaping International Intervention

Edited by Michael Aaronson and Adrian Johnson

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Cover image: US Air Force personnel operate the sensor suite of a MQ-1 Reaper UAV at Holloman Air Force Base, New Mexico, 18 January 2012. Photo courtesy of Department of Defense/DeAndre Curtiss.

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Acronyms and Abbreviations

ALADIN	Abbildende Luftgestützte Aufklärungsdrohne im Nächstbereich [Airborne Reconnaissance Drone for Close Area Imaging]
AP	Additional Protocol (Geneva Conventions)
AQAP	Al-Qa'ida in the Arabian Peninsula
AQIM	Al-Qa'ida in the Islamic Maghreb
BDA	Battle-damage assessment
C4ISTAR	Command, control, communication, computers, intelligence, surveillance, target acquisition and reconnaissance
CIA	Central Intelligence Agency
COIN	Counter-insurgency
CSDP	Common Security and Defence Policy
CT	Counter-terrorism
EADS	European Aeronautic Defence and Space Company
EDA	European Defence Agency
ESS	European Security Strategy
EU	European Union
EUOHQ	European Union Operational Headquarters
HALE	High altitude, long endurance
IAI	Israeli Aerospace Industries
ICRC	International Committee of the Red Cross
IHL	International Humanitarian Law
ISTAR	Intelligence, surveillance, target acquisition and reconnaissance
MALE	Medium altitude, long endurance
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organisation
NGO	Non-governmental organisation
OHCR	Office of the High Commissioner for Refugees
RMA	Revolution in military affairs
SHAPE	Supreme Headquarters Allied Powers Europe
TAI	Turkish Aerospace Industries
UAV	Unmanned aerial vehicle
UCAV	Unmanned combat air vehicle
UK	United Kingdom
UN	United Nations
US	United States of America

Editor's Note

Many terms exist to describe pilotless aircraft. For the sake of readability, this report uses unmanned aerial vehicle (UAV) and 'drone' interchangeably. The term 'drone' is not used in any pejorative sense.

Preface

THE ORIGINS of this *Whitehall Report* lie in a multidisciplinary workshop held in July 2012, organised by cii – the Centre for International Intervention at the University of Surrey – and funded by the Institute of Advanced Studies at the university. A report of the workshop is available at <www.ias.surrey.ac.uk/workshops/intervention/report.php>.

The workshop explored the links between technology, society and behaviour and asked whether, and if so how, new precision-strike capabilities are reshaping approaches to international intervention in situations of crisis and conflict in third countries. Participants came from a range of backgrounds, including philosophy, sociology, international relations, security studies, international law, psychology, engineering, technology and the creative arts.

One of the aims was to identify issues of policy relevance that could be shared with a wider audience in Whitehall and beyond; this report, produced collaboratively by RUSI and cii, is the result. Most, but not all, of the chapters are based on papers presented at the workshop.

The editors would like to thank all the authors for their contributions and Mirela Dumic for her administrative support.

We would also like to pay great thanks to Ashlee Godwin, Emma De Angelis, Cathy Haenlein, Scott Edwards and Terence Ihm in the RUSI Publications department for their extensive efforts in helping produce the final report. We would also like to thank the anonymous reviewers who provided thoughtful comments on the draft chapters.

Professor Sir Michael Aaronson
Adrian Johnson
March 2013

Introduction

Michael Aaronson and Adrian Johnson

THE ISSUE of 'drones' – as unmanned aerial vehicles are referred to in public discussion – has acquired an astonishingly high profile in the media in the UK and elsewhere, and is of increasing interest in academic as well as policy circles. 'Drones' are of course only one manifestation of the enormous technological superiority enjoyed by the US that has played a major part in shaping its foreign-policy interventions over the last sixty years. Aerial bombing campaigns, from Vietnam to Kosovo, Iraq and Libya, are another. Cyber-warfare is also manifestation of technological development, though one not covered in this report, partly because the capabilities are still mainly classified and there is little case-study evidence to draw on.

The reason drones are given such prominence here is that they have acquired a key role in the Obama administration's global counter-terrorism strategy. Their use as a vehicle for targeted killings – including in countries where the US is not actively engaged in armed conflict such as Pakistan, Somalia and Yemen – is highly controversial and contested, and gives rise to a wide range of strategic, legal, ethical and policy questions. Thus the key drivers examined by this report are, firstly, precision-strike capability – the ability to place a destructive force accurately and precisely against a given target; and, secondly, UAV technology – the first time states can combine assistance in the field with zero operator risk in order to achieve either persistent surveillance or destructive effect.

Given the speed with which the drone has entered popular discourse, it is instructive to ask just how much is known or understood by the public about this new technology, the capability it provides and the use to which it is put. This report opens with the findings of recent polling of public opinion carried out by YouGov. This shows that that the UK public distinguishes between the inherent potential value of drones themselves and their actual use. So, for example, while a majority believe that drones help to reduce casualties by reducing the numbers of boots on the ground and as a result of their comparative accuracy, a third of those polled believe their use is undermining Western security by alienating public opinion in the countries where strikes take place, and nearly half say that they make it too easy for Western governments to take military action in foreign countries.

This research is complemented by Ulrike Franke's chapter pointing to the five most common media misrepresentations of UAVs. She shows that the typical portrayal of a drone is of a large UAV, piloted from far away, armed, used mainly for targeted killings by the CIA, possessed only by the US and a handful of European countries, and used solely for military purposes. Franke

shows that, by contrast, the vast majority of UAVs are small, controlled from nearby, armed, not used in targeted killing, operated by a wide range of countries, and widely – and increasingly – used for civilian purposes. She concludes that such misconceptions are harmful in that they stand in the way of informed debate in democracies about the responsible use of UAVs – which, as a later chapter demonstrates, could have security consequences.

One of the reasons why much debate about drones is so passionate is that the subject of targeted killings is understandably controversial. Thus it is important to separate the legal and ethical issues surrounding the use of lethal force from the legal and ethical issues surrounding the introduction of new technology. Both are important, but they raise different considerations, which this report attempts to unravel.

The chapter by Nathalie Weizmann of the International Committee of the Red Cross addresses these issues through the lens of International Humanitarian Law (IHL), which governs the use of UAVs in armed conflict, and international human rights law, which governs their use in situations that do not amount to armed conflict. Her analysis excludes the issue of the lawfulness of the recourse to war (*jus ad bellum*); as we shall see from later contributions, this remains a significant area for debate. Weizmann concludes that 'while UAVs that support or use force are not prohibited, international law clearly circumscribes their use'. However, she acknowledges that the law can only go so far in addressing 'the growing ethical, moral and political concerns that we so often hear'.

The next contribution, from a serving security official in a NATO member country, who for professional reasons must remain anonymous, deals precisely with some of these wider concerns, in particular the importance of legitimacy – as well as lawfulness – in determining the acceptability of new technology and new forms of warfare. Even if new weapons are legal under international law, they may still be deemed illegitimate by critics and campaigners and therefore become politically unacceptable. Here, then, is a reason why informed debate separating technology from policy is essential. The author cautions against too restrictive an approach towards drones if democratic states are to retain the security dividend afforded by their technological superiority.

This theme is approached from both a philosophical and a technological angle by Alex Leveringhaus and Tjerk de Greef. They point to the importance of 'moral perception' – an integral part of situational awareness – on the part of those operating weapons systems, and ask how this is affected by the remoteness of the operator from the target. They argue that systems must be designed in a way that maximises the likelihood of moral behaviour by the operators, and introduce the notion of 'e-partnerships' to describe

systems that enhance the quality of the information that operators receive while not in any way diminishing their accountability for their actions.

The lack of data on casualties of US drone strikes – due to a policy of secrecy and the difficult environment in which they are conducted – has hindered the efforts of the public, scholars and legislators to convincingly determine their true tactical and strategic impact. An additional moral dimension is introduced by Jacob Beswick and Elizabeth Minor, who argue for the importance of counting casualties in all interventions – not just those involving UAVs – as a means of establishing whether obligations to protect civilians have been respected. As a case study, they examine Operation *Unified Protector* carried out by NATO over Libya in 2011, which was explicitly mandated as a Protection-of-Civilians operation by the UN Security Council. They make the case that a commitment to protect civilian life in targeting decisions is no substitute for casualty-recording as an evaluative capability.

Before leaving the domain of ethics and law, it is worth pointing out that the largest area of controversy is one where international law is open to differing interpretations and where there is no higher court that can provide a definitive ruling. This concerns the US's justification for the use of lethal force against those it considers a threat to its security interests, on the grounds that it is engaged in a 'transnational global conflict' against the 'illegal combatants' of Al-Qa'ida and its allies. A 2011 US Department of Justice White Paper, leaked in February 2013, argues that 'a lawful killing in self defence is not an assassination'; further, that where an individual 'poses an imminent threat of attacks against the United States' and where certain other conditions are met, the use of lethal force would be justified. Note that this also assumes a different interpretation of 'imminence' than has been traditionally accepted in international law; the White Paper argues for 'a broader concept of imminence in judging when a person continually planning terror attacks presents an imminent threat, making the use of force appropriate'. This interpretation, which justifies the use of lethal force in countries in which the US is not at war, is highly contested.

It is worth highlighting that disagreements over the legality and legitimacy of intervention are an enduring problem. The armed intervention in Kosovo by NATO in 1999, for instance, was not preceded by a UN Security Council Resolution explicitly authorising force – neither was the US-led invasion of Iraq in 2003. Yet many would hold the two campaigns very distinct in their legitimacy, with the former rather less controversial than the latter. Intervention sits uneasily with respect for state sovereignty which, although under assault as an absolute principle, is still a salient international norm. At a basic level, certain criticisms of the US drone-strikes programme speak to a much deeper tension between the rights of states to manage their

own affairs and the rights of others to defend themselves from increasingly globalised, sub-state threats.

The final contributions examine the efficiency and effectiveness of precision-strike capabilities in terms of strategy and tactics. Again, the focus is on drones but the arguments apply more widely to other capabilities and forms of intervention. Conway Waddington argues that the seductive appeal of precision-strike technologies has diverted attention away from proper discussion of whether targeted killing is an appropriate counter-terrorism tool at the strategic, as opposed to the tactical, level. He claims that policy enablers have become policy drivers, leading to a counterproductive and bankrupt strategy.

Armin Krishnan examines in closer detail the strategy of targeted killing as an instrument of both counter-terrorism and counter-insurgency. He identifies a number of variables that can actually make targeted killing effective in terms of destabilising organisations, but cautions that its benefits are limited. Despite the attractions of the 'light-footprint' approach, targeted killing 'remains within the political context' and is not a substitute for a political settlement. More 'careful local solutions' are needed if fundamentally political issues are to be resolved.

Developing this theme, David Hastings Dunn and Stefan Wolff make the case that targeted strikes, whether part of a counter-terrorism or a counter-insurgency strategy, can only be effective as part of a broader approach. Comparing the current campaign in Yemen with those in Pakistan and Afghanistan, they argue that strikes, based on pre-existing intelligence, that target individual terrorist leaders are likely to be much more effective than so-called 'signature strikes', which have many more harmful side-effects and fail to 'disentangle the links between insurgents and terrorists'. They, too, argue that technology must not become a substitute for a broader policy.

Finally, as a previous RUSI *Whitehall Report* ('Short War, Long Shadow') determines, even in the Libya campaign – the result of a French and British push – NATO allies were heavily dependent on the US for both high-end war-fighting and enabling capabilities, particularly at the start of operations. Appropriately, Tom Dyson takes stock of Europe's readiness to deploy precision-strike capabilities and finds it is still heavily dependent on the US. If Europe is to be a credible security actor, he argues, a full spectrum of capability is required. He identifies two possible avenues for European states to overcome these capability deficits: the EU's Common Security and Defence Policy (CSDP) or NATO's Smart Defence Initiative. However, the ideological underpinning of individual European nation-states with regard to foreign and security policy is a major obstacle to concerted action, with the main problem emanating from the UK. Dyson argues that the latter must 'for

its own and Europe's sake, overcome domestic opposition to the CSDP that is based on outdated ideological path dependency.'

There are perhaps three key points to emerge from this *Whitehall Report*. First, the importance to democracies of remaining manifestly true to their ethical principles in the way they carry out warfare. Much public anxiety about the use of drones stems from concerns that their use somehow evades established norms of ethical and legal behaviour in armed conflict. The contested nature of the US approach to targeted killing is the most obvious manifestation of this problem.

Second, the need for a clear strategic vision underpinning the exploitation of new technological capabilities; means are not the same as ends and policy enablers must not become policy drivers. Furthermore, without a clear strategy, interventions – no matter how well intentioned – may be doomed to failure.

Third, alarmism over the technology can distract attention from the real problem, which is one of dubious policy. Although the use of new technology does require proper consideration of its ethical, legal and policy implications – as has always been the case – it is the use to which the technology is put, rather than the technology itself, which is most in need of scrutiny.

Drone precision strike has been and remains controversial; but it is important to disentangle the separate strands of criticism, some of which stand up to scrutiny more than the others. Political and moral concerns over secrecy and targeting are matters of the specific use of drones. The long-term effectiveness (or not) of drone strikes as a campaign is a strategic question that is ultimately embedded in local context. Concerns about targeting and strategy are, however, questions of policy rather than technology.

Unfortunately, policy and technology are often conflated in the debate which, as a result, risks becoming ill-informed. This report is a contribution to that discussion and, it is hoped, will clarify and illuminate a wider debate about contemporary intervention.

The Public View: British Attitudes to Drone Warfare and Targeted Killing

Joel Faulkner Rogers

AS PUBLIC debate now seemingly plays catch-up with a decade of evolving policy on drones, public opinion on the subject has been variously portrayed and oversimplified on a scale between nonchalantly 'for' and hysterically 'against'.

In support of this RUSI *Whitehall Report*, YouGov conducted a multi-stage study of British attitudes to the use of drones and targeted killing, including six separate surveys each fielded to nationally representative samples of the adult British population.

According to results, the British public is near evenly divided on whether drone strikes in countries like Pakistan, Yemen and Somalia are helping or hindering Western security. Roughly a third in each case say that drones have made the West more safe overall by making it easier to target known terrorists, or less safe overall by turning public opinion against us in various countries, or 'neither of these'/'don't know'.

This is not to suggest, however, that the electorate lacks consensus on the subject of drones and targeted killing. A majority of the British public supports the policy, at least in principle, of targeted killing or assassination in certain instances. British opinion also portrays a more balanced set of attitudes to drones than some media coverage might suggest, which goes beyond binary moral judgements and reflects wide recognition of both perceived advantages and liabilities inherent to drone warfare.

There is also a distinction between attitudes to the effect of drone policy and belief in the potential merits of drones themselves. The two are not the same in these findings, suggesting that public concern and uncertainty is more focused on current policies and patterns of use, rather than the fundamentals of drone strikes and targeted killing themselves.

Responses also indicate some characteristic political fault-lines, with current Conservative voters more supportive of both drone strikes and British assistance in their deployment than either Labour or Liberal Democrat (Lib Dem) supporters. Conservatives in this study also tended to show a higher tolerance of casualty rates in the name of targeting a known terrorist.

Results in the experimental section of the study further show that sensitivity to casualties has a predictably substantial impact on support for drone

strikes. However, varying majorities of respondents across the political spectrum also suggest that they would be willing to tolerate a certain level of casualties if the action were directly linked to preventing an imminent threat to the homeland.

Potential Impact of Casualties on Support for Drone Strikes

In the first part of this study, YouGov conducted five experiments designed to explore how public support for government involvement in drone strikes might be affected when several independent variables are introduced, including the context of imminent threat, the targeting of UK citizens and the likelihood of varying civilian casualties.

Each survey was fielded to a different, nationally representative survey of the adult British population, including at least 1,500 respondents respectively.

In each case, respondents were first shown the following explanatory text:

> It was recently reported that the UK Government might be passing information to US authorities to help them carry out missile strikes from unmanned aircraft called 'drones' to kill known terrorists overseas in countries like Pakistan, Yemen and Somalia.

Participants were then asked to what extent they would support or oppose the UK government assisting in a drone strike. In each case, however, we asked about a slightly different scenario, and also split the sample into two roughly equal sub-samples. In the second sub-sample, we asked yet another version of the question, this time with an added element, asking respondents to imagine the missile strike were intended to prevent an imminent threat to Britain. (Of this, more later.)

Table 1: 'To what extent, if at all, would you support or oppose the UK Government assisting in a drone missile strike…'

	Support (%)	Oppose (%)	Don't know (%)
'to kill a known terrorist overseas?' (n=883)	55	23	21
'to kill a known terrorist overseas if the person being targeted were a UK citizen?' (n=871)	60	23	17
'to kill a known terrorist overseas if it were guaranteed that no innocent civilians would be killed by the drone strike?' (n=933)	67	21	13
'to kill a known terrorist overseas if it were likely that 2–3 innocent civilians might be killed by the drone strike? (n=953)	43	41	16
'to kill a known terrorist overseas if it were likely that 10–15 innocent civilians might be killed by the drone strike? (n=802)	32	46	22

Note: Due to rounding, figures may not sum to 100%.

Table 1 shows the overall results from each of the first sub-samples. (See Notes on Methodology at the end of this chapter for more details on Surveys 1–5.)

In these results, an overall majority of 55% said they support versus 23% saying they oppose in response to the basic version of the question: 'To what extent, if at all, would you support or oppose the UK Government assisting in a drone missile strike to kill a known terrorist overseas?'

Among the camps of current voters for the three big political parties, a strong majority of Conservatives said they support (75% vs 9% oppose); as did roughly half of Labour (52% vs 29% oppose) and a smaller plurality of Lib Dems (43% vs 36% oppose).

Overall, support for assisting in a missile strike increases slightly to 60% when the question includes the added detail of: 'if the person being targeted were a UK citizen' – potentially, we might guess, by implying a more direct threat to Britain. Support also increases among Conservative and Lib Dem voters. (Respectively: Cons – 79% support vs 11% oppose; Lab – 49% support vs 31% oppose; Lib Dems – 56% support vs 38% oppose.)

Perhaps predictably, support increases again to 67% overall, including majorities in each of the big parties, when the question includes: 'if it were guaranteed that no innocent civilians would be killed by the drone strike'. (Respectively: Cons – 85% support vs 12% oppose; Lab – 61% support vs 24% oppose; Lib Dems – 59% support vs 33% oppose.)

We then see that overall support for a drone strike drops substantially to 43% when the suggestion is introduced that two or three innocent civilians might be killed. The overall number of those who oppose rises to a roughly similar 41%, and the electorate becomes essentially divided.

Overall support for a drone strike drops further still to 32% when the suggestion is introduced of higher casualties, with ten to fifteen innocent civilians possibly killed. The overall number of those who oppose rises to a larger 46%, meaning a plurality is now against the strike.

It should be noted in these figures, however, that sensitivity to casualty rates is not uniform across the political spectrum.

When asked the question including a casualty rate of two or three innocent civilians, Labour and Lib Dem supporters show majorities – just about – that oppose, while a substantial majority of Conservative supporters (62%) still support the drone strike. (Respectively: Cons – 62% support vs 26% oppose; Lab – 38% support vs 50% oppose; Lib Dems – 36% support vs 51% oppose.)

In response to the question including a higher casualty rate of ten to fifteen innocent civilians, Conservative supporters become broadly divided, while a plurality of Labour and majority of Lib Dem supporters are opposed. (Respectively: Cons – 40% support vs 45% oppose; Lab – 31% support vs 45% oppose; Lib Dems – 30% support vs 53% oppose.)

Potential Impact of an Imminent Threat on Tolerance for Casualties

In the second sub-sample of each survey, however, we also found that sensitivity to casualty rates is potentially impacted across the political spectrum by the independent variable of imminent threat.

As previously explained, in each of the five experiments, we also split the sample into two roughly equal sub-samples. In the second sub-sample, we asked a slightly re-worded version of the question in each case, but this time with an added element, asking respondents to imagine the missile strike were intended to prevent an imminent threat to Britain.

Table 2 shows the overall results from second sub-samples.

Table 2: 'Imagine a terrorist attack against the UK was imminent and could be stopped by a drone missile strike against a known terrorist in Yemen. To what extent, if at all, would you support or oppose the UK Government assisting in a drone missile strike…'

	Support (%)	Oppose (%)	Don't know (%)
'to kill a known terrorist overseas?' (n=878)	74	14	12
'to kill a known terrorist overseas if the person being targeted were a UK citizen?' (n=856)	71	12	17
'to kill a known terrorist overseas if it were guaranteed that no innocent civilians would be killed by the drone strike?' (n=973)	75	11	14
'to kill a known terrorist overseas if it were likely that 2–3 innocent civilians might be killed by the drone strike? (n=912)	64	20	15
'to kill a known terrorist overseas if it were likely that 10–15 innocent civilians might be killed by the drone strike? (n=723)	60	22	17

Note: Total sample = 1,966 adults. Fieldwork was conducted online between 26–27 February 2013. Figures have been weighted and are representative of all British adults aged 18 or over.

In this context, overall support remains notably less sensitive to casualty numbers. We see support for a missile strike drops from 75% to 64% among respondents overall when asked the question with a casualty rate of two or three innocent civilians instead of none, and drops further to 60% when it

includes a casualty rate of ten to fifteen innocent civilians. But in each case, overall support retains a strong majority.

Interestingly, responses now show majority support for a drone strike among all three big political camps in both casualty scenarios.

When asked the question including a casualty rate of two or three innocent civilians, results are respectively: Cons – 83% support vs 9% oppose; Lab – 61% support vs 24% oppose; Lib Dems – 68% support vs 22% oppose.

When asked the question including a casualty rate of ten to fifteen innocent civilians, results are respectively: Cons – 88% support vs 12% oppose; Lab – 58% support vs 26% oppose; Lib Dems – 53% support vs 33% oppose.

Clearly, it should be remembered that an opinion survey of attitudes to hypothetical scenarios is different from measuring public reactions to a real event. Notwithstanding, these results suggest several potential findings: first, that Conservative supporters in this study tend to show a higher tolerance of casualty rates in the name of targeting a known terrorist; second, that while sensitivity to casualties has a predictably substantial impact on support for drone strikes, varying majorities of respondents across the conservative/liberal spectrum also suggest they are willing to tolerate both a casualty rate of two or three innocent civilians and ten to fifteen civilians if they believe the action is directly linked to preventing an imminent threat to the homeland.

Attitudes to the Policy or Principle of Targeted Killing

For the second part of this study, YouGov fielded a longer, single survey to a nationally representative sample of British adults (n=1,966) looking at broader perceptions surrounding the drone debate. (See Notes on Methodology at the end of this chapter for details on Survey 6.)

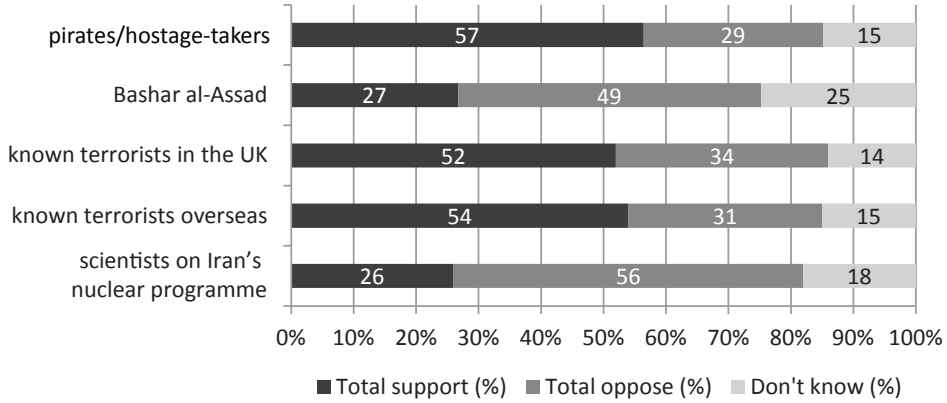
Before looking specifically at attitudes to drones, we tested attitudes more generally to the policy of targeted killings. As Figure 1 shows, respondents were asked to what extent they would support or oppose their government taking part or assisting in various examples of targeted killing.

Figure 1 indicates that there is little public support for actions such as assassinating Bashar al-Assad or scientists working on Iran's nuclear programme. However, a majority of the British public supports the policy, at least in principle, of assassinating known terrorists and pirates/hostage-takers.

Support is strongest in these results for the targeted killing of pirates/hostage-takers, with 57% of respondents overall saying they would support

the UK government taking part or assisting in this kind of targeted killing, versus 29% saying they would oppose.

Figure 1: 'To what extent, if at all, would you support or oppose your country's government taking part or assisting in each of the following? (Assassinating…)'



Note: Total sample = 1,966 adults. Fieldwork was conducted online between 26–27 February 2013. Figures have been weighted and are representative of all British adults aged 18 or over.

Support for assassinating known terrorists is weaker by comparison, but still constitutes an overall majority: 52% overall say they would support the UK government taking part or assisting in the assassination of terrorists in the UK, versus 34% saying they would oppose, while 54% overall say they would support similar action against known terrorists overseas, versus 31% saying they would oppose.

Behind national totals, Lib Dem voters stand out next to supporters of the other large parties, with less support for the policy of targeted killing against known terrorists, both in the UK and overseas. A majority of current Conservative and Labour voters said that they would support the UK government taking part or assisting in the assassination of known terrorists in the UK (respectively: Cons – 63% support vs 27% oppose; Lab – 52% support vs 38% oppose) while, in contrast, a 51% majority of current Lib Dem voters said they would oppose the same action, with 40% saying they would support it.

Similarly, a majority of current Conservative and Labour voters said they would support the UK government taking part or assisting in the assassination of known terrorists overseas (respectively: Cons – 61% support vs 29% oppose; Lab – 55% support vs 33% oppose), while a small 53% majority of current Lib Dem voters said they would oppose the same activity, with 37% saying they would support it.

Attitudes to the Overall Impact of Drone Strikes on Western Security

The British public is divided, it seems, on the broad question of whether drone strikes in countries like Pakistan, Yemen and Somalia are ultimately helping or hindering Western security:

- 32% of all respondents say: 'On balance, drone missile strikes have made the West more safe overall by making it easier to target known terrorists'
- 31% of all respondents say: 'On balance, drone missile strikes have made the West less safe overall by turning public opinion against us in countries where they are used'
- 37% of all respondents selected 'neither of these'/'don't know'.

Results further indicate a notable divide between conservative and liberal sections of the electorate:

- A plurality of Conservatives (46%) believe drone strikes have ultimately made the West 'more safe', compared with 26% saying 'less safe' and 27% who selected either 'don't know' or 'neither of these'
- By comparison, a plurality of Lib Dems (41%) say the opposite – that these strikes have ultimately made the West 'less safe', compared with 32% choosing 'more safe' and 26% who selected 'don't know' or 'neither of these'
- Attitudes among Labour supporters follow a similar direction of opinion to Lib Dems, but are more evenly spread among those who answered 'more safe' (29%), less safe (36%) and either 'don't know' or 'neither of these' (34%).

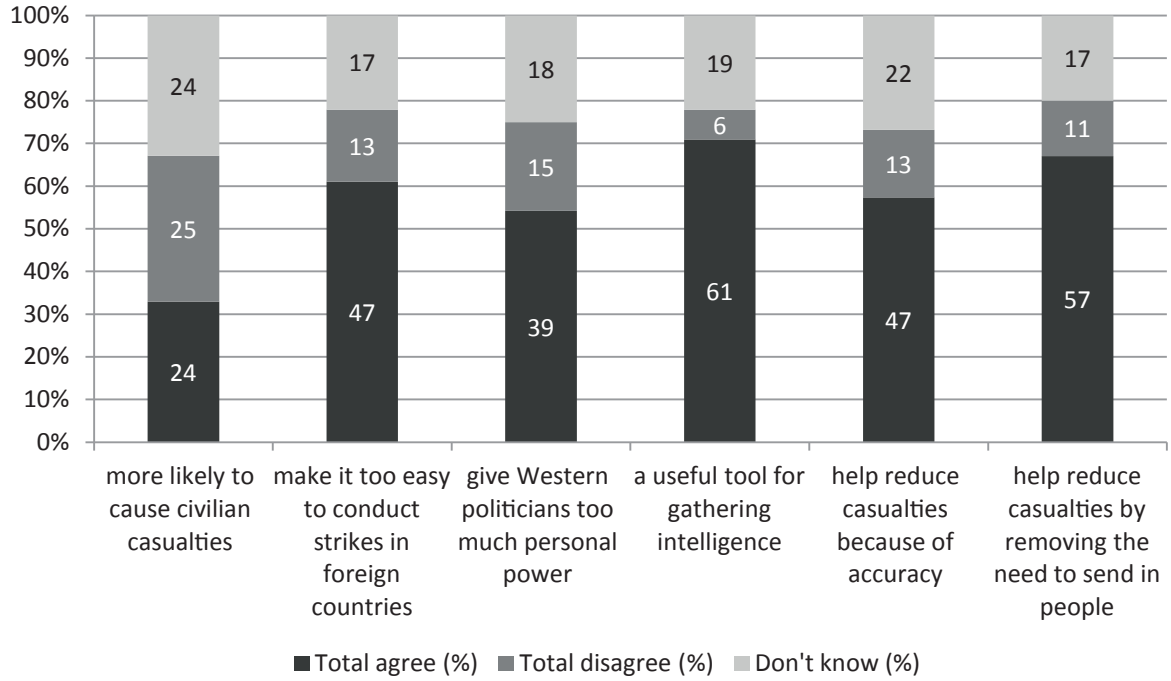
Attitudes to Pro/Con Arguments about Drones

This is not to suggest that there is no consensus in British attitudes to drones. Participants were also asked to what extent they agree or disagree with three pro-drone arguments and three con-drone arguments that have helped to characterise recent public debate on the subject.

These arguments included:

- 'Drones help to reduce casualties by removing the need to send in people on the ground'
- 'Drones help to reduce casualties because of their accuracy compared with other weapons used over long distances'
- 'Drones are a useful tool for gathering intelligence'
- 'Drones give Western politicians too much personal power to pick and choose who is killed'
- 'Drones make it too easy for Western governments to conduct military strikes in foreign countries'
- 'Drones are more likely to cause civilian casualties than other weapons used over long distances'.

Figure 2: 'Thinking about drone missile strikes, to what extent, if at all, do you agree or disagree with the following statements?'



Note: Total sample = 1,966 adults. Fieldwork was conducted online between 26–27 February 2013. Figures have been weighted and are representative of all British adults aged 18 or over.

Responses to 'Pro-Drone' Arguments

A 57% majority agreed overall that drones help to reduce casualties 'by removing the need to send in people on the ground'. This included majorities among supporters of all three major parties. (Respectively: Cons – 68% agree vs 8% disagree; Lab – 57% agree vs 14% disagree; Lib Dems – 60% agree vs 15% disagree.)

A significant plurality (47%) also agreed that drones help to reduce casualties 'because of their accuracy compared with other weapons'. This included a majority of current Conservative voters and a plurality of current Labour voters, while a plurality of Lib Dems disagreed. (Respectively: Cons – 57% agree vs 8% disagree; Lab – 49% agree vs 16% disagree; Lib Dems – 36% agree vs 18% disagree.)

A clear majority further agreed that drones are useful for intelligence, including similar majorities among supporters of the major parties. (Respectively: Cons – 70% agree versus 5% disagree; Lab – 62% agree versus 6% disagree; Lib Dems – 65% agree versus 9% disagree.)

Responses to 'Contra-Drone' Arguments

In the same results, however, a significant plurality agreed that 'drones make it too easy for Western governments to conduct military strikes in foreign countries', with 47% of respondents overall saying they agreed. This included agreement among majorities or pluralities of Conservative, Labour and Lib Dem supporters saying the same. (Respectively: Cons – 46% agree vs 20% disagree; Lab – 51% agree vs 12% disagree; Lib Dems – 58% agree vs 12% disagree)

The electorate is more politically divided on the question of individual accountability among policy-makers. Just 39% of respondents overall agreed with the statement that 'drones give Western politicians too much personal power to pick and choose who is killed', while 15% disagreed, 28% said 'neither agree nor disagree' and 18% selected 'don't know'. A majority of Lib Dems agreed, along with a smaller plurality of current Labour voters, while Conservative responses essentially mirrored the national totals. (Respectively: Cons – 37% agree vs 23% disagree; Lab – 43% agree vs 14% disagree; Lib Dems – 52% agree vs 12% disagree.)

Finally, a wide spread of answers was produced with no strong trend in responses to the statement: 'Drones are more likely to cause civilian casualties than other weapons used over long distances'. Overall, 24% of respondents agreed, alongside 26% who chose 'neither agree nor disagree', 25% who said 'disagree' and 24% who selected 'don't know'. Responses among party camps showed a similarly divergent spread of percentages.

Greater Public Concern towards the Current Policies of Drone Warfare than its Fundamentals

In the round, these figures point towards an important fault-line in public opinion towards drones. The British public may be divided overall on whether current drone deployments are doing more harm than good to Western security. But results also suggest a distinction between attitudes to the perceived effect, implementation and decision-making environment of current drone policy, on one hand, and attitudes to the inherent, potential value of drones themselves on the other.

Among the first category of opinion, a third of Britons believe that the current use of drones is undermining Western security by turning public opinion against those associated with the strikes, while substantial pluralities among more liberal voters believe that it gives politicians too much power to 'pick and kill'. Nearly half of the electorate also say drones are making it too easy for Western governments to take military action on foreign soil.

Nevertheless, a cross-party majority further agrees that drones help to reduce casualties by removing the need to put more boots on the ground,

and a plurality – including nearly 60% of Conservatives and almost half of Labour supporters – agree that drones help to reduce casualties through their comparative accuracy. A majority also supports the policy in principle of targeting killings against known terrorists, albeit with a small majority of opposition from Lib Dems.

There is, therefore, greater public concern and uncertainty, it seems, towards current policies and patterns of use than towards the fundamentals of drone warfare itself.

Notes on Methodology

Survey 1 was undertaken between 27–28 February 2013. Total sample size was 1,761 British adults. The survey was carried out online. The overall sample was split into two sub-samples of n=883 and n=878.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/qj4gfpj4r5/YGCam-Archive-results-280213-Drones-US-UK.pdf>.

Survey 2 was undertaken between 3–4 March 2013. Total sample size was 1,727 British adults. The survey was carried out online. The overall sample was split into two sub-samples of n=871 and n=856.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/qgughr4smx/YGCam-Archive-results-040313-Drones-terrorists-UK-citizens.pdf>.

Survey 3 was undertaken between 4–5 March 2013. Total sample size was 1,906 British adults. The survey was carried out online. The overall sample was split into two sub-samples of n=933 and n=973.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/fi791bdvhf/YGCam-Archive-results-050313-Drones-innocent-civilians.pdf>.

Survey 4 was undertaken between 6–7 March 2013. Total sample size was 1,865 British adults. The survey was carried out online. The overall sample was split into two sub-samples of n=953 and n=912.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/qapzhjj074/YGCam-Archive-results-070313-Drones-terrorists-innocent-civilians.pdf>.

Survey 5 was undertaken between 7–8 March 2013. Total sample size was 1,525 British adults. The survey was carried out online. The overall sample was split into two sub-samples of n=802 and n=723.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/6seonn0ps6/YGCam-Archive-results-080313-Drones-terrorists-innocent-civilians.pdf>.

Survey 6 was undertaken between 27–28 February 2013. Total sample size was 1,966 British adults. The survey was carried out online. Figures have been weighted and are representative of all British adults aged 18 or over.

Full results can be found here: <http://cdn.yougov.com/cumulus_uploads/document/7jhe13wtc6/YGCam-Archive-results-270213-Assassination-Drones.pdf>.

The Five Most Common Media Misrepresentations of UAVs

Ulrike Esther Franke

UNMANNED AERIAL vehicles (UAVs) have come of age in the last decade. Having first been used on a large scale by the American military for surveillance purposes in the Vietnam War, and having been improved through subsequent use by the Israelis in Lebanon and by NATO in Operation *Allied Force* in Kosovo,[1] UAVs can now be found in arsenals all over the world for a variety of purposes.

For a surprisingly long time, the Western media ignored this development. Only with the beginning of the CIA drone operations in Pakistan, Yemen and Somalia[2] has the Western media started to report regularly on UAVs. News items on drone strikes or on new UAV-technology developments are published every day. The terms 'drone' and UAV, as well as model names such as Predator, Reaper and Global Hawk, have entered the general vocabulary.[3]

Unfortunately, the increased media coverage of UAV developments has not led to a better informed public. Rather, through an undue focus on specific aspects of drone usage, the media has been creating false impressions and ideas about UAVs. This chapter aims to expose the most common misrepresentations of UAVs in the Western media. This analysis is based on a systematic screening of media sources from major European countries; the examples cited here are drawn from the British media, with further illustrative examples from German, French and American news sources. While some of the more specialised – and, indeed, even academic – literature can be accused of propagating the same misconceptions, this chapter concentrates on the mainstream press, as these news sources are most influential in guiding the public's knowledge and opinions of UAVs. A well-informed public is an essential ingredient in a democracy; it is therefore important that the public is able to make informed decisions about future UAV use, whether in military or civilian contexts. Popular misconceptions about drones risk seriously hampering important discussion and decisions on future drone usage.

Misrepresentation 1: Most UAVs are Predator-type drones – big UAVs that are piloted from far away

No UAV holds such an iconic place in the media as the General Atomics MQ-1 Predator. The Predator is over 8 metres long, weighs 500 kg (empty) to 1,000 kg (loaded), with a wingspan of almost 17 metres.[4] It can stay in the air for about twenty hours.[5] It is the best known example of the so-called Medium Altitude, Long Endurance (MALE) UAV class.[6]

Developed in the 1990s, the Predator was first deployed by the US in Bosnia in 1995.[7] Initially used for reconnaissance, it can now be armed with two Hellfire air-to-ground missiles. The Predator and its larger brother, the General Atomics MQ-9 Reaper,[8] get the most media attention because of their use by the CIA for targeted killings. The CIA's use of UAVs is by far the most reported UAV-related news item. Through this coverage, the Predator and the Reaper have become the best-known UAVs and are covered regularly and in surprising detail by the media. On *Spiegel.de*, Germany's most important news website, readers can, for instance, find an interactive graphic of the Reaper, with details on armament and sensors.[9] Almost every article on UAVs pictures a Predator or Reaper, and there are media photo galleries all over the Internet displaying these two types of drones.[10] Even articles on other drone types or uses are often illustrated with pictures of the best-known MALE UAVs; for example, a *Daily Telegraph* blog post on all kinds of UAVs features a photo of a Predator.[11] Another article by the *Daily Telegraph* uses a Predator picture to illustrate an article on domestic UAV use in the US.[12] The Predator and Reaper are omnipresent.

The media's fascination with these particular aircraft, the extreme focus on the Pakistani drone campaigns to the detriment of coverage on other uses, as well as imprecise language can easily create the perception that Predator-types drones (that is, MALE UAVs) are the most widely used and important UAVs worldwide. In an otherwise well-researched article, *Rolling Stone*, for instance, states: '[the] drones used in Iraq and Afghanistan – the Predator and the Reaper',[13] suggesting that these two UAVs are the only ones (or at the very least the most common ones) used in the two theatres.

The term 'drone' is on the way to becoming synonymous with MALE UAVs in the media. The German weekly *DIE ZEIT*, within a longer feature on UAVs, proposes a short UAV typology, listing six different UAVs. Of these six, all but one (the small Parrot AR.Drone 2.0) are MALE or High Altitude, Long Endurance (HALE) UAVs.[14] In a 2012 article, *Le Monde* writes, 'Drones have clear operational advantages. They are cheap while efficient. They are fast, can fly long missions and allow monitoring of the situation on the ground in areas that are remote and difficult to reach from an altitude of 18 000 meters.'[15] This information is not wrong – but it solely describes characteristics of MALE UAVs, not UAVs in general.[16]

Furthermore, a large number of newspaper reports focus on the fact that some UAVs can be controlled from far away.[17] That MALE and HALE UAV pilots can monitor Pakistani plains from air bases in Nevada or Lincolnshire is an important advantage – and one of the most discussed features of these types of UAV.[18] Peter W Singer, senior fellow in foreign policy at the Brookings Institution, has coined the term 'cubicle warriors', a term now often used by

the media for pilots flying combat missions from their offices before driving home to see their families.

Reality: Most UAVs are small, unarmed and controlled from close by
There are only a handful of MALE UAV types currently in use in the world. The US and some of its allies, such as the UK, Italy and Turkey,[19] use US-built MALE UAVs, mainly the Predator and the Reaper, as well as the lesser-known Gray Eagle.[20] Two Israeli companies also manufacture MALE UAVs: namely Aeronautics Defense Systems, which builds the Dominator, and Israel Aerospace Industries, whose different Heron variants are used by about a dozen armed forces in the world (among them Israel, Germany, Australia, India and France[21]). Furthermore, China and Turkey both have MALE UAV development projects at advanced stages; China seems to have successfully completed development of the Chengdu Pterodactyl I and Turkey plans to introduce the Turkish Aerospace Industries TAI Anka. Several European countries are deliberating on a jointly financed, European-built, armed MALE UAV, such as the nEUROn.[22]

For the moment, however, the numbers of MALE UAVs in military arsenals around the world are mostly fewer than ten: Singapore uses one Heron;[23] Italy has six Reapers; France uses four Harfangs;[24] Germany has three Herons; and the UK plans to double its number of Reapers from five to ten by mid-2013.[25] Very few countries operate more MALE UAVs; India, for instance, reportedly fields between fifteen and thirty Heron UAVs.[26] The Brazilian Federal Police allegedly uses up to fourteen Herons.[27] The US – by far the leading UAV producer and user – has, all types and services combined, fewer than 500 MALE UAVs in its arsenal.[28] The CIA, which carries out the controversial drone strike programme in Pakistan, Yemen and Somalia, only holds about thirty MALE UAVs.[29] These estimations mean that all over the world – even considering the largely unknown number of MALE UAVs in Israeli, Chinese and Iranian military arsenals – it seems unlikely that there are more than about a thousand MALE UAVs currently in use.

There are, on the other hand, tens of thousands of smaller, tactical drones (sometimes called mini or micro UAVs). Germany has hundreds of ALADIN, LUNA and KZO UAVs in use.[30] France bought more than 250 DRAC UAVs between 2004 and 2012.[31] The US holds about 10,000 AeroVironment RQ-11 Ravens, AAI RQ-7 Shadows, Boeing ScanEagles and other tactical drones. The UK has purchased over 100 Lockheed Martin Desert Hawks[32] and has just recently ordered 160 PD-100 Black Hornet nano-UAVs for use in Afghanistan.[33]

Even more importantly, these kinds of UAVs have become an almost universal military tool used by states all over the world. While the number of states using MALE or HALE UAVs is limited, it has become almost impossible to

count tactical UAV users. About seventy-five states use UAVs today (see Misrepresentation 4 and Figure 1 below).

'Cubicle warriors' – soldiers comfortably sitting in front of computers in air-conditioned trailers in Nevada, New Mexico or Lincolnshire, monitoring and even killing people from afar – may indeed exist. This image, however, does not represent the reality of most UAV use. MALE and HALE UAVs can be piloted from far away, but all other UAVs have a rather limited range from which they can be controlled. A lot of them are even launched by hand, such as the Raven, ALADIN and Desert Hawk, used by soldiers in the field. Also, larger tactical UAVs such as the Watchkeeper are piloted from the country in which they are needed.

The common coverage is highly misleading in this regard. Most UAVs are not Predator-type drones; most UAVs are rather small, and controlled from close by.

Misrepresentation 2: Most UAVs are armed

The majority of newspaper articles, reportages and newscasts on UAVs focus on armed UAVs or do not differentiate between armed and unarmed drones. The *Guardian* entitles one of its articles 'UK to double number of drones in Afghanistan'.[34] However, in the text it becomes clear that the UK plans to double the number of its armed Reapers, not of all of its UAVs in use in Afghanistan. In the aforementioned typology by *DIE ZEIT*, a third of the listed UAVs are armed. In the main article, the author comments on Germany's plan to acquire up to five Euro Hawks (HALE UAVs used for surveillance purposes). Discussing this acquisition plan, the article states:[35]

> The giant drone is called RQ-4 Global Hawk (Euro Hawk in Germany) and is probably the most spectacular acquisition by the German armed forces since the Big Bertha … Up to five of these giant surveillance aircrafts are supposed to be stationed at Jagel Airforce base in Schleswig by 2013 … Five remotely piloted long endurance drones which can fly from here to New Zealand – why such an armada? Never, assures de Maizière [the German defence minister] and his aides, will these drones be used in the same way the CIA does. Sending a drone from Schleswig to Pakistan or Africa to kill terrorists there – this is 'just inconceivable'.

Indeed, sending Global Hawks to Pakistan to kill terrorists is inconceivable as the Euro/Global Hawk does not carry any armament. It is a high-altitude surveillance UAV, with a payload of surveillance equipment, built to eventually replace the US's aging fleet of U-2 spy aircraft. Comparing such a drone to the Big Bertha – a super-heavy howitzer deployed by Germany in the First World War – is extremely misleading. The CIA also does not use

Global Hawks to engage terrorists, nor, to this author's best knowledge, does the CIA even have any.

Reality: Most UAVs are unarmed

Most UAVs are not MALE drones. Most are small, tactical UAVs. Since only big UAVs can carry a large-enough payload to be armed,[36] and since not even all big UAVs carry armament, there are even fewer armed UAVs than MALE UAVs. At the moment, there are three countries fielding armed UAVs: the US, the UK and Israel. China supposedly also holds armed UAVs,[37] and the state of Iranian UAV development projects is unclear. A few other countries, such as France, Germany, Turkey and Russia, plan to acquire or develop indigenous armed UAVs, but most states with smaller armed forces have been reluctant regarding the arming of UAVs. Thus, most UAVs are unarmed.

Misrepresentation 3: UAVs are mainly used for targeted-killing campaigns such as the CIA operations in Pakistan, Yemen and Somalia

Due to the focus on the CIA-led targeted-killing campaign using UAVs, there is a real danger of the public believing that these drone attacks represent the most common use of UAVs. Furthermore, because the CIA campaign in these countries is controversial, articles and newscasts on UAV strikes, especially covering those in Pakistan, are frequently published.[38] Anti-drone campaigners almost exclusively focus on these strikes – thereby deliberately or unconsciously creating the impression that this is all UAVs are used for.[39] Some journalists even seem misled in their own reporting and their narrow focus on certain countries. For instance, *Deutsche Welle*, Germany's international broadcaster, opens an article on UAVs with the following sentence: 'Drones are becoming more widespread throughout the world – be it in Pakistan, Iraq, in Yemen or Somalia'.[40]

Reality: The targeted-killing campaigns in Pakistan, Yemen and Somalia only represent a tiny fraction of UAV use

There are – all types taken together – tens of thousands of UAVs in the world. The CIA has about thirty to thirty-five UAVs (most or all of them Predators and Reapers) and currently intends to buy ten more.[41] This means it can be safely said that the CIA uses less than 1 per cent of all drones in the world. This puts into perspective the scale of CIA drone operations, at least from a statistical point of view.

While discussing the specific use of UAVs for targeted killing is of course important, the CIA campaigns remain just that: a very specific use. Military UAVs are used for a wide range of purposes such as surveillance, data transmission, target designation and more. Weapon deployment represents a fraction of these purposes.

Misrepresentation 4: Only the US, Israel and a handful of European countries have UAVs

From the way the media reports on UAVs, one could easily gain the impression that only the US, Israel and some European countries operate them. This is mainly due to the public focus on armed UAVs and MALE UAVs which, for the moment, only a handful of mostly Western countries use. In *DIE ZEIT* typology, four out of six UAVs are US-made, one is French and one Israeli. Furthermore, the *Guardian* Datablog claims to list all countries using UAVs.[42] Yet it only lists ten countries, namely the US, France, Germany, Italy, Turkey, the UK, Russia, China, India and Israel.

Reality: About seventy countries use UAVs worldwide, and more are to start

The Netherlands,[43] Norway,[44] Spain,[45] the Czech Republic,[46] Estonia,[47] Sweden,[48] Qatar,[49] the UAE,[50] Egypt,[51] Iran,[52] Thailand[53] and others all use tactical UAVs – plus, of course, all of the major military powers such as China, Russia, Israel and so on. Most sources estimate that circa seventy to eighty countries have UAVs. These numbers are speculative – tactical UAVs are easy and cheap to build, do not require special material or knowledge, and are therefore difficult to track. But open-source data reveals the following numbers: fifty-three known UAV users; seventeen likely UAV users; and three and two known and likely holders of armed UAVs, respectively.[54]

Misrepresentation 5: UAVs are used solely for military purposes

The media focuses almost exclusively on the military use of UAVs. Only about 10 per cent of UAV reports by the major European newspaper websites touch upon the issue of civilian use of drones.[55] Indeed, civilian use is a topic largely absent from general news coverage. This creates the impression that it is not a considerable part of UAV use.

Reality: Civilian use of UAVs is already relatively extensive and increasing rapidly

While for the moment the military sector is dominant in drone use, civil applications are gaining ground. A number of governments have adapted UAVs initially purchased for military activities for civil applications such as law enforcement, maritime patrol, border protection or security for mass gatherings.

The US uses unarmed Predator aircraft to patrol its border with Mexico. The UK used an AirRobot AR100B – a small helicopter UAV – during the Olympic handover ceremony in August 2008 to monitor the gathering of 40,000 people at Buckingham Palace.[56] France used UAVs for security purposes at the G8 Summit in Deauville in 2011 and continues to use them for the Bastille Day parade in Paris.[57] Equally, Germany and Russia use UAVs to monitor demonstrations.[58] Police and law enforcement are especially

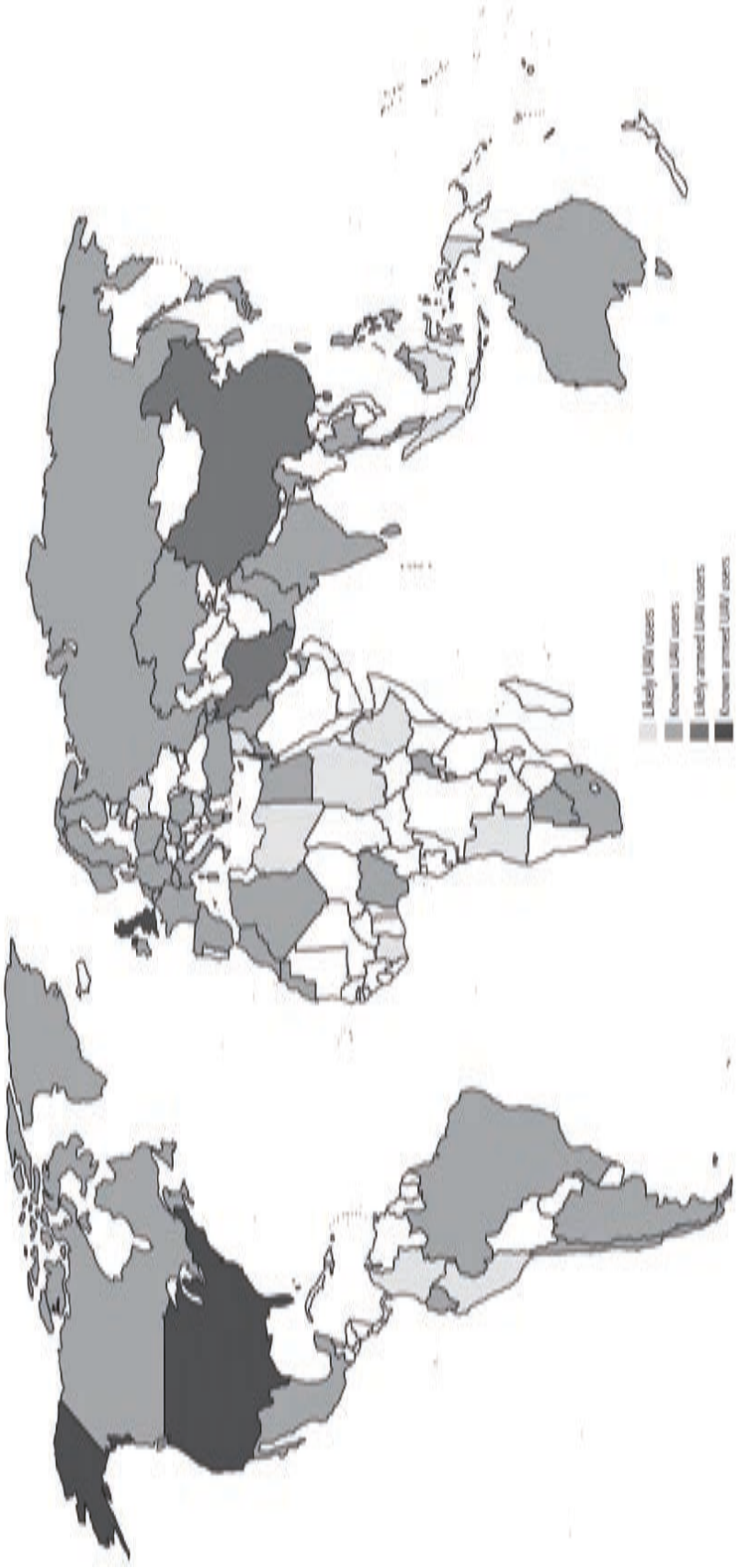


Figure 1: Known and Likely UAV/UCAV User States.

interested in the new technology. In June 2012, Merseyside Police used a UAV in the arrest of a car thief.[59] In North Dakota, local police got help from a Department of Homeland Security UAV when a man barricaded himself in his farm to avoid arrest.[60] Furthermore, UAVs have been used in the aftermath of natural disasters such as Hurricane Katrina, when they were used in damage assessment and in the hunt for survivors.[61] After the Japanese tsunami of March 2011, a vertical take-off UAV was used to explore the devastated nuclear power plant in Fukushima – an area with radiation levels far beyond exposure levels safe for humans.[62] NASA also deploys a Global Hawk for hurricane research.[63]

However, it is not only state agencies and researchers that use UAVs: the private sector is involved too. For almost a decade, Nigerian and Angolan oil companies have used the Israeli Aerostar UAV to monitor offshore rigs.[64] Gazprom started testing UAVs in 2007 and now offers UAV services for pipeline monitoring.[65] NGOs and advocacy groups have also started to see the potential of the unmanned aircraft. In Nepal, in a training programme organised by the World Wildlife Fund, park rangers and army personnel learn how to operate UAVs in national parks in order to stop wildlife crime and poaching.[66] The Sea Shepherd Conservation Society, an environmental group, reportedly uses UAVs to monitor illegal Japanese whaling in the southern hemisphere.[67]

Civilian use of UAVs is clearly growing. In Britain, the Civil Aviation Authority has given approval to 120 companies to fly UAVs in Britain; these UAVs are currently, however, only allowed to fly within the line of sight of the operator. According to a 2012 Bundestag report, German authorities have registered a clear upward trend in demand for UAV use in civilian airspace:[68] in 2010 and 2011, agencies received more than 500 requests from companies, individuals and universities.

Conclusion

This chapter has outlined and contrasted media misconceptions of UAVs with a factual assessment of the situation. An undue focus on specific aspects of UAV use is likely to create erroneous beliefs. The close attention to the CIA-led drone campaigns in Pakistan, Yemen and Somalia could create the impression that only a handful of countries have UAVs, which are armed, controlled from far away, and used primarily for targeted killings. Such erroneous impressions are especially dangerous when taken together with biased blogs and opinion pages.[69] An ill-informed public is ill-prepared to take part in the discussion of future UAV use by democratic states, and can easily be misled. This discussion is, however, an urgent one of the utmost importance, as drones are certainly here to stay.

Notes and References

1. For a concise history of UAV use, see Jon Lake, 'The Unmanned Future: Great White Hope or Impossible Dream?', *Combat Aircraft Monthly* (October 2012), pp. 58–63.
2. These attacks started in 2004, but substantially increased from 2008 onwards, which is when the media picked up the story. For good statistics, see The Bureau of Investigative Journalism, <http://www.thebureauinvestigates.com>.
3. Some anecdotal evidence suggests just how recently these terms have entered general vocabulary: in the 1995 edition of the general-knowledge board game 'Trivial Pursuit', drones were just male bees and predators were a football boot sold by Adidas.
4. US Air Force, 'MQ-1B PREDATOR', 5 January 2012, <http://www.af.mil/information/factsheets/factsheet.asp?fsid=122>, accessed 8 March 2013.
5. It is difficult to make general statements about endurance, as this very much depends on the aircraft's payload and mission. A 'typical' Predator mission lasts about twelve hours, but it can reportedly stay in the air for more than twice as long.
6. There is no agreement (rather, there is extreme confusion) regarding the classification or categorisation of UAVs.
7. Walter Boyne, 'How the Predator Grew Teeth', *Air Force Magazine* (Vol. 92, No. 7, July 2009).
8. The Reaper is based on the Predator's airframe, but is considerably larger and heavier: it is 11 metres long, has a wingspan of 20 metres, weighs more than 2,000 kg, and can carry a payload of almost the same weight. Due to its increased lifting capabilities, it can be armed with up to fourteen Hellfire missiles, or a combination of missiles and laser-guided bombs. See US Air Force, 'MQ-9 REAPER', 5 January 2012, <http://www.af.mil/information/factsheets/factsheet.asp?id=6405>, accessed 8 March 2013.
9. *Der Spiegel*, 'Der Sensenmann', <http://www.spiegel.de/flash/flash-27187.html>.
10. See, for instance, *Daily Telegraph*, 'In Pictures: Unmanned Drones', 9 December 2011; *GlobalPost*, '(PHOTOS): The Drone Age: UAV Technology'. Also, six out of the sixteen weapon types shown in the *Daily Beast's* 'Weapons Porn' image gallery are UAVs or robots, demonstrating a certain fascination the media has shown with regard to robotic weapons. David A Graham, 'Weapons Porn', *Daily Beast*, 19 September 2009, <http://www.thedailybeast.com/newsweek/galleries/2009/09/19/photos-weirdest-coolest-weapons-in-the-us-arsenal.html#slide0>, accessed 14 March 2013.
11. Rob Crilly, 'Drones: Why the Sky's Not Quite the Limit', *Daily Telegraph* blogs, 20 February 2012.
12. Raf Sanchez, 'US Skies to be Full of Drones', *Daily Telegraph,* 22 April 2012. This article refers to the Federal Aviation Administration's release of documents regarding the agency's UAV authorisation programme. No types of UAVs were named in these documents, which listed entities having received permission to use them for various purposes. Entities included universities that use UAVs to monitor their campuses. While no UAV type was listed, it is virtually impossible for a university to use a $10 million Predator UAV, which requires an elaborate ground station and a whole team to control, to increase campus security.

13. Michael Hastings, 'The Rise of the Killer Drones: How America Goes to War in Secret', *Rolling Stone* (April 2012).
14. *DIE ZEIT,* 'Die Flugautomaten – eine kurze Gattungslehre', 6 December 2012, pp. 2–3.
15. Louise Arbour, 'Le droit international doit encadrer l'usage croissant des drones', *Le Monde*, 5 July 2012. Translation by the author. Original text: 'Ces avions sans pilote, initialement créés pour des missions de reconnaissance, sont de plus en plus utilisés dans le cadre d'attaques aériennes ciblées. Les drones sont un atout opérationnel évident. Peu coûteux, ils ne perdent rien en efficacité. Ils sont rapides, peuvent couvrir de longs trajets et permettent de surveiller la situation au sol dans des zones difficilement accessibles à une altitude de 18 000 mètres.'
16. For another example, see *The Economist*, 'Drones and the Man', 30 July 2011.
17. See, for instance, Lolita Baldor, 'Next Top Guns? Air Force Faces Shortage of Drone Pilots', *NBC News*, 9 August 2012; Rob Blackhurst, 'The Air Force Men Who Fly Drones in Afghanistan by Remote Control', *Daily Telegraph*, 24 September 2012; John Kantara, 'Maschinen Mit Marschbefehl', *Frankfurter Allgemeine Sonntagszeitung*, 18 July 2010.
18. See, for instance, Elisabeth Bumiller, 'A Day Job Waiting for a Kill Shot a World Away', *New York Times*, 29 July 2012; Blackhurst, 'The Air Force Men Who Fly Drones in Afghanistan by Remote Control'.
19. Turkey does not have its own Predator UAVs, but rather has borrowed them from the US Air Force, which deploys them from an air base in southern Turkey.
20. Both the Reaper and the Gray Eagle are based on the Predator's airframe. The latter is only slightly bigger than the Predator, but can carry considerably more armament.
21. France uses an IAI-EADS jointly developed UAV called the Harfang, and the Système intérimaire de drone MALE, which is based on the IAI Heron.
22. Dassault (France) – in co-operation with Alenia Aermacchi (Italy), EADS CASA (Spain), Hellenic Aerospace Industry (Greece), RUAG (Switzerland), Saab (Sweden) and Thales (France) – is currently developing the nEUROn, a combat UAV. There have also been ongoing negotiations regarding Anglo-French UAV co-operation. See Gareth Jennings, 'Neuron UCAV Makes Maiden Flight', *Jane's International Defence Review* (December 2012); Matthew Bell, 'France Enters Talks with Dassault for New Interim MALE UAV', *Jane's Defence Industry*, 21 July 2011.
23. *DefenceTalk*, 'RSAF Welcomes Inauguration of Heron 1 UAV', 28 May 2012, <http://www.defencetalk.com>, accessed 8 March 2013.
24. Armée de l'Air, 'Drones: Harfang', 20 June 2011, <http://www.defense.gouv.fr/air/technologies/aeronefs/drones/drones/(language)/fre-FR#SearchText=harfang#xtcr=2>, accessed 14 March 2013.
25. See Tim Ripley, 'Reaper Control Centre to Open in UK', *Jane's Defence Weekly*, 18 October 2012.
26. These numbers are disputed. See *Defense Industry Daily*, 'Israel Sells Heron UAVs to India', 4 April 2011; Guilem Monsonis, 'UAVs Gaining Currency with Indian Armed Forces', *Indian Defence Review*, 30 October 2012.
27. Exact or even official numbers are difficult to come by. See *Strategypage.com*, 'Heron Hustles after Predator', 13 January 2010.

28. About 400 Predators and Reapers and fewer than 100 Grey Eagles. See International Institute for Strategic Studies, *The Military Balance 2012* (London: Routledge/IISS, 2012).
29. Greg Miller, 'CIA Seeks to Expand Drone Fleet, Officials Say', *Washington Post*, 18 October 2012.
30. German Bundestag, 'Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Alexander Bonde, Winfried Nachtwei, Omid Nouripour, weiterer Abgeordneter und der Fraktion BÜNDNIS 90/DIEGRÜNEN', Drucksache 16/12481, 16 Wahlperiode, 26 March 2009.
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Remotely Piloted Aircraft and International Law

Nathalie Weizmann

MUCH PUBLIC debate has centred on the legality of unmanned aerial vehicles (UAVs)[1] for the application of armed force. Using UAVs, operators who sometimes sit hundreds or thousands of kilometres away are capable of carrying out surveillance over long periods and attacking stationary and moving targets with a wide range of explosive ordnance and a relatively high degree of precision. These capabilities, along with the fact that pilot lives are not at risk, make this new technology particularly attractive to military and security forces.

Nevertheless, the idea of remote warfare has caused much public discomfort on ethical, moral and political grounds. Some have argued that UAVs' heightened utility may increase opportunities to attack, drive war into populated areas and put civilians and civilian objects at greater exposure to incidental harm. Some sources have raised additional concerns about the psychological harm caused to people living under the persistent threat of UAV attacks. Other worries relate to the perceived lack of transparency and accountability surrounding the use of lethal force by UAVs.

This chapter will not address all of the concerns relating to the use of UAVs in the support or application of force, nor will it comment on specific examples of UAV use.[2] This piece will focus on certain questions of legality in military and security operations through the lens of existing international law. International Humanitarian Law (IHL), which governs the use of UAVs in armed conflict, and international human rights law, which applies to their use in situations that do not amount to armed conflict,[3] can provide frameworks in which to consider some of the common concerns that have been expressed about the ways UAVs are used.

How Are UAVs Typically Used?

Unmanned aerial vehicles are able to conduct surveillance for extended periods thanks to both sophisticated sensors and an increased ability to remain airborne for extended periods. Most UAVs are used for intelligence-gathering, surveillance and reconnaissance, both in peacetime and in armed conflict. UAVs can also carry a range of explosive ordnance, including bombs and missiles, and can be armed with precision-guided munitions. The ordnance typically use a combination of blast, fragmentation, penetration and incendiary effects to injure or kill people and damage or destroy objects. Only a small number of countries currently possess armed UAVs.[4]

While small surveillance UAVs may be operated by a single person, larger surveillance and armed UAVs are typically operated and controlled by a crew

composed of a pilot and a payload operator who are supported by a team of signals and imagery intelligence analysts. At present, human operators activate, direct and fire the weapons carried by UAVs. Many armed UAVs can be controlled by operators located hundreds or thousands of kilometres away from the intended target, allowing the crews to be physically absent from the place where the UAV is deployed.

These sophisticated features allow a state to use armed UAVs to conduct surveillance over a given area outside its borders for an extended period of time and to attack stationary targets as well as moving vehicles and persons. Targeting decisions are made not only on the basis of what is observed through the UAV's own sensors, but also on the basis of the operational context and intelligence obtained by the UAV crew from various other sources.

Which Rules of International Law Apply to the Use of Military UAVs?

UAVs can be used directly as weapons platforms from which to launch bombs and missiles, or indirectly as surveillance platforms to provide targeting intelligence in support of attacks carried out by conventional aircraft, artillery, forces on the ground, or other UAVs.

Much unease about UAVs relates to whether their use is lawful under international law. More specifically, questions often arise as to the lawfulness of the threat or use of force (*jus ad bellum*)[5] and the manner in which force is applied (*jus in bello*). The former should not be confused with IHL or international human rights law, which address *how* force may be used in order to ensure a minimum of humanity.[6] International human rights law generally deals with a person's inherent right to be protected against abusive power, while IHL regulates the behaviour of parties to an armed conflict. As the International Committee of the Red Cross (ICRC) is not in the practice of opining on the lawfulness of force from a *jus ad bellum* perspective, this chapter will focus on the rules of IHL and international human rights law as they apply in military and security operations.

In armed conflicts, IHL applies equally to all parties to the conflict regardless of whether their resort to force was lawful. It is a body of law that seeks, for humanitarian reasons, to limit the effects of armed conflict. There are two types of armed conflict: international and non-international. While the former type is waged between states,[7] the latter involves hostilities of a certain intensity between a state and an organised non-state armed group, or between such groups themselves.[8]

A key development in recent years has been the rise of non-international armed conflict with an extraterritorial element. Some of these types of conflict, originating within the territory of a state between government armed forces and one or more organised armed groups, have been known to

'spill over' into neighbouring states. In addition, a non-international conflict can involve multinational armed forces, or forces under the aegis of the UN or a regional organisation, fighting alongside the armed forces of a state in its territory, against one or more organised armed groups.

Some believe that another type of non-international armed conflict can exist across the territory of multiple states, between a state and an organised non-state armed group, such as the United States and Al-Qa'ida. The ICRC adopts a case-by-case approach to classifying the situations of violence occurring in the 'fight against terrorism'. Some situations have been classified as international armed conflict, others as non-international, while various acts of terrorism have been assessed as occurring outside any armed conflict.[9]

IHL does not govern situations of violence that do not amount to an armed conflict. Such situations, which can include internal tensions or disturbances, are governed by international human rights law. This offers guidance on how force can be used by law-enforcement officials 'in self-defence or defence of others against the imminent threat of death or serious injury, to prevent the perpetration of a particularly serious crime involving grave threat to life, to arrest a person presenting such a danger and resisting their authority, or to prevent his or her escape, and only when less extreme means are insufficient to achieve these objectives'.[10]

When used in armed conflict, UAVs must be employed in compliance with applicable IHL treaties and customary law. Outside of armed conflict, UAVs must be used in compliance with the relevant rules of international human rights law. Both the operators concerned and the relevant party or state to which they belong are responsible and accountable for respecting these bodies of law.

Some Concerns Regarding the Use of UAVs in the Application of Force

When new weapons emerge, there is often debate as to whether existing international law sufficiently addresses their legality. Uneasiness has also arisen around the belief that UAVs may increase the opportunities for attacking an adversary and thus put civilians and civilian objects at greater exposure to incidental harm. A number of technical limitations can also make it difficult to distinguish between civilian and military objects or to properly assess the risk of excessive incidental harm to civilians. On the other hand, because UAVs possess sophisticated sensors and are able to conduct surveillance for long periods, they have the potential to increase an operator's ability to exercise the required caution in the timing, location and precision of an attack by directing more precise attacks and thus reducing incidental civilian casualties and damage to civilian objects. Set out below are some thoughts on whether and how IHL provides a framework in which to address some of these issues.

The Legality of New Weapons

There can be no doubt that the longstanding rules of IHL apply to new weapons and to the use of new technological developments in warfare. This is recognised, for instance, in Article 36 of Additional Protocol I to the Geneva Conventions of 1949 (AP I), which requires that each State Party determine whether the employment of any new weapon, means or method of warfare that it studies, develops, acquires or adopts would, in some or all circumstances, be prohibited by international law, including IHL.[11]

This requirement to review the legality of all new weapons arguably applies to all states, regardless of whether or not they are party to AP I. Indeed, every state should ensure that the new weapons it develops or acquires are used in accordance with its international legal obligations. The assessment will entail an examination of all relevant empirical information, such as the weapon's technical description and actual performance, and its effects on health and the environment.[12]

Even in the absence of rules of international law that are specific to UAVs, the longstanding rules of IHL govern their use. In light of the rapid development of weapons technology, it is important that the study, development, acquisition or adoption of military UAVs be subject to legal review.

Claims of Increased Likelihood of Attacks and Incidental Harm

Because UAVs cover vast ranges, have greater persistence, gather more information about the battle space, reduce risks to air crew, and present an attractive alternative to more valuable aircraft, there are claims that this heightened utility may increase opportunities to attack. It has also been alleged that an increase in the likelihood of attacks may cause an associated rise in civilian exposure to harm.

The general rules of IHL applicable to all means and methods of warfare provide general protection to civilian individuals, populations and objects. They apply to any use of UAVs in armed conflict. One of the fundamental rules of IHL requires that parties to an armed conflict distinguish between civilian persons and civilian objects on the one hand, and combatants and military objectives on the other, and that they direct their operations *only* against military objectives.[13]

In international armed conflict, members of the armed forces of a party to the conflict can be lawfully targeted. In non-international armed conflict, members of state armed forces can be lawfully targeted, as can members of an organised armed group of a party to the conflict[14] when their continuous function is to directly participate in hostilities.[15]

Persons who do not fall within these categories are civilians and are entitled to protection against direct attack. There is one exception to this, however. Civilians directly participating in hostilities become legitimate targets of attack, but only for the duration of their direct participation. In order to qualify as direct participation in hostilities, a civilian's specific act must be on a spontaneous, sporadic or unorganised basis and meet the following three cumulative criteria:[16]

1. The act must be likely to adversely affect the military operations or military capacity of a party to an armed conflict or, alternatively, to inflict death, injury or destruction on persons or objects protected against direct attack
2. There must be a direct causal link between the act and the harm likely to result either from that act, or from a co-ordinated military operation of which that act constitutes an integral part
3. The act must be specifically designed to directly cause the required threshold of harm in support of a party to the conflict and to the detriment of another.

Measures in preparation of a specific act of direct participation in hostilities, and the deployment to and the return from the location of the act also form an integral part of that act.[17] When civilians cease their direct participation in hostilities, they regain full civilian protection against direct attack.[18]

As for military objectives, they are defined as follows: the object to be attacked must, by its nature, location, purpose or use, contribute effectively to the military action of the enemy and its partial or total destruction, capture or neutralisation, and must offer – in the circumstances ruling at the time – a definite military advantage. Any object that does not fall under the definition of a military objective is a civilian object and must not be attacked.

Whether or not UAVs actually increase the likelihood of attacks, their operators must comply with these clear IHL prohibitions on attacking civilian persons or civilian objects.

Indeed, civilians who are near a legitimate target are often victims of inevitable side-effects of an attack on it. While it is legally accepted that civilian persons and objects may be incidentally harmed in this way, the IHL rule of proportionality dictates that 'incidental loss' of civilian life or property must not be excessive in relation to the concrete and direct military advantage anticipated from an attack against a military objective. Attacks that do not comply with the rule of proportionality are forbidden.[19]

In addition, precautions must be observed by all parties to an armed conflict in order to avoid or at least minimise such incidental effects. Some of the rules on these precautions are addressed below.

Extraterritorial Targeting of Persons

Over recent years, questions have also been raised about the lawfulness of extraterritorial targeting of persons with UAVs.[20]

As seen above, members of organised armed forces or groups whose continuous function is to conduct hostilities on behalf of a party to an armed conflict can be lawfully targeted. Despite the fact that only combatants are explicitly authorised under IHL to directly participate in hostilities, the reality is that civilians often do so as well. For such time as they are directly participating in hostilities, they lose their protection against direct attack.

Of course, to determine the lawfulness of extraterritorial targeting by a UAV, it will also be important to examine whether the activities of the targeted person are committed within an armed conflict (in which case IHL applies) or have no link to an armed conflict (in which case international human rights law applies).

A particular concern relates to the lawfulness of UAV attacks against persons directly participating in hostilities in connection to a specific non-international armed conflict[21] that has no relation to the state from which they are carrying out their hostilities. Under one view, that person 'carries' an armed conflict with him to that state. In this case, the IHL rules mentioned above on whom may be lawfully targeted would apply here. The application of the rule of proportionality would entail that 'incidental' harm to civilians or civilian objects could be lawful when the targeted person is in their midst. The contrary view, which the ICRC shares,[22] is that the person does not 'carry' the armed conflict with him to the state from which he or she is participating in hostilities. In such a case, and in contrast to the first view mentioned above, the application of armed force against a person in the territory of a non-belligerent state should be governed by the rules of law enforcement under international human rights law.[23]

There have also been cases in which states have extraterritorially targeted individuals whose activity, based on publicly available facts, clearly had no connection to any armed conflict. Here, too, the lawfulness of such an application of armed force would need to be examined under the same human rights law standards: lethal force may be used only if other means are 'ineffective or without promise of achieving the intended result'.[24] If the use of force is unavoidable, the operator must exercise restraint, act in proportion to the seriousness of the offence and the legitimate objective to be achieved, minimise damage and injury, and respect and preserve human

life.[25] In light of these strict human rights standards, it has been argued that the use of UAVs for extraterritorial targeting is almost never likely to be legal outside of an armed conflict.[26]

Feasible Precautions

Because UAVs possess such sophisticated sensors as video and infra-red cameras and are able to conduct surveillance over a given area for an extended period of time, they also have the potential to help direct attacks more precisely against military objectives and thus reduce civilian casualties and damage to civilian objects. As armed UAVs are crewed by a pilot and payload operator and are supported in real time by intelligence analysts, they may be less subject to information overload than, for instance, the pilot of a conventional single-seat fighter-bomber.

On the other hand, UAVs' high altitudes and potentially long engagement ranges can hamper their sensor resolution, posing particular challenges for complying with the fundamental IHL rule of distinction. Moreover, due to limitations in intelligence-gathering and depending on the quality of the information provided by UAV sensors, targets may not be identified correctly and their activities may be mistakenly identified as having military significance. Some have argued that abuses are more likely when a person is disconnected and at a distance from a potential adversary,[27] but there is no evidence that this is true or more frequent in the particular case of UAV operators.[28] The limited capacity of an operator to process a large volume of data, including contradictory data, at a given time, and the supervision of more than one system at a time, have also led to questions about the operator's ability to fully comply with IHL in those circumstances.

These factors, combined with the difficulty of containing the effects of explosive ordnance, mean that civilians might sometimes be mistakenly attacked, and these attacks might sometimes cause excessive incidental injury or loss of life to civilians and damage or destruction to civilian objects.

According to Article 57 AP I and customary IHL applicable in all types of armed conflict, in the conduct of military operations, constant care must be taken to spare the civilian population, civilians and civilian objects. IHL therefore requires that parties to a conflict take feasible precautions in carrying out attacks.[29] This includes doing everything feasible to verify that targets are military objectives. This requires paying close attention to the gathering, assessment and rapid circulation of information on potential targets, which, in turn, depend on the availability and quality of the party's technical resources. A party must use the most effective and reasonably available means to obtain the most reliable information possible before an attack. In case of doubt, additional information must be obtained before an attack is launched.

In addition, a target's sudden appearance may make it necessary to strike within a very short time. In such instances, the need for a rapid reaction will affect the feasibility of certain precautions, as determining the military nature of a target and potential incidental damage will require an expedited analysis. In most cases, those who plan or decide on an attack will base their decisions on indirect information provided by intelligence or reconnaissance (human, aerial, satellite or other) operations. UAVs' enhanced real-time aerial surveillance possibilities therefore have the potential to widen the range of precautionary measures that may be taken in advance of an attack.[30]

IHL also requires that each party to a conflict take all feasible precautions in the choice of means and methods of warfare with a view to avoiding, and in any event minimising, incidental loss of civilian life, injury to civilians and damage to civilian objects. This can entail restrictions on the timing or location of an attack, for instance to avoid attacking a military objective located within a densely populated area if the attack is likely to cause heavy civilian losses. It can also require choosing the axis of attack least likely to cause civilian losses. In light of this, consideration must be given to the use of precision-guided munitions where these are available to the party conducting the attack. If, through the use of UAVs, operators have an increased ability to exercise the required caution in the timing, location and precision of an attack, then UAVs may well – from an IHL point of view – be the preferred option for certain operations.

Conclusion

While UAVs that support or use force are not prohibited, international law clearly circumscribes their use. Operators are bound to comply with IHL or international human rights law, depending on the context. In armed conflict, their use to support or carry out attacks must conform to IHL rules of distinction, proportionality and precautions. Outside of armed conflict, the legality of UAV attacks is subject to the far stricter limits on the use of force under international human rights law and standards. While these legal frameworks can help respond to some of the common concerns about the use of UAVs, they can only be complementary to the growing ethical, moral and political concerns that we so often hear.

The views expressed in this chapter are those of the author and do not necessarily reflect those of the ICRC. The author is grateful to Raymond Smith for his invaluable expertise.

Notes and References

1. UAVs are also known as remotely piloted aircraft (RPA), remotely piloted vehicles (RPV) or simply as 'drones'.

2. The ICRC does not generally comment publicly on specific situations, but rather engages in bilateral and confidential dialogue with authorities.
3. IHL and international human rights law have different scopes of application but are complementary. While international human rights law is considered to apply at all times (constituting the *lex generalis*), the application of IHL is triggered by an armed conflict (constituting the *lex specialis*).
4. Israel, the US and the UK are reported to have conducted attacks using armed UAVs, also known as unmanned combat aerial vehicles (UCAVs). China, Iran and Italy are also reported to have introduced, or be planning to introduce, armed UAVs into service. See IHS Jane's, *All the World's Aircraft: Unmanned*, 38th edition (London: IHS Global Inc, June 2012).
5. The Charter of the United Nations prohibits all UN member states from resorting to the threat or use of force against the territorial integrity or political independence of any state, with the exception of the right of individual or collective self-defence recognised in Article 51 of the Charter and Security Council measures necessary to maintain or restore international peace and security. See United Nations, 'Charter of the United Nations', 1945, 1 UNTS XVI, [UN Charter] Articles 2(4) and 42.
6. See François Bugnion, 'Just War, War of Aggression and International Humanitarian Law', *International Review of the Red Cross* (Vol. 84, No. 847, September 2002), p. 523.
7. Or between a state and a national liberation movement provided the requisite conditions under AP I have been fulfilled (see Art. 1(4) Additional Protocol I to the Geneva Conventions of 1949).
8. A 2008 ICRC Opinion Paper defines non-international armed conflicts as '*protracted armed confrontations* occurring between governmental armed forces and the forces of one or more armed groups, or between such groups arising on the territory of a State (party to the Geneva Conventions). The armed confrontation must reach a *minimum level of intensity* and the parties involved in the conflict must show a *minimum of organization.*' See ICRC, 'How is the Term "Armed Conflict" Defined in International Humanitarian Law?', opinion paper, March 2008.
9. ICRC, 'International Humanitarian Law and the Challenges of Contemporary Armed Conflicts', Report to the 31st International Conference of Red Cross and Red Crescent, doc. 31IC/11/5.1.2 [ICRC Challenges report], Geneva, Switzerland, 28 November–1 December 2011, pp. 49–51.
10. See 'Basic Principles on the Use of Force and Firearms by Law Enforcement Officials Adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders', Havana, Cuba, 27 August–7 September 1990 [Basic Principles], Rule 9. These rules define when and how law-enforcement officials are permitted to use force. Law-enforcement officials include 'all officers of the law, whether appointed or elected, who exercise police powers, especially the powers of arrest or detention. In countries where police powers are exercised by military authorities, whether uniformed or not, or by State security forces, the definition of law enforcement officials shall be regarded as including officers of such services.'
11. Additional Protocol I does not specify how each State Party should determine the legality of the use of new weapons, means and methods of warfare that it

studies, develops, acquires or adopts. It is up to each state to set up its own review mechanism.

12. ICRC, 'A Guide to the Legal Review of New Weapons, Means and Methods of Warfare, Measures to Implement Article 36 of Additional Protocol I of 1977', 2006, <http://www.icrc.org/eng/resources/documents/publication/p0902.htm>, accessed 13 March 2013.
13. Additional Protocol I, Articles 48, 51(2) and 52(2).
14. See Nils Melzer, 'Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law', *International Review of the Red Cross* (Vol. 90, No. 872, December 2008), adopted by the Assembly of the International Committee of the Red Cross on 26 February 2009 [DPH Guidance], pp. 21 and 30. See also ICRC Challenges report, p. 42.
15. This distinguishes members of the organised armed group from civilians who directly participate in hostilities on a merely spontaneous, sporadic or unorganised basis, or who assume exclusively political, administrative or other non-combat functions.
16. DPH Guidance, 'Chapter V: Constitutive Elements of Direct Participation in Hostilities'.
17. DPH Guidance, 'Chapter VII: Temporal Scope of the Loss of Protection'.
18. The ICRC's criteria for 'direct participation in hostilities' are not universally accepted, and there are concerns that the definition is either too narrow or too broad. See Ryan Goodman and Derek Jinks, 'ICRC Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law: An Introduction to the Forum', *New York University Journal of International Law and Politics* (Vol. 42, No. 3, Spring 2010), p. 637; Noam Lubell, *Extraterritorial Use of Force Against Non-State Actors* (Oxford: Oxford University Press, 2010), p 96; Michael Schmitt, 'The Interpretive Guidance on the Notion of Direct Participation in Hostilities: A Critical Analysis', *Harvard National Security Journal* (Vol. 1, May 2010), p. 37; Kenneth Watkin, 'Opportunity Lost: Organized Armed Groups and the ICRC "Direct Participation in Hostilities" Interpretive Guidance', *New York University Journal of International Law and Politics* (Vol. 42, No. 3, Spring 2010), p. 692; Robert Gehring, 'Loss of Civilian Protections under the Fourth Geneva Convention and Protocol I', *Military Law and the Law of War Review* (Vol. 19, 1980), p. 19.
19. Article 51(5)(b) of Additional Protocol I; see also Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law, Vol. I: Rules* (ICRC/ Cambridge University Press, 2009), rule 14.
20. Extraterritorial targeting is understood as the use of lethal force against a specific person – or persons – by agents of one state in the territory of another.
21. In an international armed conflict, the extraterritorial use of UAVs does not raise the same concern (but of course continues to be governed by the general rules of IHL).
22. ICRC Challenges report, p. 22. For more on the geographical scope of armed conflict, see Noam Lubell and Nathan Derejko, 'A Global Battlefield? Drones and the Geographical Scope of Armed Conflict', *Journal of International Criminal Justice* (Vol. 11, No. 1, forthcoming 2013).
23. However, the fact that the state using force abroad lacks effective control over the person (or territory) for the purposes of establishing jurisdiction raises questions about the extraterritorial applicability of human rights law. Despite the views of a few

important dissenters, it is widely accepted that international human rights law does apply extraterritorially. It is submitted that customary human rights law prohibits the arbitrary deprivation of life and that law-enforcement standards fall within customary human rights law.

24. Basic Principles, rule 4.
25. Basic Principles, rule 5.
26. Report of the Special Rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston, A/HRC/14/24/Add.6, 28 May 2010, § 85.
27. *Ibid.*, § 84.
28. For a description of an operator's daily work duties, see Megan McCloskey, 'The War Room: Daily Transition between Battle, Home Takes a Toll on Drone Operators', *Stars and Stripes*, 27 October 2009, <http://www.stripes.com/news/the-war-room-daily-transition-between-battle-home-takes-a-toll-on-drone-operators-1.95949>, accessed 13 March 2013.
29. Article 57, AP I states that:
    1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.
    2. With respect to attacks, the following precautions shall be taken:
        (a) those who plan or decide upon an attack shall:
            (i) do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them;
            (ii) take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss or civilian life, injury to civilians and damage to civilian objects;
            (iii) refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
        (b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
        (c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.
    3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.

30. See Jean-Francois Queguiner, 'Precautions under the Law Governing the Conduct of Hostilities', *International Review of the Red Cross* (Vol. 88, No. 864, December 2006), p. 793.

Can New Capabilities be Illegitimate?

CAPABILITY DEVELOPMENT has become an increasingly complex business, comprising much more than the development (or adaptation) of innovative technology for military use. A growing body of conceptual and doctrinal advice addresses the use of technological innovations. Often, such advice precedes the decision to acquire new capabilities, in order to respond to concerns related to their anticipated political or military impact. Following acquisition, in turn, this advice percolates through ever-more sophisticated political or military direction, guidance and instructions. Operation plans spanning hundreds of pages – like those for NATO's current operations[1] – reflect this growth in complexity. Concepts, doctrines and leadership have, in their own respective ways, kept pace with technological innovation.

This trend notwithstanding, the development and acquisition of new capabilities seems to prompt a heretofore unknown degree of disquietude – sometimes even within militaries – in light of common perceptions or expectations regarding their actual, prospective and future use. Their technological differences aside, it seems that capabilities involving remotely operated, automated or autonomous systems are particularly prone – though not the only instances of technological evolution – to evoke such uneasiness.

As a result, the legitimacy of various technological innovations in being, or their military use, can come into doubt. This can make the development and acquisition of these capabilities politically hazardous. Against this backdrop, liberal constitutional democracies might gradually forfeit the security dividend they derive from having such technological advantages in their armed forces. In the long run, surrendering these advantages could have obvious and undesirable effects on national security and expeditionary capability.

The Broader Context

Contemporary security and defence policies address increasingly complex matrices of risks and threats. They expect armed forces to detect, deter and defend against the full spectrum of risks and threats – regardless of the origin, originator, the means and methods used, and the domains within which they emerge. To meet this expectation, armed forces resort to the concept of 'adaptiveness': an amalgam of a new military mindset and cutting-edge equipment. Adaptiveness tackles the increasing complexity of risks and threats, as well as the diversification of their originators and origins, by substituting the ability to develop and implement tailored responses to fundamentally different situations for earlier 'one-size-fits-all' approaches. Security force assistance, stabilisation, counter-piracy, counter-terrorism, counter-insurgency, protection of civilian populations and ballistic-missile defence place vastly different demands on the forces they are assigned to.[2]

However, they have one common denominator: that is, they require military personnel to imagine and plan for the unexpected, and need equipment to credibly deliver the desired effects.[3] Given contemporary innovation cycles, reaching and maintaining adaptiveness depends on continuous, unwavering effort; borrowing language from the realm of politics, the resulting need for enduring capability development demands no less than an 'institutionalised revolution'.

Contemporary societies, many of which have become increasingly 'post-heroic', have developed disenchantment, concern or even angst about innovative new technology or its use. Political demands or policy decisions regarding, for instance, the peaceful use of nuclear energy or genetically modified organisms in the food chain only mark the tip of the iceberg; questions asked about any innovative technology may have a direct effect on capability development. In its report to the 2011 Conference of the Red Cross and Red Crescent Movement, the International Committee of the Red Cross (ICRC) approached such questions from the perspective that 'applying pre-existing legal rules to a new technology raises the question of whether the rules are sufficiently clear in light of the technology's specific characteristics, as well as with regard to the foreseeable humanitarian impact it may have'.[4] As far as 'new technologies of warfare' are concerned, the ICRC put a spotlight on cyber-warfare and remote-controlled, automated and autonomous weapons systems. Information and communication technology in general – earth sensing, geo-location, surveillance and tracking both on earth and in outer space – might likewise attract scrutiny. Throughout history, in many societies the reflex to angst has been a call for a ban, concerns have translated into appeals for restrictions, and even moderate reluctance may have prevented innovations from being wholeheartedly embraced. As a result, unequivocal support for the necessary institutionalised revolution of military capabilities cannot be taken for granted.

Disenchantment, concern or angst often represent serious value judgments rather than just irrational emotions. In particular, value judgments rooted in humanitarian motives tend to limit the level of tolerance of unpleasant side-effects of hostilities. This is where, and why, Article 36 of Additional Protocol I to the Geneva Conventions (henceforth, AP I) comes into play.[5] Transcending the realm of ethics, value judgments frequently also seek a complementing expression in the sphere of law. Using legally entrenched processes and procedures as a transmission belt, they may entreat the alteration of existing legal frameworks (by way of reinterpretation or amendment) or the introduction of new rules. Since Article 36 of AP I extends the reach of the law of armed conflict into capability development, it is the port of entry to the legal domain for value judgments on the manifestation of the institutionalised revolution of military capabilities. Accordingly, Article 36 of

AP I influences how conversations regarding emerging and future capabilities address their legal and ethical aspects.

Legitimacy, Lawfulness, Policy and Politics

Legitimacy has multiple sources. Congruence with value judgments pertaining to the realm of ethics is one of its cornerstones. Law oftentimes condenses such value judgments; if it does, its principles and rules reflect an underlying ethical consensus. Depending on the method of law-making, this consensus usually represents the views of a simple or qualified majority.[6] Less frequently, such consensus may rest on unanimity. Even then – as in the case of unanimously adopted international agreements – ethical dissent may exist; it may simply lack enough support for formal objection.

The structure of the relationship between ethics (value judgments) and law (legal principles and rules) begets three parameters important to conversations on new capabilities. First, legitimacy stands besides lawfulness in its own right. Second, some value judgments may not be reflected in legal principles and rules at a given time; lawfulness understood simply as compliance with existing legal principles and rules might hence fall short of satisfying all parameters of legitimacy. Third, inasmuch as lawfulness is both a derivative and a source of legitimacy, challenges to lawfulness entail implicit challenges to legitimacy.

These parameters have critical importance for policy as well as politics. Innovative capabilities may have to pass two different tests. Article 36 of AP I establishes clear criteria for testing lawfulness. By contrast, there are no agreed ethical standards for the purpose of testing legitimacy. This difference extends to the prospect of success of challenges to the lawfulness and legitimacy of innovative capabilities. Experience indicates that it is near-impossible to successfully challenge the lawfulness of the large majority of capabilities – existing, emerging or future. Capabilities are hardly ever fielded as surprise innovations. The review processes accompanying capability development provide continuous opportunities to present, assess and address legal concerns. New capabilities would only be considered unlawful if their employment were prohibited in all possible circumstances. Such completely banned capabilities are extremely rare.

By contrast, challenging the *legitimacy* of innovative capabilities or their military use is more viable. The role of Article 36 of AP I is key in understanding this difference. Whilst this provision shapes conversations regarding the lawfulness of emerging and future capabilities by virtue of its criteria, it is without prejudice to conversations regarding their legitimacy. Moreover, whilst Article 36 of AP I relates the lawfulness of new capabilities to the prospects for their employment, challenges to the legitimacy of these

capabilities have also relied on assertions that certain new capabilities are intrinsically illegitimate – that they are essentially evil.

Conversations Regarding Lawfulness

Article 36 of AP I mandates a comprehensive international law review to be an integral part of capability development.[7] Its test criteria name the activities warranting such an international law review, as well as the benchmark against which new capabilities ought to be tested.[8] This benchmark identifies the likely content of conversations regarding lawfulness. Thus, each international law review is supposed 'to determine' whether the employment of a new weapon, means or method of warfare 'would, in some or all circumstances, be prohibited' by AP I or by any other rule of international law binding upon a given state.

Attention should be drawn to those aspects of conversations regarding the lawfulness of new capabilities that Article 36 of AP I does not address. Since this provision is silent regarding the process or procedure guiding such conversations, as well as the range of their participants, these aspects have remained within states' sovereign margins of appreciation. As a rule, states conduct the major steps of these conversations outside of the public domain.[9]

Conversations about Legitimacy

Conversations about the lawfulness of government activities, including capability development, cannot determine the outcome of debate about legitimacy. Discussion about legitimacy is fundamentally different to that regarding lawfulness because the two rest on different premises. Defining ethical standards is no government's exclusive business; no governmental actor is competent to do so, or to establish a process supposed to generate binding value judgments. Hence, conversations regarding value judgments may involve various societal actors. Moreover, they need to agree on the ethical benchmarks as well as the processes or procedures guiding their application.

In light of this, conversations regarding the legitimacy of new capabilities have two important aspects. First, they allow for the re-use of any objections raised against the lawfulness of the capabilities in question: concerns feeding into critical perspectives regarding lawfulness can be 'recycled' for the purposes of conversations regarding legitimacy. Often these concerns are initially presented as challenges to the determination reached under Article 36 of AP I. They mainly relate to the principle of distinction (between combatants and civilians); however, they also reflect the character of lawfulness as a source of legitimacy. Consequently, doubts as to whether new capabilities really withstand the test under Article 36 of AP I challenge both their lawfulness and legitimacy.

Second, both the trajectory of ethical conversations and their outcome may be harder to influence, let alone predict, than the result of an international law review of new capabilities. The different range of participants may change the nature of the conversation, which may therefore involve elements of public campaigning and advocacy rather than being confined to expert deliberations. Moreover, the different method for establishing benchmarks as well as the processes or procedures guiding their application may result in a different balance between security concerns and humanitarian motives.

This difference between conversations regarding legitimacy and lawfulness matters. Even manifest lawfulness of certain capabilities may turn out to be insufficient to foster solid and sustainable legitimacy.[10] The example of cluster ammunitions highlights this point. The Cluster Munitions Coalition's campaign was instrumental in eroding the legitimacy of such ordnance, notwithstanding the fact that, at the time of the negotiations, they were perfectly lawful as such, and that none of the disputed modalities of employment was manifestly unlawful.[11] Each and every manifestation of the institutionalised revolution of military capabilities may face similar challenges.

So What? Testing Innovative Capabilities

It seems that in developing their positions, critics of existing or new capabilities tend to place particular emphasis on concerns they can raise against both the lawfulness and legitimacy of such capabilities. This method of steering conversations regarding the lawfulness and legitimacy of capabilities relies on the likelihood that unsuccessful challenges to the *lawfulness* of any capability have significant prospects for success when re-launched against its *legitimacy*.[12] The evolving unprecedented strength of critical perspectives concerning innovative capabilities might hence indicate that conversations concerning capability development have become more volatile, and that the equilibrium of positions in favour and against may be about to change.

Testing Lawfulness

Conversations regarding the lawfulness of both existing and new capabilities involve few surprises, if any. Capability development usually spans periods of time within which continuous international law review can address shortcomings as they occur, facilitating a lawful end result accordingly. The stamp of approval put on new capabilities sticks; once determined to be lawful under Article 36 of AP I, capabilities need not be tested for lawfulness again.

International law's lack of provisions requiring, for instance, a periodic review of in-stock capabilities is not a deficiency. Few capabilities remain unchanged. Updates, upgrades, adaptations and similar alterations, unless insignificant, ought to be reviewed with a view to confirming the lawfulness

of the capability they alter. Moreover, within their respective scopes of application, the legal principles and rules applied during the international law review of a given capability are equally relevant to activities involving that capability. This legal framework leaves no loophole.

However, nothing prevents conversations regarding the lawfulness of capabilities from being considered unsatisfying. Both the benchmark set by Article 36 of AP I and the structure of conversations regarding lawfulness may contribute to such dissatisfaction. Article 36 of AP I responds to manifest unlawfulness of capabilities, rather than to concerns about their lawfulness. In applying this benchmark, governments stay within bounds if they determine that a capability is lawful as long as one lawful modality of employment exists, provided they have reason to assume that they can effectively prevent unlawful modalities of employment.[13]

In practice, this means that governments can dismiss non-compelling critical positions on lawfulness of a new capability for as long as they are able to present a supportive position. If they can, it does not matter, for the purpose of Article 36 of AP I, whether a government's position may be considered weaker than the critical positions they are called upon to address.

Conversations regarding the prevention of unlawful modalities of employing new capabilities, in turn, need not yield absolute certainty in this respect. Neither military equipment nor the personnel using it can be, or need to be, perfect. In particular, neither unpredictable human errors nor unpredictable technological malfunctions would affect an assessment that a government can effectively prevent unlawful modalities of employment.

Testing Legitimacy

In responding to manifest unlawfulness of capabilities rather than to concerns about their lawfulness, Article 36 of AP I is without prejudice to the impact these concerns have on their legitimacy. The following synopsis of key critical perspectives towards innovative capabilities indicates how unsuccessful challenges to their lawfulness may be turned into viable challenges to their legitimacy.

Conversations regarding military capabilities attract various concerns which usually reflect three major lines of thought:

- First, they assert that new capabilities may undermine the prohibition on the use of force in international relations
- Second, they contend that given capabilities cannot be lawfully employed within the object and purpose of the relevant legal principles and rules

- Third, they suggest that a new capability might obstruct enforcement of the law of armed conflict.

The reasoning rebutting these lines of thought essentially addresses their legal content; it might hence fall short of sufficiently dealing with their coinciding ethical elements.

In addition to these three lines of thought, some critics of new capabilities try to aggregate key points thereof in an effort to foster assertions that certain new capabilities are intrinsically illegitimate. Often, such positions seem to grow independently of the arguments they originally derive from. If this happens, demonstrating that one or more of the original lines of thought were flawed will not cause the assertion that a new capability is illegitimate to be altered; this frequently reflects a fundamental opposition to warfare as such. In that case, such positions represent one possible ethical viewpoint but, given their uncompromising nature, are hardly capable of being factored into conversations whose result is not predetermined at their outset.

New capabilities are often said to lead to arms races and make conflict more likely. This includes the notion that they could affect the position of neutral states or contribute to a militarisation of internationalised domains such as outer space and cyberspace. However, new capabilities also sustain states' ability to effectively exercise their inherent right of self-defence, including through more credible deterrence. Contrary to criticism, cyber-capabilities use a new domain of warfare that is too different from territory under sovereign control for it to be assimilated thereto. Information and communication technology, as it stands, lacks the capacity to effectively control, for example, the routing of packets. Accordingly, routing through nodes located in neutral states does not amount to either a violation of neutrality by parties to an armed conflict, or support to one such party provided by the neutral state. Space law does not prohibit military use to sustain preparedness for, and exercise the right of, self-defence. Consequently, new capabilities usually bring to bear the security dividend associated with technological advancement. Moreover, policy decisions regarding the use of force are driven by values or interests, as the case may be, rather than capabilities.

Modalities of employment are frequently discussed in the light of the distinction, mandated by law, between military objectives and civilians, civilian populations or civilian objects. In particular, lawful collateral damage seems to be intolerable from many political and ethical standpoints. However, innovative capabilities, including those which increase firepower, do – or at least, depending on one's perspective, can – reduce the toll of armed conflict since they offer improved intelligence or added precision, and facilitate prudent planning and execution of tactical-level operations. At the same time, such innovative capabilities may even entail a humanitarian

benefit inasmuch as they sustainably reverse the trend, still prevailing in many contemporary armed conflicts fought with dated equipment, towards more civilian victims.

Finally, new capabilities do not obscure the accountability of humans. It is true that innovative technologies like remote control, automation or autonomy may reshuffle responsibilities among those involved in their employment. However, accountability may shift from on-scene commanders to, for example, programmers or policy-makers, rather than impersonal machines. If investigators, prosecutors and judges adapt their technological knowledge, they can continue to perform their tasks in enforcing the law of armed conflict. Throughout history, war crimes have been committed by people rather than equipment – and it seems unlikely that this is going to change.[14] Rather, change may occur as programmers and policy-makers might become increasingly likely targets of war-crimes investigations. Whilst this likelihood may cause unease amongst the groups in question, it is part and parcel of civilian superior responsibility as enshrined in the Statute of the International Criminal Court – provided that 'autonomous' robots are considered 'subordinates' in the same way as soldiers, who do not cease to be 'autonomous' as human beings when wearing a uniform.

Despite the strength of the arguments summarised, alignment with positions in favour or against new capabilities will by and large depend on premises situated somewhere between humanitarian idealism and pragmatic realism. Such premises determine the extent to which potential abuses of power will matter in affording the benefit of the doubt, or certain unpleasant realities of warfare will be tolerated as a given fact. Those participants in ethical conversations who retain doubts regarding the lawfulness of a capability may emphasise the existence of such doubts and portray them as indications of weak, or faltering, legitimacy. Since perceptions of legitimacy may respond strongly to such doubts, they may amount to viable challenges to the legitimacy of emerging or future capabilities. Some may argue (as they have done before and continue to do so with regard to new capabilities and domains) that humanitarian arms control is the best way to overcome such doubts.

Conclusions

Leaving biological and chemical weapons aside,[15] it is by and large inconceivable that new capabilities leveraging innovative technologies are inherently illegitimate. They may run the risk of being considered illegitimate nevertheless. Conversations regarding their legitimacy will happen; like in many other contexts, one cannot choose not to communicate. Within these conversations, even the manifest lawfulness of given capabilities may not sustain their legitimacy. Following the examples of the campaigns against landmines and cluster munitions, actors opposed to the development

of innovative capabilities may need to do little more than cast doubt on the validity of such assessments in their effort to eventually collapse the legitimacy of the capabilities in question.

If the balance between security concerns and humanitarian motives in conversations regarding the legitimacy of emerging and future capabilities is indeed shifting, then defending their lawfulness will not suffice to sustain the institutionalised revolution of military capabilities. The changing nature of the conversations regarding the lawfulness and legitimacy of innovative capabilities does not, however, affect the security dividend they uniquely procure. Prudent efforts supporting the lawfulness and legitimacy of emerging and future capabilities for the benefit of national and international security may reverse this undesirable trend.

The author is an international security professional in government service. Whilst the author's identity is known to the editors, it cannot be revealed to a broader audience.

Notes and References

1. As a rule, operation plans are neither published nor otherwise available in the public domain. However, selected parts of them may be included by way of reference in documents accessible by the public. See, for instance, the Department of Defense, 'Report on Progress toward Security and Stability in Afghanistan', submitted to Congress, 2010, <http://www.defense.gov/pubs/November_1230_Report_FINAL.pdf>, accessed 13 March 2013. See also a briefing on stability operations, which may have become public without appropriate approval, by Regional Command East Combined Joint Task Force, <http://info.publicintelligence.net/USArmy-StabilityOps.pdf>, accessed 13 March 2013.
2. Some of these demands may also depend on the legal nature of the situation in which these missions or campaign themes are supposed to be pursued. Some related questions of international law have long been, and are likely to remain, controversial.
3. Without such credibility, deterrence is an illusion rather than an achievable aim.
4. International Committee of the Red Cross (ICRC), 'International Humanitarian Law and the Challenges of Contemporary Armed Conflicts', official working document of the 31st International Conference of the Red Cross and Red Crescent, doc. 31IC/11/5.1.2, Geneva, Switzerland, 28 November–1 December 2011, Ch. V.
5. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977.
6. It is understood that various factors influence consensus-building regardless of whether a quorum is achieved for the adoption of a (statutory) law. For instance, a given majority's views may be mitigated by the respect it pays to the (human) rights of the minority.
7. As the ICRC observes, 'Several States, including States not party to Additional Protocol I, have implemented this requirement'. See Jean-Marie Henckaerts and

Louise Doswald-Beck, *Customary International Humanitarian Law, Vol. I: Rules* (Cambridge: Cambridge University Press, 2005), p. 250.

8. Article 36 of AP I applies to the study, development, acquisition or adoption of a new weapon, means or method of warfare.
9. There may be various reasons not to discuss the legal ramifications of emerging capabilities in the public domain. Apart from their possible nature as trade secrets, they would seem to represent works in progress and by necessity be subject to improvement. That aside, incidents of leaked information regarding legal assessments of new technologies' modalities of use are nevertheless well known. It may be assumed that such legal assessments leverage insights drawn from, for instance, concept development and experimentation, including modelling and simulation, war gaming or closed meetings of legal experts.
10. Key examples can be drawn from the ultimately successful efforts to outlaw anti-personnel landmines and cluster ammunitions. Of the many arguments used in support of their alleged illegitimacy and built upon principles of the law of armed conflicts, those related to distinction were presented most powerfully. Usually this included the 'visualisation', from a victim's perspective, of undoubtedly undesirable side-effects of their use.

    With these examples in mind, it should be easy to see that the legal requirement to prevent excessive collateral damage, including that likely to derive from the long-term side-effects of, for instance, unexploded ordnance, illustrates particularly well how the 'recycling' of concerns can involve putting a spin on them. Under Article 51(5)(b) of AP I, attacks (defined as 'acts of violence against the adversary, whether in offence or in defence' by Article 49(1) of AP I) are at variance with the principle of distinction if they 'may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated'. This provision indicates that, from a legal perspective, the principle of proportionality may be regarded as one manifestation of distinction.

    Failure to demonstrate that certain cases of collateral damage are unlawful would not necessarily prevent anyone from asserting that they are illegitimate based on a threshold of excessiveness which attaches significantly less weight to military success than both the law of armed conflict and prevailing policies concerning the conduct of hostilities by a state's armed forces.
11. The Convention on Cluster Munitions was adopted at a diplomatic conference in Dublin on 30 May 2008, with 107 states participating.
12. The principle of distinction is the source of various concerns related to the protection of civilians which, if unsuccessfully raised against the lawfulness of a given capability, can be re-launched against its legitimacy. For instance, the ICRC expressly raises doubts as to whether cyber-weapons can be used in congruence with the principle of distinction, including proportionally. ICRC, 'International Humanitarian Law and the Challenges of Contemporary Armed Conflicts', pp. 37–38.
13. Article 36 of AP I requires the review of new capabilities with a view to prohibitions that apply 'in some or all circumstances'. It would be counterintuitive to expect states to consider unlawful a capability whose employment would be prohibited in some

circumstances only. Thus, an obligation to abstain from introducing a weapon, means or method of warfare cannot arise except if their employment would be prohibited in all circumstances.

14. Even if technology did enjoy 'autonomy' in the true sense of the meaning given to this term, it would enjoy such autonomy in accordance with a man-made decision, and subject to no less human control than, for example, small units or sub-units of human soldiers operating 'autonomously'.

    The ICRC defines an autonomous weapon system as 'one that can learn or adapt its functioning in response to changing circumstances in the environment in which it is deployed'. It believes that a 'truly autonomous system would have artificial intelligence' and observes that 'Such systems have not yet been weaponized'. ICRC, 'International Humanitarian Law and the Challenges of Contemporary Armed Conflicts', p. 39.

15. It seems to be commonly accepted that biological and chemical weapons inadvertently cause unnecessary suffering, meaning that they fail to stay within the bounds of the fundamental principle that 'In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited' (Article 35 of AP I). This principle does not affect the right to weaken enemy forces to win the war. It does, however, require abstention from 'the employment of arms which uselessly aggravate the sufferings of disabled men, or render their death inevitable'; the earlier perception that soldiers are expendable was substituted for the understanding that 'the employment of such arms would … be contrary to the laws of humanity'. International Military Commission, 'Declaration Renouncing the Use, in Time of War, of Explosive Projectiles under 400 Grammes Weight', Saint Petersburg, 29 November/11 December 1868.

    The Hague Declaration Concerning Asphyxiating Gases, of 29 July 1899, the first of its kind to outlaw certain chemical weapons, expressly builds on the Saint Petersburg Declaration. The same applies to biological weapons. In addition, such weapons, if used in areas where civilians are present, would also be indiscriminate by their very nature.

Tele-operated Weapons Systems: Safeguarding Moral Perception and Responsibility

Alex Leveringhaus and Tjerk de Greef

FOR THE past twenty years or so, the issue of military humanitarian intervention has featured prominently on the political and academic agenda.[1] For the purpose of this chapter, the authors define military humanitarian intervention as 'the use of force by a state or group of states against a target state, or non-state actors operating in the target state's territory, in order to halt wide-spread and grave atrocities occurring within the target state's boundaries'. The discourse over intervention is wide-ranging. One issue that deserves more attention is the impact of weapons technology on interventionism. Commenting on NATO's intervention in Kosovo in 1999, for instance, the academic and politician Michael Ignatieff speaks of 'virtual war', where NATO forces, supported by computer-based targeting systems and more traditional forms of air power, did the fighting, but only 'Serbs and Kosovars did the dying.'[2] NATO's service personnel, Ignatieff shows, were removed from the actual combat zones, but with the help of modern targeting systems could carry out military missions.

Not least due to the rise of tele-operated vehicles over the last ten years, the issues identified by Ignatieff are likely to become even more prominent in the future. A machine is tele-operated in the sense that it is remote-controlled by an operator who receives images picked up by the machine's sensors. The images are transmitted via a satellite-based video link. Based on the information he or she receives, the operator can issue commands to the system. Unmanned aerial vehicles (UAVs) are the best-known representatives of tele-operated systems in the military. Originally designed for reconnaissance and surveillance missions, they are nowadays capable of carrying a payload, which, for instance, is why they are used – including by the CIA – for the morally and legally controversial practice of targeted killings. Operators can make life-and-death decisions often thousands of miles away from theatres, while their UAV is airborne close to the actual combat zone. Since UAVs are widely used in the military, this chapter largely focuses on them.

In a number of recent contributions to the debate over military intervention, philosophers have explicitly welcomed the use of UAVs.[3] Firstly, for reasons of proportionality, they argue, the use of UAVs is desirable. Using UAVs to carry out, say, targeted killings leads to less damage and destruction than a large-scale military operation with boots on the ground. Secondly, Western states in particular are under pressure to minimise casualties amongst their own service personnel, especially during operations that are not directly

classifiable as self-defence.[4] Indeed, one of the morally and politically attractive features of UAVs is their ability to protect the lives of service personnel.[5] By minimising the risks faced by service personnel, they might also reduce the reluctance of powerful states to halt atrocities.

However, in order to arrive at an informed opinion about whether UAVs should be deployed during military humanitarian interventions, more information is needed about them. Research on UAVs in general and their use during military humanitarian intervention in particular is in its infancy, but is likely to become more important in the future. This chapter explores how the use of UAVs impacts on the moral perception of those who operate them. The issue of moral perception, in fact, is crucial for a commitment to responsibility within the armed forces.

The chapter begins with some brief comments on the nature and relevance of moral perception, before continuing with some observations on the challenges tele-operated weapons pose to moral perception. Finally, the authors make recommendations for the design of tele-operated systems. There are important choices to be made, and sound design is always 'design for responsibility' – or so it shall be argued.

Moral Perception

The concept of moral perception is central to the practice of holding individuals responsible for their actions. Since the Nuremberg Trials, it also plays a major role in international law. Roughly, the concept refers to the knowledge of the morally relevant facts in a particular situation. In holding individuals responsible for their actions, it is assumed that they have acted with knowledge of morally relevant facts. Conversely, in order to be exculpated from wrongdoing, an individual has to prove that he could not have acquired knowledge of the morally relevant facts. Since Nuremberg, combatants need to at least meet the moral perception criterion in order to be exculpated from wrongdoing.[6] They must prove that, based on the information they had at the time, they thought an order was legitimate. Knowledge of the morally relevant facts enables soldiers to apply the key principles of discrimination, necessity and proportionality in order to assess an order.

Arguably, tele-operated vehicles transform the way in which soldiers acquire knowledge of relevant moral facts. UAVs introduce (amongst other things) an element of distance, removing their operators from the actual battlefield. True, as Ignatieff's idea of 'virtual war' implies, the trend towards greater distance is nothing new in military technology. Weapons development has long permitted targeting at ever-greater distances. What differentiates tele-operated weapons from earlier systems, however, is that they, in principle, lead to a richer situational understanding. Contemporary UAVs, for instance, use a sophisticated set of sensors to offer high-resolution images

of a particular combat situation in real time. This is different from, say, naval defence systems where a potential target appears as an abstracted symbol on the screen. Further, unmanned aerial vehicles can remain airborne for long periods of time and this may enable their operators to get a better understanding of, say, patterns of life. Taken together, it appears that UAVs potentially lead to better targeting decisions because operators and their superiors will have more information and, therefore, better knowledge of morally relevant facts – or so one could argue.

On a more balanced analysis, it is clear that tele-operated systems can have both beneficial and disadvantageous impacts on moral perception. By removing operators from theatres, the possibility of death or serious injury amongst service personnel decreases greatly. This may have positive effects on moral perception. Given that soldiers do not face an immediate threat to their safety, the stress they experience in combat is diminished. Stress affects moral perception because it influences how human beings interpret their environment and frame certain issues. To illustrate the point, consider the infamous My Lai massacre that occurred during the Vietnam War. Fearing that the inhabitants of the hamlet of My Lai were Vietcong guerrillas posing as civilians, American soldiers experienced high levels of stress and, as a result, failed to apply the discrimination criterion accurately. This led to a terrible massacre. A decrease in stress, then, might lead to greater awareness as well as more accurate interpretations of morally relevant facts in a combat situation. If this is true, the impact of tele-operated weapons on moral perception seems positive, rather than negative.

That said, the reduction of stress can have negative effects. While it is correct that negative stress resulting, say, from fear of loss of life diminishes human decision-making capacities, some forms of stress can have positive effects on an operator's alertness. It has, for example, been demonstrated empirically that boring work conditions impact negatively on information processing and performance.[7]

There is another worry about the impact of distance on the moral perception of operators. Operators gather information from onboard sensors, mainly in the form of video feeds. However, the temptation to rely exclusively on information operators receive from their UAVs should be cause for concern. The onboard sensors installed in UAVs, naturally, offer a bird's-eye perspective. While this perspective has advantages, it may make it difficult to interpret human behaviour. Facial expressions or gestures, for instance, are important to determine whether someone is posing a material threat or not – but this aspect of human conduct may be lost completely to an operator due to his or her detached perspective. Moreover, onboard sensors do not necessarily enable operators to understand the social dynamics of a conflict. They may reveal *who* participates in conflict; but they do little to show

why some people participate in conflict. Imagery intelligence alone cannot substitute for on-the-ground intelligence-gathering and first-hand reports.

Finally, it is important to note that the amount of information operators receive has an impact on moral perception. On the one hand, operators may receive too little information; machines might not transmit certain information that a human being would have picked up. This problem is particularly acute with operationally autonomous machines that can carry out tasks, such as information-gathering, without assistance from an operator. Depending on their particular task, autonomous UAVs may process and filter large amounts of information themselves before passing on selected information to an operator. On the other hand, tele-operated weapons might supply operators with too much information. As UAVs can have many sensors and can remain in the air for long periods of time, processing the amount of information they provide may be difficult even for a small group of operators. In both cases – the undersupply and oversupply of information – it becomes difficult for operators to filter out morally relevant facts.

If these brief observations are accurate, the introduction of tele-operated weapons in general, and UAVs in particular, could go either way: it could increase or decrease the ability of individuals to acquire morally relevant facts. This possibility leads to two immediate requirements.

Firstly, and from a more technologically oriented perspective, engineers designing military equipment must be sensitive to how different types of technology impact on the moral perception of their operators. That is to say, they must take into account how psychological factors impact on information-processing and shape the perception of morally relevant facts.

Secondly, and from a more legally and normatively oriented perspective, tele-operated weapons systems must be designed in order to minimise any distortions or unnecessary restrictions of their operators' moral perception. Sound design must always be design that enhances, rather than undermines, the preconditions for individual responsibility. Ensuring this is, in the authors' view, one of the central moral obligations of engineers and designers. This is not to suggest that sound technological design is the only way to safeguard moral perception. There are additional operational tactics that, for the time being, may compensate for the weaknesses of UAVs – for instance, using multiple pilots per drone and giving pilots frequent breaks. In what follows, however, the chapter focuses on engineering solutions to safeguarding moral perception, indicating what design for responsibility might look like.

e-Partnerships

How can it be ensured that individuals perceive the morally relevant facts in a given situation? One position holds that it cannot. In fact, it contends that

if individuals are unreliable decision-makers because they are stressed or not stressed enough, or because they receive too much information or too little, it might be a good idea to take them out of any decision-making loop altogether. In this case, machines are made fully operationally autonomous. This solution is proposed by the US roboticist, Ronald Arkin.[8] In this case, UAVs would make decisions about the application of force to a target themselves.

There are various problems with this approach, however. It is difficult to see, for instance, how a fully operationally autonomous machine could interpret human behaviour in complex situations in order to determine whether an individual is a combatant or non-combatant. Considering the full implications of Arkin's proposal, one faulty system is replaced by another. Arkin is right to point out that humans are bad at decision-making and interpreting complex information under stressful conditions; however, machines (currently) lack the reasoning capacities that allow them to make sense of complex situations.

Faced with this problem, it is a common-sense response to try and team human operators and artificial agents, such as computers, by integrating them into a *joint* cognitive system.[9] The strengths of one actor can then compensate for the weaknesses of the other. This move potentially enhances situational understanding and subsequent decision-making, as well as moral perception in general. The concept of such an 'e-partnership' is not entirely new. E-partnerships are already being prototyped in the domains of healthcare, space missions and naval warfare.[10] They are facilitated by working agreements which are made by a human operator with a machine (artificial agent). Working agreements give rise to a fine-grained division of labour with regard to specific tasks. As part of a working agreement, for instance, a human operator may delegate the task of identifying relatively unambiguous targets to the artificial agent, while remaining in control of the more demanding task of identifying ambiguous objects that may or may not be legitimate targets.

This scenario is not far-fetched. A similar working agreement was tested and evaluated in a naval-combat workstation prototype.[11] The eight navy officers who participated in the study very much appreciated the division of labour between human and artificial agents introduced by the working agreement, especially when decisions had to be made under pressure. In this experiment, an e-partner prototype was compared to a more static version resembling today's combat-management workstation aboard navy frigates. The officers liked the working agreements and were relieved that they could focus on more demanding tasks while having the machine carry out relatively easy tasks. This relief yielded very positive and statistically significant results. The participating navy officers identified tracks more quickly. As a result, the measured identification speed increased by 60 per cent for all tracks, and by 42 per cent for the subset of the complex tracks.

In light of these findings, the effect of e-partnerships on moral perception is potentially positive. Firstly, as the study shows, e-partnerships increase efficiency via a better division of labour, lowering the stress experienced by those operating machines. Importantly, the operator remains involved in the decision-making process. In this way, e-partnerships protect the operator against stress induced by boredom.

Secondly, working agreements between the machine and the operator allow for better information management. If there is a danger that the operator will not be able to filter out morally relevant facts because he either receives too much or too little information from his machine, it needs to be ensured that he gets the right amount of information. As part of the working agreement, the operator determines which information is provided by the machine and how it is managed subsequently in the decision-making process. Of course, this requires some prior planning in order to identify the challenges posed by a particular mission. This has some implications for the way the military operates. Prior to utilising UAVs, operators and their superiors need to have a clear understanding of the kind of facts that may become relevant during a mission.

Thirdly, e-partnerships introduce an interesting dynamic between human operators and their machines. Just as, during ordinary team work, (human) team partners may develop different perspectives on a situation, machines and humans may develop different perspectives on a situation. This can be an advantage. Operators can use the perspective provided by their machine to check if they are missing morally relevant facts. The machine may flag up aspects of a situation that the operator might have otherwise overlooked. This safety mechanism should provide operators with a suitable corrective.

If these points are sound, e-partnerships can protect a commitment to responsibility within the armed forces. First, operators will be responsible for the terms of their working agreements with their machine. This raises issues about foresight, negligence and so on that are not tackled here. For now, it suffices to note that the operator remains firmly in control of his machine – even if there is a physical distance between them. Secondly, working agreements ensure that operators receive the morally relevant facts needed to make decisions that comply with International Humanitarian Law, as well as key moral principles.

Admittedly, e-partnerships are no magic formula. However, the authors doubt that there is one. They are, nonetheless, a promising way forward, especially when compared to proposals for fully operationally autonomous machines.[12] More research needs to be conducted into e-partnerships in order to gain a precise understanding of their impact on moral perception.

Conclusion

Some commentators argue in favour of the deployment of tele-operated combat technologies during military humanitarian intervention. Indeed, there are some benefits associated with tele-operated weapons; but the difficulties posed by these systems must not be neglected. Before such weapons systems can be deployed, there needs to be assurance that their usage is safe and that they enhance, rather than undermine, human decision-making capacities. This is important in any type of armed conflict. However, it is particularly important in the context of military intervention. Typically, atrocities occur in a complex social environment: which party is doing what is often difficult to ascertain. Intervening powers must proceed with extreme care in order not to make an already volatile situation worse. During intervention, the operational requirements upon tele-operated systems and those who operate them are therefore high. Ordinary operators and their superiors need reliable information about the complex environment they operate in, especially when they are not directly present. E-partnerships could be step into the right direction, ensuring that operators receive the information they need.

Notes and References

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12. Human Rights Watch, for instance, is worried about the development of operationally autonomous weapons. See Human Rights Watch, 'Losing Humanity: The Case against Killer Robots', 19 November 2012, <http://www.hrw.org/reports/2012/11/19/losing-humanity-0>, accessed 14 March 2013.

Casualty Recording as an Evaluative Capability: Libya and the Protection of Civilians

Jacob Beswick and Elizabeth Minor

THE CONDUCT of participating NATO militaries in 2011's Operation *Unified Protector* aimed to minimise harm to civilians and civilian structures.[1] In so doing, NATO sought to demonstrate compliance with international law and fulfil the mandate to protect civilians granted by UN Security Council Resolution 1973.[2] Rigid rules of engagement, which incorporated pre-attack surveillance and restrictive attack procedures, were employed to the same end. However, by the end of the conflict, key NATO officials began to conflate the *expected* outcomes of precision strikes regarding the mitigation of harm to civilians with the *actual* outcomes. As a consequence, NATO claimed that its forces caused zero civilian casualties and that the mandate under UN Security Council Resolution 1973 was therefore comprehensively fulfilled. This claim was made without having undertaken systematic post-attack assessments, and in the absence of supporting evidence.

Knowledge of civilian deaths is vital to evaluating the operational conduct of the intervention in Libya, which was mandated to protect civilians directly. This was clearly reflected in debate within the Security Council as well as in the concerns of the media, civil society and states.[3] This chapter argues that understanding civilian deaths is fundamental to the protection of civilians in armed conflict more broadly. To make this argument, the relationship between the mandate granted under Resolution 1973, Operation *Unified Protector* and the protection of civilians in armed conflict framework at the UN level is examined. In doing so, areas of vulnerability within the protection-of-civilians framework are highlighted and possible resolutions are proposed.

In light of the Libyan case, this chapter concludes, first, that there is a need for clear requirements within Security Council resolutions for operations mandated to protect civilians to systematically assess their effects on civilians; and, second, that there should be recognition that such systematic assessment can support the accountability of conflict parties and may provide the basis for legitimate (as well as legitimising) discussions on whether the operations have been effective.

Resolution 1973, Libya and the Protection of Civilians

Resolution 1973 authorised member states 'acting nationally or through regional organisations or arrangements, and acting in cooperation with the Secretary-General, to take all necessary measures ... to protect civilians and civilian populated areas under threat of attack' in Libya, 'while excluding a foreign occupation force of any form.'[4] The mandate also approved a no-fly

zone over Libya, which was an 'important element' for the protection of civilians, and enforced the arms embargo and asset freeze introduced in Security Council Resolution 1970 in February 2011.[5] Acknowledging the (ongoing) debate over the interpretation of Resolution 1973 as enabling regime change, the discussion here instead views the resolution as it relates to the protection of civilians in order to identify recommendations.

The purpose of the protection-of-civilians framework is to 'ensur[e] full respect for the rights of the individual in accordance with international human rights law, humanitarian law, and refugee law.'[6] The UN Secretary-General and Security Council have addressed 'five core challenges' to the implementation of mandates to protect. Three of these are relevant to the discussion at hand: enhancing compliance of parties to conflict with their obligations under international law; enhancing the protection of civilians through UN peacekeeping and other relevant missions; and enhancing accountability for violations. Comprehensive information and casualty recording are significant in addressing these challenges.

Enhancing Accountability and UN-Mandated Missions to Protect

In recent years, there has been a focus on the role of 'comprehensive and reliable' information in effectively implementing and assessing protection activities.[7] Security Council Resolution 1894 (2009) reaffirmed the requirement for benchmarks and information-gathering which, as the Secretary-General explained in 2010, would enable the 'measurement and review of progress' of protection missions.[8] This, in turn, would inform the 'development and revision of peacekeeping and other mission mandates.'[9] Fulfilling the core aims of protection mandates therefore requires that missions are accountable for their conduct insofar as they relay key information on their operations.

Enhancing Accountability and Compliance among Parties to Conflict

Resolution 1894 also makes clear the role of information in 'addressing in its country specific deliberations the compliance of parties to armed conflict' with international law.[10] While it recognises the existence of a 'range of existing methods' available 'on a case by case basis, for gathering information on alleged violations', it refers only to the International Humanitarian Fact-Finding Commission by name.[11]

Sources of information are viewed more broadly. Resolution 1894 'stresses that mandated protection activities must ... [include] information and intelligence resources' in their implementation, implying that commissions' field investigations need not be the only source of information.[12] Resolution 1894 also refers to the Secretary-General's reports to the Council, which require 'detailed information relating to the protection of civilians in armed conflict, including on protection-related incidents and actions taken by parties to armed conflict to implement their obligations to respect and protect the

civilian population.'[13]As such, language on accountability and compliance refers to commissions as significant tools, while actors mandated to protect may be seen as key resources for relevant information.

It is worth noting that the UN Human Rights Council's International Commission of Inquiry on Libya contributed to building a clearer picture of violations against civilians committed by all parties to the conflict.[14] The Commission's work has provided an assessment of the legality of NATO's conduct, thereby addressing accountability and compliance with humanitarian law – to the extent permitted by the information that NATO provided.[15] However, while conformity with international humanitarian and human rights law is central to the protection of civilians, a full assessment of a mission (in terms of overall harm caused or protection achieved) requires a comprehensive accounting of civilian casualties, rather than an enumeration of those casualties that could be seen as in violation of international law. Such comprehensive assessment is a distinct activity that relates to all three of the core challenges identified above.

These commitments to accountability, compliance with the law and improving protection-of-civilians missions through review are evident in Resolution 1973. In particular, the Secretary-General's Panel of Experts and the request that 'Member States concerned … inform the Secretary-General immediately of the measures they take' demonstrate this.[16] It is worthwhile quoting the mandate placed on the Panel of Experts, who were to:[17]

> 1. Gather, examine and analyse information from States, relevant United Nations bodies, regional organisations and other interested parties regarding the implementation of the measures decided in resolution 1970 (2011) and [Resolution 1973], in particular incidents of non-compliance;
>
> 2. Make recommendations on actions the Council, or the Committee or State, may consider to improve implementation of the relevant measures;
>
> 3. Provide to the Council an interim report ... and a final report to the Council ... with its findings and recommendations.

The continuities between the protection-of-civilians framework, its aspirations within the core challenges and Resolution 1894, and the mandate to intervene in Libya are quite clear. However, given the omission by NATO and the Panel of Experts to systematically 'gather, examine, and analyse information' on civilian casualties caused by the intervening forces, implementation did not match policy aspirations. Indeed, the Panel of Experts' reports included information on all aspects of the mandate except civilian harm. So how are the objectives laid out by the broader protection-

of-civilians framework engaged and assessed by the very institution that mandated them in the first place?

The next section examines this disjuncture by looking at statements made by NATO representatives, in addition to restrictions placed on NATO forces by Resolution 1973.

Unified Protector and Resolution 1973

At a press conference on 24 October 2011, near the conclusion of *Unified Protector*, Lieutenant General Charles Bouchard articulated NATO's position on the implementation and outcome of the operation:[18]

> The operational concept[19] was a simple one – protecting the civilian population from Qadhafi forces, and in doing so, *ensuring no civilian casualties*. *We did that through very careful targeting process and precision munitions and courageous restraints ... Throughout we stayed focused on the mandate, to protect the population*, to ensure a No-Fly Zone and to conduct the embargo.

Bouchard's statement covers the 'strategic objective' informed by Resolution 1973 to *directly* protect civilians;[20] the 'operational concept' referring to the procedures undertaken to achieve that objective, including mitigation strategies; and the outcome of 'ensuring no civilian casualties'. In this case, as well as in statements made by NATO Secretary-General Anders Fogh Rasmussen, the logical flow demonstrates an unproblematic relationship of causality between objectives, operations and ideal outcomes.[21]

Commitment to directly protecting civilians and ensuring zero civilian casualties inevitably raises questions regarding the means of evaluation. With civilians' safety a priority, NATO upheld rigid rules of engagement, which incorporated cautious targeting procedures and weapons systems designed to minimise civilian harm. However, the expected results of mitigation strategies, though they may be based on rigorous targeting protocols, are not the same as empirically informed conclusions concerning actual outcomes. Indeed, the dependence on mitigation strategies for providing vital information on civilian deaths runs contrary to the aspirations within the protection-of-civilians framework as discussed above.

In addition to mitigation strategies, NATO conducted battle-damage assessments (BDAs) to investigate attack sites. These were 'conducted *when possible* to determine damage and otherwise evaluate the effects of the strike'; however their efficacy and frequency of use are publicly unknown.[22] Furthermore, 'additional assessment', though this was not clarified further, 'was carried out where possible in instances where there was a claim of civilian casualties.' [23]

The means of acquiring information to assess are key to the development of this chapter's argument. As Peter Olson (legal adviser to the Secretary-General and international staff of NATO) notes, information on civilian harm was acquired through 'extensive air and intelligence, surveillance and reconnaissance assets of all kinds, as well as video footage and other evidence [such as] open source and media reporting.'[24] However, when compared to the findings of NGOs, the Commission of Inquiry instigated by the Office of the High Commissioner for Human Rights and the *New York Times*, all of which were acquired through on-the-ground assessments, the efficacy of BDAs and mitigation strategies to ensure zero civilian casualties proves inadequate, and cause for serious consideration of a more systematic approach.[25] Greater transparency of NATO's methods of acquiring information would enable scrutiny of strengths and weaknesses. Moreover, there is an opportunity for clarifying what can and cannot be used to successfully assess the impacts of an operation on the civilian population.

Importantly, in the Libyan case it must be understood that the very mandate to protect, whose core elements were rooted in resolutions such as 1894, restricted NATO's access to attack sites by prohibiting 'boots on the ground'.[26] As a consequence, the mandate excluded systematic assessments by NATO. Nevertheless, the logic employed by Bouchard and Rasmussen and the capability of the assessment methods used remains questionable. Thus, regardless of the operational constraints, more needs to be done to collect information to enhance accountability, compliance and protection missions more generally.

Reflecting on the Protection of Civilians and the Mandate to Protect

The protection-of-civilians framework within the Security Council can be viewed as a 'strategic toolkit ... [that] continues to expand', within which aspirations are articulated and mandated.[27] These mandates, in addition to the rules of engagement of a particular mission, are a 'legally binding instruction on when, where, and how soldiers may use force' and 'help the operation's leadership and field personnel define the mission and its goals.'[28] Along with the *use* of force, the particularities of mandates, such as information-gathering, should remain equally binding.

Despite this, a challenge remains: in UN peace operations, 'armed forces of Member States ... do not have clear concepts or doctrinal guidance on what it means to "protect civilians"', resulting in a 'conceptual gap [that] has led to operational gaps in the field.'[29] This chapter argues that similar gaps exist in relation to information-gathering in the case of Libya.

While Resolution 1894 contributes to articulate the role information plays in addressing the core challenges discussed above, it fails to stipulate what kinds of information are essential. While this issue has been addressed in general

terms by the Department of Peacekeeping Operations, the Office for the Coordination of Humanitarian Affairs and even the Secretary General, mission mandates need to clarify in specific terms what information is regarded as essential. The case of Libya is helpful in discerning this 'gap' insofar as civilian deaths became a de facto benchmark by which the international community understood the efficacy of protection achieved through *Unified Protector*. After all, it was through civilian deaths that questions of accountability, compliance and the efficacy of protection were publicly evaluated both within and outside the Security Council.

Applying this conclusion to protection-of-civilians missions more broadly has its challenges. However, from Resolutions 1894 and 1973, it is evident that while information on conduct is essential for addressing these challenges, there should be clarity as to who is responsible for collection and what means are suitable for assessments. Moreover, the role of such information should contribute to the formulation of mandates. As was the case with Resolution 1973, by prohibiting 'boots on the ground', the Security Council created a challenge to NATO's capability for systematic assessments.[30]

What a systematic assessment may look like is another matter. In general, UN peacekeeping missions systematically acquire information through human rights components and the Department for Peacekeeping Operations's Joint Operations Centres and Joint Mission Analysis Centres.[31] However, in the light of Resolution 1973 and *Unified Protector*, this chapter argues that casualty recording should be considered as fundamental to future information-gathering work.

Casualty Recording

Casualty recording is the comprehensive, systematic and continuous documentation of individual conflict deaths or the incidents in which these occur, with the public release of this information when it is safe to do so. This provides a fundamental type of data contributing to systematic information about protection-of-civilians operations, and has a variety of operational and other benefits within the framework.[32] This chapter recommends that a requirement for casualty-recording should be incorporated into any Security Council mandate for military engagement which invokes the protection of civilians. For effective implementation, this is the key level at which casualty-recording activity needs to be authorised, the actors who must carry it out defined, and the reporting and integration of findings into other procedures (such as accountability or lessons learned) set out.

Granular data on casualties can contribute to understanding developing threats to protection and whether civilians are being adequately protected, as well as generating information useful to accountability and lessons-learned processes. Data can contribute to enhancing compliance by supporting the

detailed evaluation of operations. It therefore brings benefits to decision-making processes that direct military engagement and to post-attack assessments. Some potential uses of casualty information are set out below in relation to *Unified Protector* and the protection-of-civilians framework. They are also supported by the Oxford Research Group's research into existing (mainly NGO) casualty-recording practice.[33]

There are a variety of methods for recording casualties. Recording should start as soon as possible, even if the information available is not detailed, and continue for as long as necessary in order to develop the most comprehensive and useful record. In terms of military intervention, this means that any information initially available to militaries through their internal assessment procedures should be supplemented by mandated on-the-ground investigations carried out by these forces as soon as it is safe to do so. The authors' research also shows the uses and potential benefits of casualty-recording, which are relevant to its incorporation into mandates for military engagement and the designing of procedures for recording.

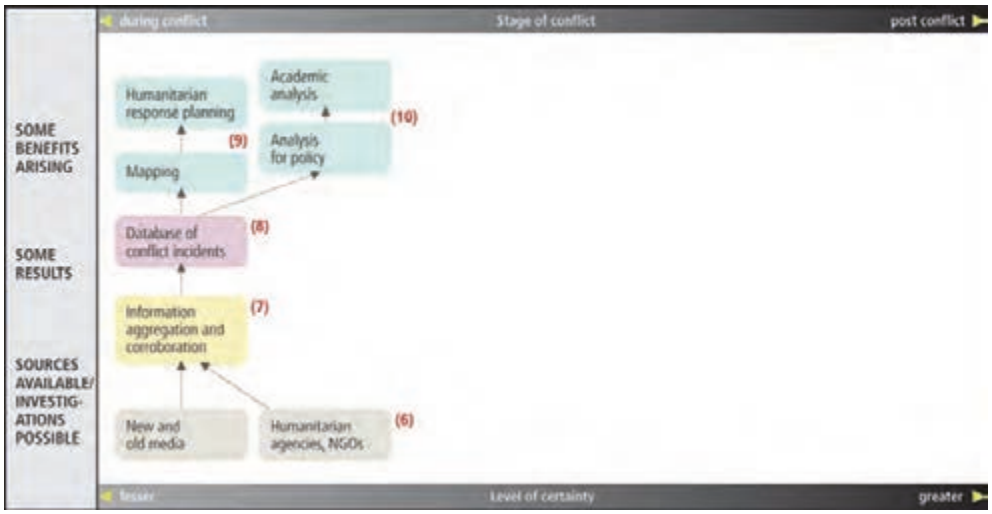
There are different ways to record casualties that are possible under different circumstances, including at different points during or after conflict. These will give different levels of certainty and detail, and often have different uses. For records to be meaningful and distinguishable, recording must include the date, location, numbers killed and a description of the violent incident (for instance, the weapons used). Distinguishing individual casualties by name is also methodologically important and enables a deeper investigation into the consequences of conflict. Work done at different stages of conflict or through different methods can provide a starting point for, or feed into, more detailed types of investigations which may be done later. When done to the comprehensive standard that the Oxford Research Group calls for,[34] casualty-recording means systematically collecting a wide range of specific details useful for building a very detailed knowledge of individuals killed (including both personal details and information about affiliations, such as combat status), actors responsible for their deaths and incidents for every case.

The spectrum of recording is demonstrated in Figures 1–5, which illustrate how different approaches to casualty recording are connected. These are drawn from the authors' research into current casualty-recording practice. The potential relevance of different parts of the spectrum to practice during military intervention is noted where applicable. The explanation should be read by numbered step with reference to numbered areas on the illustrations.

Figure 1: The Variables in the Spectrum.

At different stages during and after conflict (1), different approaches, offering different levels of certainty, will be possible (2). What is feasible will depend on the context, including the types and quality of sources available and investigations that recorders are able do (3). These produce different types of results (4), uses or benefits (5).

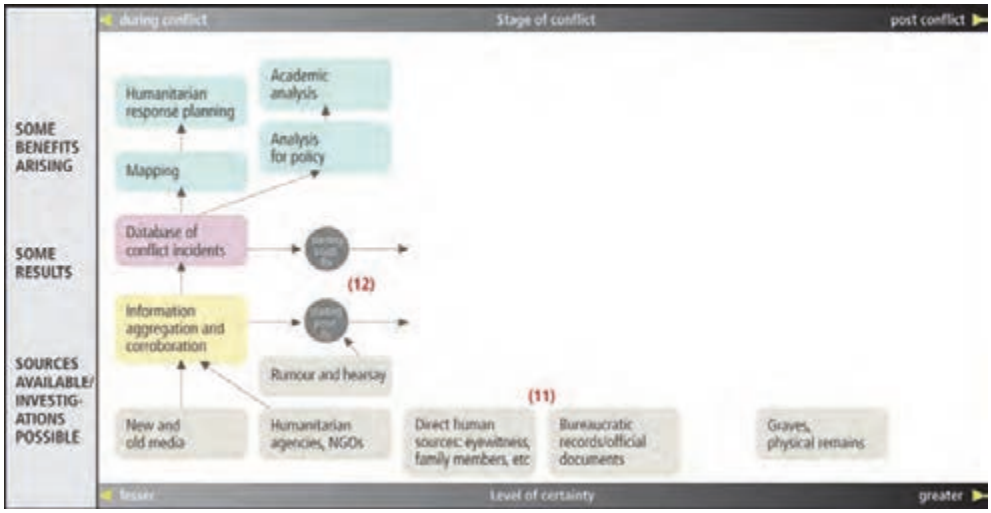
Figure 2: A Scenario during Conflict.



During intense conflict, certain sources containing information about casualties might be available (6), which might include information collected through battle-damage assessments. It may not be feasible to independently investigate the information given by these sources, but this can be aggregated and corroborated (7) into a database of incidents (8). Combined with mapping technology, this database can be useful to risk and needs assessments (9). It

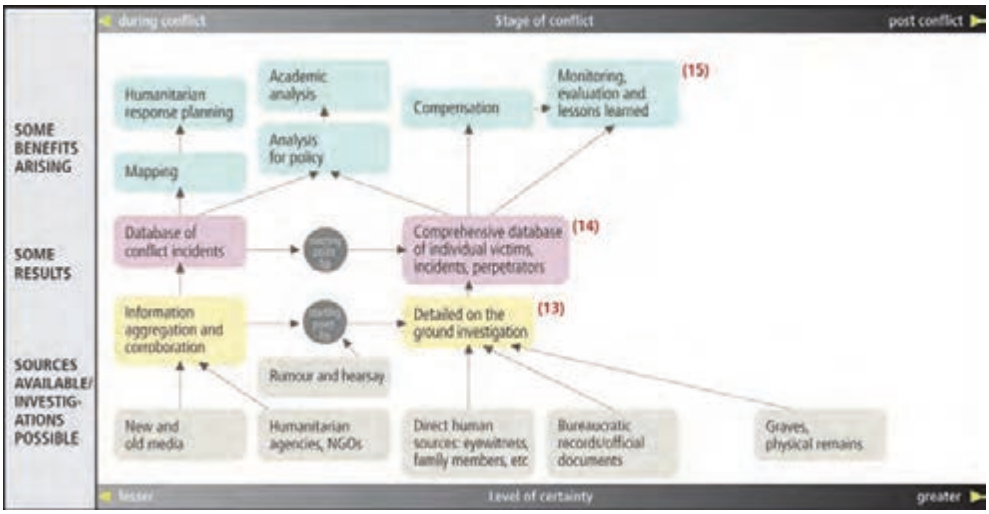
can also provide analysis useful to formulating policies to reduce violence or examining existing policy limitations (10).

Figure 3: When the Context Changes.



With a change in the context (for example, violence has decreased) different sources and investigative possibilities will become available (11). Work that has already been done can provide a baseline or starting point for new investigations. That is, it can give indications about where further investigations should be directed, and records that can be built on and added to (12). During military interventions, where incident-level information cannot be created from battle-damage assessments, operational information could at least provide indications for where and when incidents causing casualties may have occurred.

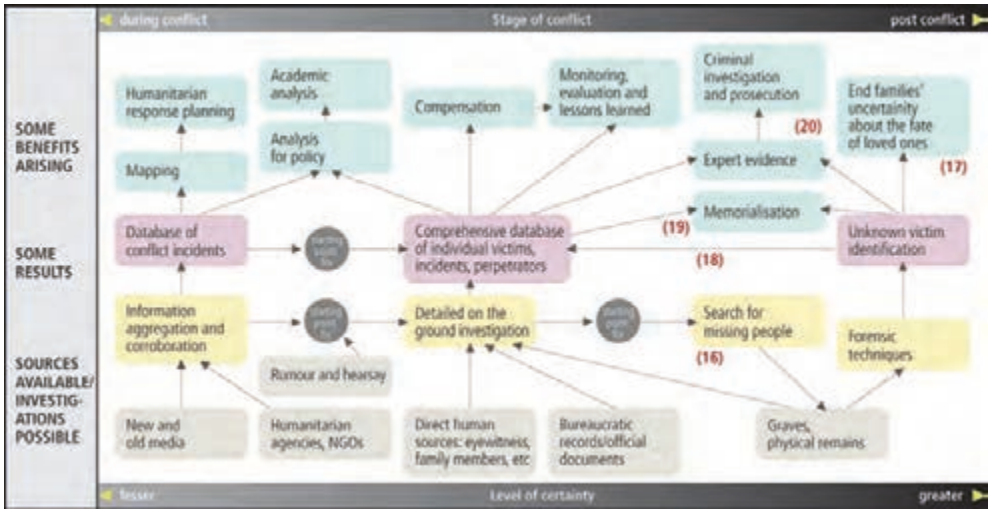
Figure 4: More Detailed Investigation.



New investigations may be detailed, on-the-ground and use new sources to build a more detailed and certain picture (13). Such investigations could produce a more comprehensive, detailed database about individual casualties, building on an existing database of incidents (14). Such records can contribute to more sophisticated policy analysis and to procedures requiring a greater standard of proof or level of detail, such as assigning compensation or evaluating the conduct of participants to conflict (15). This type of on-the-ground investigation should be mandated for military interventions to take place at the earliest possible point. For an intervention such as *Unified Protector*, where no on-the-ground presence for combat was mandated, this would be when military operations cease. For other operations where forces are already present on the ground, investigation should be an ongoing part of intervening forces' responsibilities.

After conflict, previous investigations can assist work to search for and determine the fate of missing people, investigate graves and identify unknown remains (16).

Figure 5: Completing the Diagram – Missing People, Memorialisation and Legal Processes.



This is needed to end families' uncertainty about the fate of their loved ones, and to return their relatives' remains (17). The identification of unknown remains contributes to a more comprehensive picture of casualties, which are not limited to the missing (18). Information from a comprehensive and detailed database of casualties or from unidentified remains can contribute to memorialisation (19). Casualty records do not constitute legal analysis, but do provide information either on individual cases or on patterns of harm that can be used to make legal determinations (20). This can contribute to enhancing compliance with the law and accountability of conflict parties.

Conclusion

This chapter has explored the relationship between Resolution 1973, its implementation in Operation *Unified Protector*, and the protection of civilians in armed conflict framework at the UN, to illustrate the importance of systematically recording civilian casualties. While demonstrating a variety of recording methodologies available, the argument holds that the pursuit of the core challenges to the protection-of-civilians framework requires systematic information on casualties. Such information – its acquisition and analysis – should be given a clear and fundamental role when drafting Security Council resolutions mandating protection.

The Libyan case proves helpful, in that it illustrates areas where shortcomings in the mandating resolution undermined broader protection-of-civilian aspirations:

- Mandates to protect civilians require clarity regarding the obligations – in terms of procedures and responsible parties – to collect information on civilian harm
- Through the clarification and implementation of systematic assessment measures for casualty-recording, accountability, compliance with the law and greater understanding as to the efficacy of missions to protect can be better realised.

Within the UN Secretariat, numerous agencies are currently working towards building capacities to obtain improved information on civilian harm and casualties. There is an undeniable bureaucratic and logistical complexity in determining which agencies are most suitable for undertaking such assessments in a given conflict environment. However, the research findings on the range of existing practices presented here provide a set of considerations which those drafting and operationalising mandates for the protection of civilians can usefully keep in mind.

Notes and References

1. Joint Analysis and Lessons Learned Centre, 'Cultural Property Protection in the Operations Planning Process', 2012.
2. Richard Froh, Letter from NATO Deputy Assistant Secretary General for Operations to Human Rights Watch, 1 March 2012, cited in Human Rights Watch, 'Unacknowledged Deaths: Civilian Casualties in NATO's Air Campaign in Libya', 2012, pp. 73–74.
3. UN Security Council, 'Thirteenth Open Debate on the Protection of Civilians', 25 June 2012; UN, 'Report of the Secretary-General on the Protection of Civilians in Armed Conflict', S/2012/376, 2012, para. 19.
4. UN, 'UN Security Council Resolution 1973', S/RES/1973, 17 March 2011.
5. *Ibid*.

6. International Committee of the Red Cross, 'Professional Standards for Protection Work Carried Out by Humanitarian and Human Rights Actors in Armed Conflict and Other Situations of Violence', 2009, p. 7.
7. UN, 'UN Security Council Resolution 1894', S/RES/1894, 11 November 2009.
8. UN, 'Report of the Secretary-General on the Protection of Civilians in Armed Conflict', S/2010/579, 2010, p. 16, emphasis added. Such benchmarks are currently used by the DPKO: see Department of Peacekeeping Operations, 'Civil Affairs Handbook', 2012, pp. 121–24.
9. UN, 'Report of the Secretary-General on the Protection of Civilians in Armed Conflict', S/2010/579, p. 2.
10. UN, 'UN Security Council Resolution 1894'.
11. *Ibid*. Ad hoc commissions and commissions of inquiry are also vital in this regard, and are found in other resolutions and reports by the UN Secretary General.
12. *Ibid*. Indeed, the DPKO hosts Joint Operational Commands and Joint Mission Analysis Centres for the purpose of informing field and headquarters staff. However, it is unclear to the authors whether the quality of data produced through these entities is of the same high standard as that produced by commissions.
13. *Ibid*.
14. Commissions of Inquiry do not seek 'evidence of a standard to support a criminal conviction, but an assessment based on a "balance of probabilities" to determine whether a violation had occurred.' In so doing, the UN Human Rights Council's International Commission concluded that NATO 'conducted a highly precise campaign with a demonstrable determination to avoid civilian casualties ... [though on limited occasions where attack sites] showed no evidence of military utility ... the Commission was unable to draw conclusions ... on the basis of the information provided by NATO and recommends further investigation.' UN, 'Report of the International Commission of Inquiry on Libya', A/HRC/19/68, 2012, pp. 2, 5.
15. *Ibid*., p. 2.
16. UN, 'UN Security Council Resolution 1973'; UN, 'Final Report of the Panel of Experts Established Pursuant to Security Council Resolution 1973 (2011) Concerning Libya', S/2012/163, 20 March 2012.
17. UN, 'UN Security Council Resolution 1973'.
18. NATO, 'Press Briefing on Libya', 24 October 2011, emphasis added.
19. Different authors cited provide different definitions for 'operational concept' and 'strategic concept' or 'framework'. Holt and Berkman hold that 'civilian protection requires an operational concept to guide troops in facing questions on the ground and a strategic framework for addressing these questions quickly and effectively.' Victoria Holt and Tobias Berkman, 'The Impossible Mandate? Military Preparedness, the Responsibility to Protect and Modern Peace Operations', The Stimson Centre, September 2006, p. 9.
20. This is a key concept. While operations in Afghanistan have an indirect objective of protecting civilians, in the Libyan case the direct goal was to protect civilians.

21. Further evidence of this narrative can be found in other NATO press briefings: NATO News Conference, 17 May 2011; NATO, 'Press Briefing on Libya', 3 November 2011; NATO, 'Press Briefing on Libya', December 2011.
22. Letter from Peter Olson, 23 January 2012; UN, 'Report of the International Commission of Inquiry on Libya', 2012, p. 205, emphasis added. It was explained to the authors by a NATO representative that further information on the matter is kept secret for security reasons.
23. UN, 'Report of the International Commission of Inquiry on Libya', p. 205.
24. *Ibid*.
25. Take, for instance, the 9 September 2011 attack in Sirte, in which Human Rights Watch found two dead civilians, and the 8–9 August 2011 attacks in Majer, in which thirty-four people died. In these cases, as NATO reported to the UN International Commission of Inquiry on Libya, no battle-damage assessments were undertaken. Human Rights Watch, 'Unacknowledged Deaths', May 2012, pp. 67, 69; UN, 'Report of the International Commission of Inquiry on Libya', pp. 214–15.
26. Richard Froh, Letter from NATO Deputy Assistant Secretary-General for Operations to Human Rights Watch.
27. Hugh Breakey, 'The Protection of Civilians in Armed Conflict: Four Concepts', in Angus Francis, Vesselin Popovski and Charles Sampford (eds), *Norms of Protection: Responsibility to Protect, Protection of Civilians and their Interaction* (Tokyo: United Nations University Press, 2012), pp. 48–53. This is reflected by Holt, Taylor and Kelly: 'the Council's conceptualisation of the protection of civilians has varied over time. It has used the term "protection of civilians" in relation to protection norms set out in the Geneva Conventions and subsequent Protocols'. Alternatively, it has used the term in a much more narrow sense to describe the mandated role of peacekeepers 'to provide physical protection' through their use of 'military capability in the field either to deter attacks on civilians or, sometimes, to use force to defend civilians from attack.' Victoria Holt, Glyn Taylor and Max Kelly, 'Protection of Civilians in the Context of Peacekeeping Operations', independent study jointly commissioned by United Nations DPKO/OCHA, 2009, pp. 25–26. The 'five core challenges' elaborated by Secretary General Ban Ki-moon are a good example of how the Security Council's protection-of-civilians framework shapes aspirational and operational policies.
28. Holt and Berkman, 'The Impossible Mandate?', p. 79.
29. Holt, Taylor and Kelly, 'Protection of Civilians in the Context of Peacekeeping Operations', pp. 25–26.
30. In addition to the fundamental role of the Security Council in formulating mandates, it is acknowledged that there must be political will by member states generally, and those in the Security Council in particular, for the argument to be fulfilled.
31. The Oxford Research Group is currently undertaking research into such entities.
32. For a full definition of casualty-recording, see Elizabeth Minor, 'Towards the Recording of Every Casualty: Analysis and Policy Recommendations from a Study of 40 Casualty Recorders', Oxford Research Group, 2012.
33. Elizabeth Minor, John Sloboda and Hamit Dardagan, 'Good Practice in Conflict Casualty Recording: Testimony, Detailed Analysis and Recommendations from a Study of 40 Casualty Recorders', Oxford Research Group, 2012.

34. That every casualty of armed violence is promptly recorded, correctly identified and publicly acknowledged is the call of the Every Casualty Campaign. See <www.everycasualty.org/campaign>, accessed 13 March 2013.

Precision-Strike Technology and Counter-Terrorism: Conflating Tactical Efficiency with Strategic Effectiveness?

Conway Waddington

PRECISION-GUIDED MUNITIONS, delivered at range, provide significant tactical advantages. This chapter examines the ways in which tactically efficient precision-strike technology allows and facilitates the execution of particular strategic approaches to security, specifically in terms of counter-terrorism. Broadly, this chapter argues that it is dangerous to allow the expansion and refinement of these technological capabilities to outstrip the policy and rationale that necessitated the development of such tools in the first place. Furthermore, these technological policy enablers threaten increasingly to become policy drivers – and poor ones at that. This concern is the result, to some extent, of a related problem whereby the tactical efficiency offered by drones and precision-strike technologies is assumed to equate to strategic effectiveness.

The context for these observations is the US implementation of precision-strike capability, and its use of drones for targeted killings as part of counter-terrorism activities:[1] the US has the most visible international counter-terrorism security focus, and is also the predominant user of drones. It is also worth noting early that this chapter posits a US approach to a 'war' on terror that is, to a certain extent, engaged in a cycle of self-fulfilling prophecy. In emphasising a counter-terrorism policy of identifying and targeting groups designated, sometimes questionably, as terrorist threats, the US is not only manufacturing enemies for itself, but is also providing a jihadist rallying cry by reinforcing the anti-Islamic narrative that is increasingly attached to their actions. There is also a pervasive risk that the US may find itself sucked into local conflicts that have been artificially subsumed within the 'global' War on Terror. This view is not the central argument of this chapter, but it is one particular facet of the cautionary note carried throughout.

Another key underlying assertion is that the heavy reliance on drones and precision strikes has been necessitated by politically sensitive variables such as those that exist in Central Asia, and on the Pakistani side of the Afghan border in particular. This precision-strike-reliant approach includes in its methodology targeted killings and signature strikes, all cloaked in secrecy, at least insofar as the behind-the-scenes policy- and decision-making that guides such practices is concerned. Such tactics are highly contentious for several reasons detailed below, and deserving of rigorous and continuous evaluation, particularly if they are to be exported to other areas of operation. Similarly, the deliberate nature of the targeted killings appears to demand

oversight and accountability which are made impossible by the covert nature of the strikes.

Of critical concern here is the interplay between tactical efficiency and strategic value. In Yemen for instance, even a successful targeted killing of an insurgent or terrorist may result in other members of the family or clan of that individual swearing oaths of vengeance against the Yemeni government and its US ally with whom they previously might not have had any quarrel.[2] Signature strikes in Pakistan, which are essentially opportunistic strikes against targets deemed to be exhibiting likely insurgent or terrorist characteristics, are tactically expeditious, but have infuriated sections of the general populace while also providing compelling propaganda material against the US. In the former case, the action-oriented nature of the strikes may not actually be contributing toward the overall strategic goal of enhanced security and may in fact be counter-productive. In the latter case, that key tenet of discrimination between legitimate and illegitimate targets has been degraded by a lack of oversight and a potentially dangerous form of expedient thinking. In both instances, a fixation on the technological promises of drones and precision strike has, at the very least, encouraged the implementation of tactics of dubious strategic value.

The most easily apparent problems of drone or air strikes relate to collateral damage and improper targeting. All too often, the promises of improved technology are invoked in response by supporters of the technology and, more poignantly, its applications. Other concerns relating to the legality or morality of targeted killings are similarly bypassed with appeals to expedience or proportionality, again hinging largely on the tactical capabilities of the technology, which naturally appeals to its users for its political-risk-mitigating properties. In both cases, the technology itself then takes centre stage in the broader debate on US counter-terrorism, drawing focus away from policies that ought to be more closely scrutinised: the key example here being the objections raised to targeted killing, which nonetheless seem fixated on the drones delivering the strikes.

The elevation of precision strikes to counter-terrorism or even counter-insurgency panacea calls to mind the note of caution voiced in the law of the instrument (also expressed as the Golden Hammer, commonly attributed to psychologist Abraham Maslow): that if all you have is a hammer (and in particular one that has proven effective in the past), then all problems might start to look like nails. This warning is equally relevant to other countries developing and expanding their own precision-strike or drone capabilities.[3]

What is the Value of a Precision Strike?

A precision strike, by definition, utilises a minimum necessary amount of force in order to achieve the destruction of a specific target. The immediate

tactical advantage is that such strikes limit negative consequences, in the forms of risks to own forces, collateral damage or the political costs of a large operational footprint. In terms of US counter-terrorism operations, precision strikes fit neatly within the special operations-reliant doctrine that favours direct action. Direct action is a weighted phrase that, according to the Department of Defense Dictionary of Military and Associated Terms, refers explicitly to:[4]

> [s]hort-duration strikes and other small-scale offensive actions conducted as a special operation in hostile, denied, or diplomatically sensitive environments and which employ specialized military capabilities to seize, destroy, capture, exploit, recover, or damage designated targets.

Drones, in particular, represent a politically cost-effective option here because they place the maximum distance between the target and the weapon or reconnaissance system operator.[5] Drone-delivered ordnance offers the benefits of precision-guided weaponry, along with the political safety of not having personnel in immediate harm's way.[6]

The grand-strategic value of the current US military-centric approach to security is endlessly debatable. What is significant here is that focusing on drones and the refinement of precision-strike technologies distracts from meaningful debate about the appropriateness or effectiveness of tactics like targeted killing, or, indeed, the overall US approach to counter-terrorism. Moreover, the use of drones is increasing: the US is directing its drone forces toward counter-narcotics operations in South America, and to counter-piracy and counter-terrorism in Africa.[7] The possibility of strikes against drug-cartel leadership or pirate dens might sound like decisive action, but it does not sit well with international law. The question, however, is whether the US leadership would be able to resist the temptation to use this option if a strong enough precedent has been set.

What Are the Problem Areas?

Rather than the consequences of strikes, such as collateral damage, central to the legal and moral debate over targeted killing debate is the decision-making process itself – including the qualitative and quantitative factors that affect it and oversight (or lack thereof).[8] The broad themes about the moral, legal and political consequences of drone-delivered precision strikes are well covered by Drone Wars UK's Drone Wars Briefing,[9] which continually stresses accountability, or at least the lack thereof, as a primary area of concern. Major criticisms of the use of drones are voiced in the Stanford Law School and NYU School of Law publication 'Living Under Drones'.[10] Similarly, on the moral level, serious questions about the increased use of precision strikes as the favoured means of perpetuating foreign policy are raised in the Pax Christi discussion piece, 'Does Unmanned Make Unacceptable?';[11] and

Peter W Singer's prominent book *Wired for War,* which particularly raised the question of technological improvements defining strategic policy to the detriment of moral restraints on the use of disproportionate force.[12] This particular theme is echoed by David Cortright, the director of policy studies at the Kroc Institute, who worries that resorting to war might become too easy in the sense that the lack of risk and asymmetric distance create complacency on the part of policy-makers.[13] Similar views are raised in the Ministry of Defence's Joint Doctrine Note, 'The UK Approach to Unmanned Aircraft Systems', which emphasises the importance of risk to one's own forces as a controlling element over aggressive policies.[14]

Proponents of precision strikes cite the disruption of Al-Qa'ida, and elimination of key figures in terrorist organisations, as proof of the concept. Backing up such an argument is difficult precisely because of the secretive nature of such strikes, but the fundamental argument that terrorists are indeed being killed carries some weight. More tellingly, the tactical deployment of drones and air strikes is often viewed as effective at least in the sense that it is decisive action. Michael Lewis, a professor of law at Ohio Northern University and US Air Force combat veteran, voices support for drones by noting this. Lewis points out that, in the case of Pakistan in particular, the targeting of Al-Qa'ida or the Taliban would not be practically achievable without drones, and that the alternative of conventional ground forces or reliance on the Pakistani military would likely result in similar if not greater civilian casualties, while inaction would grant an unacceptable haven to terrorists seeking to harm the US.[15] The question here, however, is not so much a failure to eliminate targets as it is uncertainty of the strategic outcome even when such strikes work.

One line of thinking suggests that, for the most part, successful strikes have at best resulted in more dispersed but not necessarily weaker terrorist organisations. Patrick Johnson and Anoop Sarbahi produced a study utilising geographic information systems analyses to map the impact of drone operations in Pakistan, ultimately concluding that the strikes are minimally effective, acting largely to merely suppress insurgent activities. In heavily hit areas, the insurgents simply go to ground, or are displaced.[16] All the while, there exists the risk of accidents or failures to kill insurgents, as well as the risk of harm to civilians. David Jaeger and Zahra Siddique suggest something similar in a discussion paper that goes on to emphasise the disproportionate effect of unsuccessful strikes in serving the opposition's cause.[17] A more general concern that has been raised at various points suggests that the targeting of whoever is identifiable, or reachable, or just next in line offers little more than a speedy cycle of promotion within the mid-range terrorist ranks. Worse, those who do survive perfect the means of evading such counter-terror methodologies.

Drones and precision strikes on terrorist or insurgent groups epitomise the asymmetry of such conflicts. As Israel has discovered, the perception of such demonstrations of technologically superior force can play directly into the hands of the opposition.[18] Retired US General Stanley McChrystal, the former International Security Assistance Force (ISAF) commander, has cautioned repeatedly that drones are hated on a 'visceral' level, and that they are seen to embody the perceived arrogance of the US.[19] Drones are often portrayed as the literal extension of an American attitude of going anywhere and attacking anything it wants – because it can.[20]

The negative attention drawn to drone strikes is widespread. The newly instigated UN examination of drone strikes to be conducted by Ben Emmerson, the UN Human Rights Council's special rapporteur on counter-terrorism and human rights, seeks to specifically examine the troubling legal issues of targeted killings, the related tactics of signature strikes, and so-called 'double-taps'.[21] This examination echoes similar concerns raised previously by the special rapporteur on extrajudicial, summary or arbitrary executions, Philip Alston.[22] It is worth pointing out that Alston noted specifically that drones represent merely a tool of the targeted-killing methodology and that legal concerns should be directed at that methodology, rather than the technology that facilitates it.[23]

The Cult of Technology and Maslow's Hammer

The viability and seductive qualities of precision strikes have been and continue to be increased by technological developments. Though risks of collateral damage or improper targeting are reduced, it is neither conceivable that such risks could ever be completely overcome, nor should faith in technology be allowed to grow to the detriment of critical analysis of the policies that gave cause for their development in the first place. If collateral damage is indeed deemed a strategic necessity, then it should not be cloaked in untenable promises about the mitigating properties or possibilities of technology. To illustrate this, consider a theoretical perfect system, designed to kill only its specific target. Even if such a system could be practically deployed, effectively reducing the chance of collateral damage to zero, there still remain the problems of faulty intelligence leading to the targeting of the wrong person, or indeed the problem of illegitimate targeting.

Drones and precision-strike technologies represent a means for the US to continue its Al-Qa'ida-focused 'Long War' approach to security. The nature of that threat is itself questionable. Even at the height of the post-9/11 response, the US itself did not face an existential threat. Nevertheless, it is very much a military-centric approach to security that the US has taken in counter-terrorism. Contrasted with treating terrorism as a crime, it is the war model that David Luban, a professor of law and philosophy at Georgetown University, argues defines the US counter-terrorism strategic methodology.[24]

It is worth considering whether drones and precision-strike technology have themselves driven the evolution of the US kinetic approach to counter-terrorism, or whether they are merely a manifestation of a deeper level of strategic cultural thinking. Entering fully into this particular debate is not possible in this chapter, but in all likelihood the reality is a combination of the two. Since drones and other precision-strike technology undoubtedly work well – at least insofar as firepower delivery and political expedience is concerned – the potential danger is that their status as a favoured hammer will render other foreign-policy problems inviting nails.

Remember, the strategic utility of precision strike and, indeed, of drones is derived precisely from their limited footprint qualities. The idea here is political cost-effectiveness. If the manner of their use not only attracts negative attention, encourages further behaviour that has political costs, and is arguably counter-productive on a strategic scale, then surely their use needs to be re-evaluated.

Mistaking Tactical Efficiency for Strategic Effectiveness

The US pursuit of what has been not unfairly disparaged as a counter-terrorism policy akin to terrorist 'whack-a-mole' is strategically questionable. One of the major criticisms of this policy is that it is designed to counter a global terrorist threat, the existence of which can become self-fulfilling precisely because of the way that this strategy is implemented. Al-Qa'ida is widely considered to have undergone stages of development in its network structure since the beginning of the US War on Terror. As the core group was destroyed in Afghanistan, or displaced to Pakistan and elsewhere, affiliates appeared as part of a new, global terror network. The rise to prominence of Al-Qa'ida in the Arabian Peninsula, as one of many global franchises, best represents the 'Al-Qa'ida 2.0' idea.

The above narrative, though popular and persuasive, should, however, be considered in the context of the pressures faced by the US's and its allies' intelligence communities. The 9/11 attacks entrenched an understandable mindset that will not tolerate threats. Tenuous ideological similarities, vague expressions of support or image-conscious rebranding do not, however, necessarily make Al-Shabaab in Somalia, or Boko Haram in Nigeria, or Al-Qa'ida in the Islamic Maghreb a threat to the US – yet these groups are often raised in policy discussion over the War on Terror and, in the case of the former, have already been on the receiving end of US firepower as a result.[25]

This is not to say that such organisations are not dangerous in their own right or that their actions and abuses are not morally reprehensible. The question here requires cold and emotionless consideration of strategic-level security and practicality. Terrorist organisations operating in security-compromised regions of the world can and do plot against the US and its allies. However,

at some point, that threat must be treated proportionately. Not only is it impractical to attempt to directly counter every possible threat with military action, but such a policy will likely exacerbate the situation. In particular, David Kilcullen, a counter-insurgency expert and author of *The Accidental Guerrilla*, has laboured from without and within the US defence community to make the point that a counter-terrorism policy that perceives terrorist threats in every insurgency around the world can inadvertently create new enemies, while playing directly into the hands of those terrorist threats that do exist.[26]

Conclusion

In light of the political, legal and moral implications of increasing reliance on precision strikes as doctrine, discussion on its value is necessary. A careful and continuous evaluation of approaches to counter-insurgency that have arisen out of the US War on Terror needs to occur, but might not precisely because of blinkered institutional support for drones and precision-strike technology. Obtaining clarity on the distinction between tactical effectiveness in the context of strategic goals is vital to facilitating that policy discussion.

Debate around precision-strike effectiveness is gauged according to what has become a confused mix of tactical and strategic value. Promoters of precision-strike doctrine evoke images of highly selective, surgical decapitation of insurgent command structures, or 'shock-and-awe'-worthy elimination of the enemy. These arguments suggest that drones and precision-strike technology are an expedient tool with which to achieve strategic counter-terrorism aims. Contrary arguments cite a lack of accountability, violations of political sovereignty and extrajudicial killings, as well as raising questions about disconnecting war to the point that the traditional civil-military relationships fail. Often, the effectiveness of tools themselves become the centre of this debate instead of broader issues pertaining to the efficacy of certain policies in serving broader strategic security goals.

The danger that this chapter outlines is of technological refinement of precision-strike capabilities displacing or overruling the continued analysis and evaluation of the policy and rationale that necessitated the development of such tools in the first place. Put simply, policy enablers have inadvertently become policy formulators. This cycle could result in a continuance and expansion of targeted killings as the centrepiece of a counterproductive, increasingly legally and morally bankrupt counter-terrorism strategy.

Notes and References

1. The term 'drone' is used here intentionally as a neutral term. Depending on nationality and service, all manner of acronyms pertaining to the unmanned or remotely piloted nature of variously armed or unarmed land-, sea- and air-based

vehicles have been variously used. The common usage of the term 'drone' often promotes the mistaken notion that these are autonomous vehicles; however, bearing in mind the informed nature of the proposed audience for this chapter, the author believes 'drones' to be a sufficient catch-all.

2. Parts of Yemeni society, particularly in rural Yemen, are influenced by cultural norms emphasising family and tribal honour and, when necessitated, revenge. For some insight into this, see Nadwa Al-Dawsari, 'Tribal Governance and Stability in Yemen', Carnegie Papers, Carnegie Endowment for International Peace, 2012.
3. Drones and precision-strike technology offer significant possibilities for use in conventional conflict, strategic deterrents and in support of humanitarian intervention operations similar to NATO operations in Kosovo, Yugoslavia or, most recently, Libya. Due to space limitations, this discussion will be limited to counter-terrorism and counter-insurgency applications of this technology only.
4. US Special Operations Command, 'Joint Publication 3-05 – Special Operations', 2011.
5. For a comprehensive introduction to drones, and their role in precision-strike doctrine, see Louisa Brooke-Holland, 'Unmanned Aerial Vehicles (Drones): An Introduction', House of Commons Library, December 2012, p. 5.
6. John O Brennan, Deputy National Security Advisor for Homeland Security and Counterterrorism and Assistant to the President, 'The Efficacy and Ethics of U.S. Counterterrorism Strategy', Remarks at the Woodrow Wilson International Center for Scholars, Washington DC, 30 April 2012.
7. The threat of terrorism in Africa in particular has been vocally expressed by General Carter Ham, head of the US African Command (AFRICOM). The combined dangers of the Arab Spring in North Africa, in conjunction with an arc of instability and Islamist militancy in the Sahel region stretching from West to East across the continent, has resulted in an increasing US presence build-up across the continent since 2007. Most recently, Niger has signed an agreement for the building of US air bases in order to police troubled Mali and West Africa in general.
8. At the time of writing, considerable attention has been drawn to a leaked US Department of Justice memo detailing the lawfulness of the targeting of US citizens working with Al-Qa'ida, available at <http://msnbcmedia.msn.com/i/msnbc/sections/news/020413_DOJ_White_Paper.pdf>, accessed 12 March 2013.
9. Chris Cole, 'The Drone Wars Briefing', *Dronewarsuk.wordpress.com*, January 2012, <http://dronewarsuk.files.wordpress.com/2012/01/drone-wars-briefing-jan2012.pdf>, accessed 12 March 2013.
10. Stanford Law School and NYU School of Law, 'Living Under Drones: Death, Injury and Trauma to Civilians from US Drone Practices in Pakistan', September 2012.
11. Cor Oudes and Wim Zwijnenburg, 'Does Unmanned Make Unacceptable? Exploring the Debate on Using Drones and Robots in Warfare', IKV Pax Christi, March 2011.
12. Peter W Singer, *Wired for War* (New York, NY: Penguin, 2009).
13. David Cortright, 'License to Kill', *Cato-unbound.org*, Cato Institute, 9 January 2012, <http://www.cato-unbound.org/2012/01/09/david-cortright/license-to-kill/>, accessed 12 March 2013.
14. Ministry of Defence, 'The UK Approach to Unmanned Aircraft Systems', Joint Doctrine Note 2/11, Concepts and Doctrine Centre (DCDC), 2011, para. 517.

15. Michael W Lewis, 'The Case for Drone Strikes', *Los Angeles Times*, 5 February 2013.
16. Patrick B Johnston and Anoop Sarbahi, 'The Impact of U.S. Drone Strikes on Terrorism in Pakistan' (Under Review), January 2011.
17. David A Jaeger and Zahra Siddique, 'Are Drone Strikes Effective in Afghanistan and Pakistan? On the Dynamics of Violence between the United States and the Taliban', The Institute for the Study of Labor (IZA), Discussion Paper No. 6262, December 2011.
18. Israel's killing of Hamas leader Ahmed Al-Jabari in Gaza in November 2012 was a textbook example of a precision strike but, on the broader strategic level, the omnipotence that the Israelis wished to convey backfired in favour of the Palestinian cause.
19. David Alexander, 'Retired General Cautions against Overuse of "Hated" Drones', *Reuters*, 7 January 2013.
20. These beliefs are powerful regardless of their accuracy. As it is, most drone technology is quite vulnerable to interception by even moderately functional integrated air-defence systems. Drones require permissive environments to function – either in instances where they face minimal or zero threat, as in Afghanistan and Somalia, or where they have been given permission or leeway to operate, as in Pakistan and Yemen.
21. This tactic entails striking the same target twice, in order to hit any reinforcements or clean-up crews attempting to remove evidence from the scene. For obvious reasons, these strikes pose a significant risk to non-combatant first responders.
22. UN Report, 'Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, Philip Alston', UN General Assembly Human Rights Council, 2010.
23. *Ibid.*, para. 79.
24. David Luban, 'The War on Terrorism and the End of Human Rights', *Philosophy and Public Policy Quarterly* (Vol. 22, No. 3, 2002), pp. 9–14.
25. Of these three, Al-Qa'ida in the Islamic Maghreb and Al-Shabaab are both listed on the US Foreign Terrorist Organizations list. Certain leaders of Boko Haram are also listed.
26. David Kilcullen, *The Accidental Guerrilla* (London: Hurst and Company, 2009).

Dead on Target? The Strategic Dead End of Targeted Killing as a Way of War

Armin Krishnan

TODAY, CLANDESTINE warfare aimed at 'neutralising' individuals has become more prominent at a time when large-scale conventional operations are few in number. Instead, a growth in so-called low-intensity conflicts can be observed, in which non-state actors like insurgents, terrorists, criminals, militias and mercenaries are typically the main belligerents.[1] These conflicts tend to be internal conflicts, which have a strong transnational dimension in the sense that the non-state actors tend to have their safe havens in neighbouring countries and tend to have other foreign support from diasporas, 'charities', sympathetic governments and other interested parties. These 'new wars' tend to produce failed states that can destabilise entire regions and have posed a great challenge to the Western world.

Targeted killing has emerged as a response to key incidents of international terrorism. The phenomenon began in the 1960s and was mainly driven by Palestinian groups, which tried to draw the world's attention to their cause through spectacular attacks abroad or against foreigners. After the 1972 Munich Olympics attack, the Israeli government decided to assassinate dozens of key members of the Black September terrorist group in Europe and the Middle East. Despite some failures and international criticism, Israel has continued to target terrorists in its campaigns – and has even expanded its targeted killings since 2000. The Israel Defense Forces (IDF) carried out over 243 operations that targeted individuals during 2000–06.[2] The US government, too, turned to the targeted killing of terrorists after the 9/11 attacks: a presidential finding authorised the CIA to 'kill, capture and detain members of al Qaeda anywhere in the world'.[3] Conducting conflict as a series of assassinations of key enemy personnel was not only seen by the US as a means of reducing the relative threat of terrorism, but also as an effective counter-terrorism strategy for winning the War on Terror.

Drones, New Intelligence Capabilities and Individual Targeting

Targeted military strikes and operations directed against specific combatants are not an entirely new phenomenon, but individual targeting has evolved since 2001. More advanced intelligence, surveillance and reconnaissance capabilities make it possible to more easily identify, locate and track individuals on vast battlefields, across war zones and within modern societies. According to John Nagl:[4]

> What's happened over the past five years is we've gotten far, far better at correlating human intelligence and signals intelligence to paint a very

> tight, coherent picture of who the enemy is and where the enemy hangs his hat … we've gotten better at using precision firepower to give those people very, very bad days.

Unmanned aerial vehicles are part of the current technological revolution in 'manhunting', as are other sensor and surveillance systems (imagery and signals intelligence) that can reliably identify and track individuals in rural areas as well as in cities. Drones offer advantages over manned aerial capabilities: extended periods of operation, and thus the ability to find signatures of terrorist activities from the air and then, depending on the drone, launch a precision attack (an ability not used until October 2001).

Targeted Killing as a Strategy

Finding and targeting specific individuals within war zones has not been a core task of conventional militaries. In a War on Terror against unconventional opponents, 'No longer able to oppose the enemy conventionally, the United States has been forced by necessity to seek out individual terrorists, terrorist cells, and their supporting infrastructure.'[5] This has been the strategy of the Obama administration, which escalated the drone war in Pakistan against militants since 2009 with over 312 strikes compared to only fifty-two under President George W Bush.[6] While there seem to be obvious tactical and operational advantages of 'neutralising' key enemy personnel from distance, it is debatable when a strategy of targeted killings works on a strategic level: to successfully destroy, coerce or manipulate enemy organisations permanently.

Counter-Terrorism

Israel and the US have both targeted terrorist leaders as well as skilled operatives. The appeal to policy-makers is that decapitation can result in the collapse of a terrorist group. Killing or capturing other key members can disrupt specific terrorist attacks and will typically degrade the group's ability to carry out future attacks. According to Daniel Byman, experienced and skilled operatives like bomb-makers cannot be easily replaced.[7] Their immediate retaliatory attacks would also be less sophisticated and less effective. Targeted killings also increase the pressure on a group, as it forces its members to focus on survival instead of planning offensive actions. Al-Qa'ida's recently discovered list of guidelines for evading drone strikes confirms that the group has been forced into adopting a more defensive posture.[8] Targeted killings may also deter individuals from joining a terrorist group.

Counter-Insurgency

The US military has used individual targeting also in the context of counter-insurgency operations, which goes back to the Phoenix Program in South Vietnam and which resulted in 80,000 'neutralisations' (kill/capture/turning)

of Vietcong Infrastructure members.[9] Similar tactics were used in Afghanistan since 2001 and in Iraq during the period of occupation (2003–10).[10] Most of these 'kill-or-capture' missions have been carried out by Special Forces like Task Force 373 in Afghanistan, Task Force 88 in Iraq and the British SAS, which have conducted thousands of night raids on the houses of insurgents and insurgent leaders. Task Force 88 (previously Task Force 145) was, for example, credited with the killing of Al-Qa'ida in Iraq leader Abu Musab Al-Zarqawi in June 2006.[11] US Special Operations Forces have occasionally entered neutral countries for the purpose of killing insurgent leaders in their safe havens, as happened in a cross-border raid into Syria in October 2008.

Other Uses

Campaigns of killing key individuals as a main instrument for achieving important objectives have been used or could be used in other contexts as well, such as in facilitating regime change, counter-proliferation, the fight against transnational organised crime, bringing war criminals to justice, or for dealing with the problem of piracy in international waters.

Is Targeted Killing Effective on a Strategic Level?

In an age of warfare in which the opposition tends to hide within populations, and in order to avoid collateral damage through less 'surgical' targeting, it does seem to make sense to target individuals rather than the enemy in general. However, one has to be realistic with respect to what can be achieved by targeting a few key enemies such as leaders or skilled operatives.

It is a contentious issue whether enemy organisations collapse more quickly if they are subjected to a targeted-killing campaign. Some recent studies indicate that certain enemy organisations are more likely to collapse after key leaders are killed. Bryan C Price claims that terrorist groups are particularly vulnerable to decapitation because they are 'violent, clandestine, and value-based organizations that amplify the role of leaders and make leadership succession difficult'.[12] Patrick B Johnston suggests that counter-insurgency campaigns are more likely to succeed if insurgent leaders are killed or captured, while failed targeting incurs few costs.[13] However, if one considers not a large dataset of mostly historical cases, but three very important contemporary examples where targeted killing has been used extensively against major political movements or terrorist organisations over a longer period of time – namely Hamas, the Taliban and Al-Qa'ida – the results are sobering. The systematic targeting of their leaders over more than ten years has not led to the collapse of any of these organisations; it has not coerced them into making peace or abandoning their struggle, or even deterred them from terrorist tactics.

A major reason why targeted killings have only had a limited impact on these groups and Al-Qa'ida is that they have adapted. The leadership of

these organisations has been driven underground and it becomes harder and harder to understand their governance structures. Hamas no longer announces the names of many leaders. Al-Qa'ida has splintered into numerous local franchises, which more or less operate autonomously without much guidance from a central leadership. It has also been claimed that the group has responded by developing robust succession-planning.[14] 'Leaderless resistance' has apparently become Al-Qa'ida's new strategy in the West, which is based on the idea of encouraging sympathetic individuals to independently engage in terrorism and subversion.[15] Although this could be a tactic born out of desperation, so-called lone-wolf terrorism has become the biggest terrorism threat within Western societies. Jenna Jordan claims that, in particular, older and religious organisations are more likely to display greater resilience and organisational flexibility in the face of decapitation.[16] Killing leaders can in this case not prevent terrorism, but might rather encourage it through the 'martyr effect' and the outrage caused by civilian casualties that occur even in targeted attacks.

The 'martyr effect' means that the killing of a leader, especially if it is a religious leader, can be exploited by the enemy for propaganda purposes. A leader who is perceived as heroically having died for the cause can inspire others to join the group and to take revenge for the killing. This means that the killing of a leader can also be in some ways a great victory for the terrorist organisation. It is important to keep in mind Henry Kissinger's dictum that the guerrilla wins by not losing, which may also apply to the global Islamic insurgency led by Al-Qa'ida. The ability of an insurgent or terrorist group to inflict harm is less important than its ability to politically mobilise others and persevere. Al-Qa'ida usually portrays killed leaders and civilians as martyrs and there seems to be a positive correlation between targeted killings and propaganda outputs.[17] Any mistake in targeting which results in the death of innocent civilians can be used for de-legitimising a targeted-killing campaign and for radicalising others. General Stanley McCrystal and former Director of National Intelligence Dennis Blair have both warned against overuse of drone strikes because of the issue of blowback.

Many academic analysts have pointed out that the targeted killings in Pakistan by drones and otherwise have already produced a rise in anti-American sentiment within the Pakistani population and have also resulted in numerous public protests by Pakistan's government regarding specific drone strikes.[18] The actual military impact of the drone strikes might be low in comparison to the psychological impact that they have on the populations subjected to them, as was highlighted by a recent Stanford University and New York University study.[19] Opinion polls reveal that people in many Western countries object to the drone strikes in Pakistan, Yemen and Somalia. The targeted killings by Israel and the US have been criticised for

their questionable legality and may have already strained their relations with certain other countries.

Key Factors that Make Targeted Killing Work at a Strategic Level

Research into targeted killings indicates that there are indeed circumstances under which the approach can work at a strategic level, depending on a number of factors.

The Size and Age of the Enemy Organisation

It seems that the most important variables for the success of a targeted killing campaign would be the size and age of enemy organisations. Research by Jenna Jordan suggests that smaller and younger organisations are far more likely to collapse after the killing of their leaders than larger and older organisations. Leadership attacks seem to work best for terrorist organisations that have fewer than 100 members.[20] When dealing with large, complex and sophisticated enemy organisations that have been active for decades, as is the case with Al-Qa'ida and the Taliban, the odds for destroying them through the elimination of some of their leaders and operatives are smaller. Drone strikes, which mostly target low- to mid-level militants in Pakistan (only 2 per cent of the drone strikes are directed against high-value targets) will also not bring about victory through attrition because of the overall size of the targeted groups.

A High Degree of Centralisation

Obviously, organisations that are more centralised and that are controlled by one or few authoritarian leaders are highly vulnerable to leadership attacks. The more authoritarian the organisation and the more it is tied to one charismatic leader with a cult of personality, the more likely it will collapse after the death of that leader. For example, UNITA fell quickly apart after the assassination of Jonas Savimbi, UNITA's founder and strongman leader in 2002. In many authoritarian regimes and in many terrorist groups, succession is deliberately not planned in advance because leaders are afraid of rivals. This means that these regimes and organisations might collapse quickly if the leader is eliminated. In any case, the killing of the leader would most likely trigger an internal conflict for the control of the organisation or state.

Criminal or Corrupted Organisations

The lines between terrorist, insurgent and criminal organisations have often become blurred. Nevertheless, there are differences. In the fight against organised crime the US and other countries have often pursued a 'kingpin strategy' of targeting drug lords and other crime bosses. This strategy has produced mixed results. In some cases, such as the Colombian Medellín Cartel in the early 1990s, the criminal organisations quickly fell apart when leaders were killed or arrested. In other cases, criminal organisations have proven to be much more resilient with respect to leadership-targeting than

terrorist groups. Their organisations tend to splinter into smaller and more violent groups after leaders are removed. Alternatively, competitors simply move into the gap left by collapsed organisations, as did the Cali Cartel after the demise of the Medellín Cartel, which subsequently splintered into numerous *cartelitos* after it was brought down in the mid-1990s. New research suggests that it could be much more effective to target key operatives of such organisations rather than the formal leaders, who are often easily replaced. Network analysis of drug cartels reveals that the removal of so-called 'betweeners' or people 'who connect the illegal with the legal' – the governors and law enforcers – could be the most effective way of destroying a criminal organisation.[21] However, targeted killings should be measures of last resort in the fight against organised crime.

Conclusion

Targeting individual combatants has become President Obama's preferred policy in dealing with Al-Qa'ida. The US government has now moved towards the firm institutionalisation of targeted killing as a tool of foreign policy by introducing the so-called 'disposition matrix', which is a database that co-ordinates efforts for the 'kill or capture' of enemies across the US government.[22] As a result of substantial fiscal pressures and public dissatisfaction with large-scale deployments like that in Afghanistan, NATO states may rely more on a combination of drones and special forces for stabilising allied countries and pursuing other strategic objectives. These actions allow the US and its closest allies to remain present in remote world regions without having to commit expensive and politically controversial occupation or stability forces.

The benefits of such a light-footprint approach that relies on long-range precision attacks against dangerous individuals and other strategic targets will remain very limited, however. More than eleven years of killing successive generations of Al-Qa'ida and Taliban leaders has not resulted in any decisive victory. Targeted killing remains within the political context: it is not a substitute for a political settlement with Hamas and the Taliban, whereas the war on Al-Qa'ida might require careful local solutions to defeat it globally. Targeted killing or assassination outside of war zones should be only used where it is very likely to make a difference on a strategic level.

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Drone Use in Counter-Insurgency and Counter-Terrorism: Policy or Policy Component?

David Hastings Dunn and Stefan Wolff

REVOLUTIONS IN aerial warfare have long been predicted. In 1957, then-UK Defence Secretary Duncan Sandys produced a White Paper predicting the end of manned aircraft, arguing that the age of the rocket now rendered them redundant. With the US Air Force now training more operators of unmanned aerial vehicles (UAVs) than ordinary pilots, such predictions are once again being made. Whether and to what extent UAVs or 'drones' replace manned systems, however, is less interesting than the undoubted impact that these systems are having on twenty-first-century warfare.

The novelty that drone technology represents has many aspects, all of which have caused controversy. The fact that the pilots of these systems are physically remote and invulnerable, that the operation of drones across borders generates less reaction at home and abroad than traditional incursions, and that these systems are operated by intelligence agencies as well as traditional air forces have all been cited as novel, dangerous and, for some, a reason why these systems should be banned.

Such calls, however, face considerable opposition from already entrenched interests. One recent market report on the drone industry predicted that annual global spending on UAVs was set to double to $22.5 billion over the next few years.[1] Although not cheap, drones are considerably less expensive than the manned ground-attack aircraft or helicopters whose role they seek to replace.

Above all, however, drones seem to have established themselves as a militarily effective technology that is able to be employed with domestic political impunity, minimal international response and low political risk and cost.[2] It is also argued that they are particularly well-suited to counter-terrorism operations in which they can be employed over hostile or ungoverned spaces, such as parts of Afghanistan, Pakistan, Yemen, Somalia and Libya. Their success in targeting Taliban and Al-Qa'ida leadership targets has elevated the use of drones to a core component of national security policy by the Obama administration in particular, which has more than doubled the number of drone strikes compared to the George W Bush administration.[3]

Drone strikes have been effective in killing terrorist operatives and decimating their leadership – yet they have also generated significant 'blowback'. Despite increasingly vocal opposition to the use of drones, their perceived

effectiveness and relatively low financial and, above all, low political cost, attempts to limit their role would need to be able to offer a credible alternative to fighting the global War on Terror. While many argue against drone use,[4] suggestions of alternatives that can manage and contain the threats posed by the individuals and organisations targeted are few and far between.[5]

For these reasons, banning drones altogether represents a hard ask, and not necessarily one that would be prudent either. Rather than trying to prevent the further technological and strategic development of this new generation of (aerial) warfare, the debate about drones would be better served by a more nuanced analysis of the roles that drones have been assigned and the tasks they can, and cannot, realistically be expected to accomplish.

One potentially very fruitful area for discussion is the currently highly controversial employment of drones for purposes of both counter-terrorism (CT) and counter-insurgency (COIN). While distinct in their purpose and tactics, CT and COIN are often conflated and used interchangeably, especially in relation to the deployment of drones. This becomes all the more 'logical' given that the key theatres of operation in which drones are deployed make it difficult to distinguish clearly between terrorists and insurgents as targets of drone strikes. On the one hand, it is clear that the US is engaged in a CT campaign in, for example, Afghanistan, Pakistan and Yemen. On the other hand, terrorist activity in these locations is often indistinguishably intertwined with anti-government insurgencies. In Afghanistan, this insurgency is also directed at the post-2001 US presence in the country, while in Yemen and Pakistan insurgents primarily aim to overthrow incumbent regimes or significantly change the existing framework of the state.

As US drone use against terrorist networks thus also weakens insurgent capabilities, drone warfare helps beleaguered governments – such as in Yemen, Pakistan or Afghanistan – hold on to power, thereby giving them incentives to portray insurgents as terrorists, especially of the global jihadist kind, with the intent and capability to strike at Western interests in the country, region and beyond. However, these governments often face significant blowback from being seen to be complicit in the killings resulting from drone warfare. While such governments may still benefit to an extent from the results of drone warfare, their calculations are by necessity different as a groundswell of public opposition to drones, and perhaps more specifically those using them (that is, the US), creates an environment in which terrorist and insurgent networks can make a more credible claim to legitimacy *vis-à-vis* an oppressive, unaccountable government in league with a foreign enemy. Anti-Americanism thus becomes an additional tool for insurgents with which to recruit fighters and mobilise resources in their attempt to overthrow an existing government. This is very well illustrated by the case of Pakistan (including by Imran Khan's political campaign to

capitalise on anti-American sentiments). The picture in Yemen, on the other hand, is more complex with opposition to drones and anti-US sentiment, for the time being at least, less pronounced than in Pakistan.

The use of drones as weapons has evolved naturally from their use as reconnaissance vehicles. Tasked to gather information on enemy movements, their on-board optics and ability to loiter made them ideal platforms for such a role, providing an unparalleled degree of surveillance over large areas and for long periods of time, generating data that could subsequently inform ground- and air-combat operations. The time gap between gathering and analysing information, and acting on it, however, diminished significantly once drones became armed, enabling a much more immediate response to this operational intelligence.

Yet an important distinction needs to be drawn here between acting on operational intelligence that corroborates existing intelligence and confirms the presence of a specific pre-determined target and its elimination – so-called 'targeted strikes' (or less euphemistically, 'targeted killings') – and acting on an algorithmic analysis of operational intelligence alone, determining on the spot whether a development on the ground suggests terrorist activity or association and thus fulfils certain (albeit, to date, publicly not disclosed) criteria for triggering an armed response by the remote pilot of a drone – so-called 'signature strikes'.[6]

Targeted strikes rely on corroborating pre-existing intelligence: they serve the particular purpose of eliminating specific individuals that are deemed crucial to enemy capabilities and are meant to diminish opponents' operational, tactical and strategic capabilities, primarily by killing mid- and top-level leadership cadres. To the extent that evidence is available, it suggests that targeted strikes are highly effective in achieving these objectives, while simultaneously generating relatively little blowback, precisely because they target individual (terrorist) leaders and cause few, if any, civilian casualties. This explains, to a significant degree, why the blowback effect in Yemen – where the overwhelming majority of drone strikes have been targeted strikes – has been less pronounced than in Pakistan and Afghanistan.[7]

Signature strikes, in contrast, can still be effective in diminishing operational, tactical and strategic enemy capabilities, but they do so to a certain degree by chance and also have a much higher probability of causing civilian casualties. Using drones for signature strikes decreases the dependence on pre-existing intelligence about particular leaders and their movements and more fully utilises their potential to carry out effective surveillance and respond to the conclusions drawn from it immediately. Signature strikes have been the predominant approach to drone usage in Pakistan and Afghanistan.[8] Such strikes have had the effect of decimating the rank and file of the Taliban

and their associates – but they have also caused large numbers of civilian casualties and, at a minimum, weakened the respective host governments' legitimacy and forced them to condemn publicly, and in no uncertain terms, the infringement of their states' sovereignty by the US. In turn, this has strained already difficult relations between countries which have more common than divergent interests when it comes to regional stability and the fight against international terrorist networks. That signature strikes have a high probability of going wrong and that such failures prove extremely counterproductive is also illustrated by a widely reported case from Yemen, in which twelve civilians were killed in the proximity of a car identified as belonging to an Al-Qa'ida member.[9]

The kind of persistent and intimidating presence of a drone policy geared towards signature strikes, and the obvious risks and consequences involved in repeatedly making wrong decisions, are both counterproductive in themselves and corrosive of efforts that seek to undercut the local support enjoyed by insurgent and terrorist networks, as well as the mutual assistance that they can offer each other. Put differently, signature strikes, in contrast to targeted killings, do anything but help to disentangle the links between insurgents and terrorists.

Counter-insurgency as a strategy works best by providing security on the ground (deploying soldiers amongst the community that they are intended to protect) and establishing and sustaining a sufficiently effective local footprint of the state and its institutions providing public goods and services beyond just security (water, food, sanitation, healthcare, education and so forth). This strategy is often encapsulated in the formula 'clear, hold, build',[10] and it needs to go hand-in-hand with pursuing a viable political settlement that addresses what are the, in many cases, legitimate concerns of those fighting, and supporting, an insurgency. By living among the communities they seek to secure, soldiers can win their trust, stem support for the insurgents, and understand who their enemies are, what their demands and objectives are, and how best to single out those who represent an irreconcilable threat to the community. In other words, in a context in which the objective is to protect innocent civilians, win over reconcilable insurgents and their supporters, and eliminate those who are irreconcilable, drones can deliver specific contributions to an overall counter-insurgency policy. Yet this can only happen if drones target individuals for a reason, rather than being used, and perceived, as a blanket approach against an entire community.

It is important to bear in mind, in this context, that the success of counter-insurgency, in part, lies in the above-mentioned transition from a predominantly military footprint, with some civilian tasks being performed by soldiers, to a predominantly civilian footprint that includes a military component to secure gains made in restoring public services and law and

order. This is essential because it counters a similar tactic used by insurgents and terrorists. In Yemen, for example, territorial gains made by Al-Qa'ida in the Arabian Peninsula (AQAP) initially garnered a lot of local public support precisely because they not only drove government forces out of areas in southern Yemen, but because they also provided basic services to communities.

Yet, as the imposition of Sharia Law became locally less and less popular, tribal resistance, targeted drone strikes and a government offensive succeeded in retaking most of the territory gained by AQAP and holding it in the course of 2012. At the same time, AQAP operations became much more localised, not only in the sense that the organisation has not been able to mount any transnational operations, but also in the sense that it has ceased attacks on Western interests and targets in Yemen, concentrating its remaining capabilities on attacks against Yemeni military and security officials.[11]

Data from the Bureau of Investigative Journalism and the *Long War Journal* for 2012 puts the number of US drone strikes in Yemen at around forty, with almost 200 militants and around thirty-five civilians killed. In terms of the number of strikes and enemy combatants killed, this represents a significant increase compared to previous years: for the three years prior, less than half the number of strikes were confirmed, and just over half the number of militants were reportedly killed, while the number of civilian casualties was approximately a third higher, albeit with none reported in 2011.[12]

Drones, thus, were part of a broader, and, to date, successful, campaign against AQAP in Yemen. The challenge for the Yemeni government now is to make the transition from a military presence that secures and holds these territories to a more civilian one that builds up services and legitimacy, while at the same time seeking a political settlement with the southern secessionists through the nascent process of the UN-mediated National Dialogue. Unless, and until, that happens, the gains of 2012 are easily reversible. By definition, preventing a reversal of these gains cannot be accomplished by drones. Indeed, using unmanned aerial platforms to constantly look for signifiers of terrorist and insurgent activity is almost the antithesis of counter-insurgency. Civilian casualties, which have a much higher probability as a result of signature strikes, alienate and radicalise the local population and only serve to increase the active and passive support that such communities are likely to offer both terrorists and insurgents.

Once civilian casualties mount, they create an important negative legacy effect. According to data compiled by the New America Foundation, the average civilian casualty rate from US drone strikes in Yemen since the inception of the policy there is around 6 per cent, comparable to the 2011 average for Pakistan, which was 5.5 per cent.[13] In the case of Pakistan, this

represented a significant decline from the 2008 peak of almost 60 per cent.[14] Yet even more than four years after a significant decline in civilian casualties, US drone strikes remain deeply unpopular in the country,[15] far more so than in Yemen.[16] As noted earlier, the majority of these strikes in Pakistan were signature strikes; those in Yemen targeted strikes. While both were effective in reducing insurgent and terrorist capabilities, their broader consequences in Pakistan have been more negative both domestically and in terms of US-Pakistani relations than they were in Yemen.

To put it differently, using drones for long periods over isolated communities is almost an invitation for trouble in a variety of ways, including, crucially, the fact that the psychological, physical and cultural distance between the operators and their observed community is likely to contribute to misinterpretation and misperception, and thus to the killing of innocent civilians.

Remote observation offers none of the experience, associated with traditional counter-insurgency campaigns, that can generate cultural sensitivity and the building of trust and empathy. Instead it offers a sanitised form of surveillance where the act of killing is dehumanised for both the killers and the killed. Drone strikes of this nature act on suspicions rather than verified intelligence and their operation offers no sense of feedback to their operators. Their remoteness is not just physical: the secrecy with which these programmes operate and the lack of accountability to the communities over which they operate means that there is neither a legal nor an emotional cost involved in getting things wrong.

Given that drones, if deployed with sensitivity and clear purpose, can make a significant and useful contribution to counter-insurgency and counter-terrorist campaigns as illustrated by the discussion of the case of Yemen, the key challenge for policy-makers is to avoid getting things wrong, and having to live with the consequences of doing so, as is the case with Pakistan. Micah Zenko draws the conclusion that US drone policy needs to be reformed with a focus away from signature strikes and towards targeted killings of a limited number of terrorists with transnational capabilities and intent.[17] Similarly, Joshua Foust argues that for drones to be effective, they must be part of a broader strategic framework.[18] This is a sensible proposal with which the authors generally agree as far as such drone strikes are considered in the context of counter-terrorist efforts aimed at preventing attacks against the US and its (and more generally Western) interests abroad.

Yet, as has been argued, it is difficult to separate (transnational) terrorist networks from more localised insurgencies in which the former often successfully embed themselves. To the extent that drone strikes can disrupt these links, they can strengthen governments' counter-insurgency

efforts and contribute to establishing environments in which insurgents are accommodated into political and social processes that reduce the opportunities for terrorist networks to find bases from which they can operate. Using drones, from that perspective, is less about limiting their deployment in principle, but about making sure that they are an element of a broader policy of counter-terrorism and counter-insurgency – not a substitute for it.

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Developing New Capabilities: The European Imperative

Tom Dyson

AT THE beginning of the 1990s, advances in C4ISTAR (Command, Control, Communications, Computer, Intelligence, Surveillance, Target Acquisition and Reconnaissance) were viewed by key figures within the US defence establishment as representing a 'Revolution in Military Affairs' (RMA).[1] The doctrines and capabilities of this new RMA would, it was claimed, deliver the US and its allies the ability to engage in conflict against near-peer competitors without the necessity to deploy large numbers of ground forces and at little cost in terms of civilian casualties.[2] As the post-Cold War era progressed, infantry-led stabilisation and counter-insurgency operations in the Balkans, Iraq and Afghanistan highlighted the erroneous nature of the assumption that C4ISTAR could fundamentally transform the nature of conflict. In such 'wars amongst the people', technology emerged as very much secondary to the ability to deliver improvements in governance and economic development.[3]

However, while the vision of future warfare extolled by RMA proponents proved exaggerated, other operations, such as NATO's air campaign in Libya, Operation *Unified Protector* (March–October 2011), demonstrate that stand-off precision-strike technology has an important place in contemporary warfare. In short, the lessons of post-Cold War operational experiences highlight that European nations must develop balanced forces capable of both stabilisation operations and high-intensity warfare against near-peer competitors.[4]

While some European nations have acquired a significant level of expertise in counter-insurgency and stabilisation operations, their ability to undertake higher-intensity precision-strike operations is questionable. Operation *Unified Protector* in particular highlighted the continued dependence of European nations on the US for key strategic enablers, notably ISTAR and logistical support, as well as deficits in precision-strike munitions.[5] The need for Europe to develop these capabilities is all the more pressing given the US' 'pivot to Asia' and plans to shrink the US defence budget by $450 billion over the next decade, which leaves little doubt about the decreased willingness and ability of the US to underpin European security.[6] As Ivo Daalder, the US permanent representative to NATO, noted recently: 'If current trends continue, in 10 years from now this alliance would not have been able to mount the kind of campaign it did in Libya'.[7]

The impact of the Asia pivot has been magnified by the austerity cuts made to European defence budgets, which have accelerated the military decline of the Western European great powers (Britain, France and Germany).[8] This military decline will be thrown into sharper relief by the growing ability of rising economic powers, such as China and India, to potentially translate their economic growth into military power. As Nick Whitney, former head of the European Defence Agency (EDA), highlights, 'the real challenge to the security and prosperity of Europe's peoples is to continue to count – to avoid being marginalised in a world where newer and more hard-nosed powers make the rules and assert their interests and values while Europe retreats into retirement'.[9] European states face a stark and pressing choice: to co-operate more closely in the pooling and sharing of military capabilities and forces – including precision-strike capabilities – or to face a rapid decline in their ability to act independently in the event of crises in their geopolitical neighbourhood.

Two potential avenues exist for European states to overcome these capability deficits. The first is the Ghent Framework of the EU's Common Security and Defence Policy (CSDP). The Ghent Framework was agreed by the European Council in December 2011 and asks EU members to consider how to increase the interoperability of national capabilities; explore where there are possibilities for pooling capabilities; and examine the opportunities for role- and task-sharing in capabilities and support structures. The second possible avenue for European co-operation is NATO's Smart Defence Initiative. This was launched in February 2011 and has a similar set of goals to the Ghent Framework. However, European co-operation under both initiatives has been limited, certainly when seen against the backdrop of the grave strategic challenge of abandonment by the US.[10] The main reasons for this reticence to co-operate are twofold.

The first factor lies in the 'hangover' effect of Cold War defence postures. The commonalities in geographical position, relative economic power and size of Britain, France and Germany mean that they are exposed to the global balance of power in a relatively similar manner, driving isomorphism in their defence policies and the arts and instruments of warfare (including a partial and selective emulation of the RMA).[11] Yet, at the same time, nuanced, but important, variance in external vulnerability has fostered important differentiation in the three states' strategic interests which can undermine the development of common European positions on the relative importance of NATO or the EU to European security.

For post-colonial Britain, retaining power and influence at a global level during the Cold War necessitated a close relationship with the US. This led to a particularly close defence and security relationship with the US during the Cold War, including a high-level of dependency in terms of military technology

transfer and intelligence-sharing, and a consequent commitment to NATO at the expense of efforts to attain European military autonomy.[12] A public narrative of the 'special relationship' between the US and UK in defence and security was developed to frame and legitimate this dependency. However, as this chapter highlights, it is an ideology that is beginning to undermine a clear view of the UK's strategic interests in a world of shifting power vectors.

With its heavy dependence on African mineral resources and consequent desire to sustain its empire after the Second World War, France was drawn into a more difficult relationship with the US, incentivising semi-detachment from NATO and a greater willingness to promote defence and security co-operation through the EU.[13] The post-Cold War era has witnessed a gradual retreat from Gaullist ideology in the form of rapprochement with NATO and a return to the Atlantic Alliance's integrated command structures under former President Nicolas Sarkozy in 2009. Nevertheless, France remains broadly committed to enhancing defence and security co-operation under the auspices of the EU rather than NATO, not least due to the increased ability to balance German EU economic leadership that 'defence Europe' provides.

In the immediate post-war era, German chancellors were driven by the twin imperatives of attaining regional and international support for reunification and of ensuring the Federal Republic's moral and political rehabilitation in the international community after the Second World War. [14] As a consequence, German policy-makers developed a non-threatening security narrative that emphasised the use of force only in self-defence and multilateralism. This ideology had become strongly embedded within society and the institutions of defence and security by the end of the Cold War. Policy-makers have sought to refashion this security narrative in light of the challenges of expeditionary operations. However, this process has proved highly difficult in the context of the federal state, where frequent regional elections reduce the windows of opportunity to make bold, electorally unpopular changes to defence and security policy, slowing the pace of defence reform.[15] As a consequence, Germany faces significant problems in translating its economic power to military power and is a laggard in burden-sharing within NATO and the CSDP.[16]

Hence, strategic differentiation deriving from the legacy of colonialism and the states' different experiences of the Second World War has developed ideological positions which have become strongly entrenched within both the institutions of defence and security policy and the broader societies of Britain, France and Germany. These ideologies – of Atlanticism, Gaullism and anti-militarism – have slowed the pace at which the Western European great powers are able to develop common responses to the imperatives of the contemporary security environment.

The second major impediment to co-operation is the 'alliance security dilemma' in the EU and NATO.[17] Abandonment by the US – or other European alliance partners – presents a significant risk to European states. As Snyder notes, abandonment refers not only to full defection from an alliance, but can be manifested in a number of ways: 'the ally may realign with the opponent; he may merely de-align, abrogating the alliance contract; he may fail to make good on his specific commitments, or he may fail to provide support in contingencies where his support is expected'.[18] European history provides many examples of these various forms of defection from alliances. EU and NATO states cannot, therefore, be fully certain that their European partners and the US will remain true to their promises. Consequently, pooling and sharing carries a significant risk. Should states become dependent on each other for key capabilities, European action could be undermined by the non-participation of one or more European states in military operations. For this reason, states remain highly sensitive to the potential threat of losses in relative power which can derive from defection and are cautious about relinquishing sovereignty in defence policy. This places inherent limitations on the scope and depth of defence co-operation.

As such, given the strategic challenges European states face, the balance in the trade-off between the fear of defection and co-operation is weighted too far in favour of the perils of defection. As highlighted above, the reticence to co-operate deriving from the alliance security dilemma has been sharpened by the electoral unpopularity that core executives of the West European great powers face in challenging the existing ideological underpinnings of national defence policies – be it anti-militarism, Gaullism, Atlanticism or national strategic autonomy. Consequently, European states are failing to take advantage of the possibilities to co-ordinate their defence budget cuts and are not properly considering how pooling and sharing could be achieved without jeopardising the ability to undertake missions should one or more states be unwilling to participate.[19] The gravity of Europe's collective strategic decline requires bold and assertive leadership from the Western European great powers. During the last major shift in the global balance of power at the end of the Cold War, Franco-German leadership emerged to sustain Europe's economic competitiveness through the 1992 Maastricht Treaty. Similar leadership is now required to rectify Europe's military capability deficits.

The solution to slowing Europe's military decline lies in the Ghent Framework and a strengthened CSDP that has the potential to be further developed as the 'European Pillar' of NATO. In the CSDP, Europe has the institutional architecture to co-ordinate the procurement of precision-strike capabilities and enablers which can be used both under CSDP operations and in an Atlantic Alliance context when the US wishes to be involved. The potential of NATO's Smart Defence looks limited, given US attempts to use the initiative as a means of prompting its Alliance partners to purchase US capabilities and

the unwillingness of the US to provide financial backing for Smart Defence projects.[20] Furthermore, the US and the nations of the Weimar Five (France, Germany, Italy, Poland and Spain) are broadly supportive of European NATO members routing defence co-operation more intensively through CSDP, aware that the CSDP and the Atlantic Alliance are largely complementary organisations.

Indeed, it is not opposition from the US that has been the major impediment to more intensive European co-operation in defence, but the role played by the UK. While the UK has been a leader of key initiatives that strengthened European military autonomy, such as the 1998 St Malo Summit and 2004 Battlegroup Initiative, Britain has become an increasingly difficult partner in the CSDP. British European policy under the prime-ministership of David Cameron appears to be driven by pressure from the highly Eurosceptic backbenches of the Conservative Party, rather than by a rational and sober calculation of strategic imperatives. The UK core executive must challenge the dated ideology of the 'special relationship' that pervades discourse on British defence policy.[21] While of utility during the Cold War, this ideology has taken on a path dependency that does little to further the global power and influence of the UK, as recently highlighted by the US president, Barack Obama.[22] In the era of austerity and the Asia pivot, the UK's global influence will be bolstered rather than undermined by an active role in the development of an autonomous European military capability through the EU.

One option that would allow the UK to exercise leadership would be to focus on the development of a new European Security Strategy (ESS) that defines Europe's common strategic concerns and can form a foundation for intensified co-operation in pooling and sharing. The last ESS was developed in 2003, updated in 2008, and requires urgent renewal. However, a new ESS should also be accompanied by intensified and structured dialogue between European nations on the conditions under which they would be willing to provide common capabilities. Crucially, as Sven Biscop highlights, successful pooling and sharing will require more than just 'tactical level, project by project' co-operation through the EDA.[23] It necessitates the utilisation of CSDP structures and the engagement of the European Council in sustained dialogue about longer-term defence planning. This dialogue would need to decrease the level of uncertainty states experience surrounding the intentions of other states in defence policy, and permit greater co-ordination of defence cuts. Indeed, as Whitney notes, while an updating of the ESS is necessary, of greater importance is a European Defence Review Commission that will examine not only strategy but also the capabilities needed to implement strategy.[24] The leadership of the European 'big beasts', including the UK, will be central to the success of such an initiative.[25]

Secondly, the UK remains divided from its European partners over the issue of the development of permanent European Union Operational Headquarters (EUOHQ). Britain argues that the EUOHQ unnecessarily duplicates NATO structures at SHAPE. It has, therefore, consistently blocked attempts by France and Germany to initiate an independent permanent European operational planning capability.[26] However, developing a EUOHQ is a vital step in meeting the strategic imperative of enhancing Europe's ability to act autonomously. In the context of the Asia pivot, British opposition to a EUOHQ on the basis that it might upset the US is an increasingly irrational position.

The re-emergence of British leadership on the CSDP would certainly not be a panacea for Europe's weaknesses in C4ISTAR and the key strategic enablers necessary for future European-led, high-intensity, precision-strike operations. Low levels of European defence spending remain an enduring impediment to the acquisition of such capabilities. Of the twenty-six European NATO states, only Cyprus, France, Greece, Portugal, Turkey and the UK spend 2 per cent or more of their GDP on defence.[27] Germany – Europe's central economic power – is performing particularly poorly in the translation of its economic power to military effectiveness, spending only 1.3 per cent of its GDP on defence in 2011, as recently recognised by the UK secretary of state for defence, Philip Hammond.[28] Renewed British leadership on the CSDP and pooling and sharing would aid German policy-makers in burden-sharing by providing them with an opportunity to frame increases in defence spending as part of a commitment to the process of European unification.[29] This would be far more palatable to 'anti-militaristic' German public opinion than attempts to increase German contributions to a US-dominated NATO. A significant opportunity will exist for joint British-German leadership on European defence co-operation should the German Social Democrats be elected in the September 2013 federal elections, as the party has identified pooling and sharing as a key area for German European leadership.[30] British leadership of the CSDP would also act as a strong centripetal force that would attract contributions of further niche precision-strike capabilities from smaller European nations.

In conclusion, Europe urgently needs to invest in C4ISTAR and key enablers for precision-strike operations. European states cannot afford the luxury of acquiring these capabilities on a purely national basis. A consensus amongst the Weimar Five about the need for a renewed impetus behind CSDP pooling-and-sharing initiatives has emerged in recent years – a move that would also gain US support. Hence, while the alliance security dilemma will act as an inherent impediment to European integration in defence policy, enhanced intergovernmental co-operation is possible. The crucial factor hindering more concerted pooling and sharing is the unconstructive role played by Europe's second major military power – the UK – which must, for

its own and Europe's sake, overcome domestic opposition to the CSDP based on outdated ideological path dependency.

Notes and References

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19. It is unlikely that the Western European great powers, particularly Britain and France, will fully relinquish the capabilities which permit them to undertake unilateral military operations. However, by developing common capabilities in a manner that ensures several states specialise in key enabling capabilities, pooling and sharing could allow these states to make substantial savings. Such well-planned pooling and sharing will ensure that the defection of one of the Western European great powers does not stop collective military action from taking place as a 'coalition of the willing'.
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Conclusion

Michael Aaronson and Adrian Johnson

IT IS not hard to see why drones have an image problem, associated as they are with the US targeted-killing and signature-strike programmes. But an image problem can become a policy problem. Therefore, it is important not to conflate different issues regarding technology and policy in determining whether unmanned systems are, for better or worse, changing the shape of military intervention.

Much of the public debate over drones has concerned the conduct of a global counter-terrorist campaign – and especially a subset of CIA-operated drone strikes – rather than a sober assessment of the effect unmanned systems could have on the broader manner and likelihood of intervention. Nevertheless, as this report demonstrates, a careful study of the US drone programme can provide some more general lessons for other militaries and governments considering the sort of light-footprint interventions that rely heavily on precision strike, whether manned or unmanned. This is of particular relevance to Europe which, as Dyson argues in this report, urgently needs to develop its own precision-strike capabilities to reduce its dependence on the US and become a credible actor in its own right.

Are drones a threat to the civilised conduct of war? Do they lower the bar to conflict? These are two separate questions: one relates to the conduct of military operations, and the other to the conduct of foreign or national security policy more widely.

The Conduct of Intervention

As Weizmann and other contributors to this report highlight, it is important to determine whether new capabilities can satisfy the essential criteria of discrimination and proportionality. The answer seems to be that unmanned systems, as they exist, can indeed do so. There is no inherent contradiction between armed drone capability and International Humanitarian Law – a finding echoed by the UN Human Rights Council and the British government.[1]

This is not to glibly dismiss the controversy they have aroused. Many of the critiques of drone warfare[2] are reasonable. The US administration argues that its targeting policy is in line with the law of conflict, involving a three-part test that the individual targeted must pose an imminent threat; capture must be too difficult; and the strike must be conducted in line with proportionality and discrimination.[3] Aside from innocent casualties, there are two other main lines of ethical objection to the actual conduct of this policy. First, that by so stretching the definition of 'imminence' – a justification to be acting in self-defence – the administration has essentially rendered it meaningless.

Second, that 'signature strikes' depart too far from discriminatory targeting to adhere to the lawful conduct of war. In the words of one journalist, the operator of a CIA drone over Pakistan 'almost certainly doesn't know for sure what he's shooting at.'[4] The latter may be an extreme view, but when targeting is based merely on suspicious patterns of behaviour, it is not radical to argue that the principles of necessity and discrimination are not satisfied, and that the justification of 'imminence' is contorted further.

However, these are objections to a specific use, not to the nature, of drones. Targeted killing and signature strikes would raise precisely the same quandaries were they undertaken by cruise missiles, manned aerial sorties or special forces. An underlying problem with the CIA drone programme, which the US military seems to have avoided, is the secrecy in which it has been conducted. This has, perhaps unfairly, suggested a wanton disregard for legal constraints (although the drone programme has temporarily been exempted from the 'Counterterrorism Playbook', a set of limits for legal conduct[5]).

A more transparent drone programme, recognising explicit legal limits and allowing independent consideration of compliance, is one possible solution.[6] Another suggestion is to remove operations from the CIA – which, after all, is a civilian agency dedicated to secretive operations – and bring them under the control of the Department of Defense, which is accorded privileged combatant status under the Geneva Conventions.[7] As this report was going to press, there were good indications that the operational control and oversight might indeed be shifted to the military, with the CIA's role reduced.

These are all, however, problems of policy – not technology. For drones permit unprecedented levels of persistence and observation in support of effective targeting decisions; and, as Franke points out in her chapter, by far the majority of military drones worldwide are unarmed and used for surveillance. Furthermore, effective engineering could help pilots and operators to make better decisions under stressful circumstances, as Leveringhaus and De Greef argue in their chapter. It is not unreasonable to assume that, on balance, unmanned systems may provide a more effective means of respecting International Humanitarian Law in interventions to come.

There is nothing about drones that necessarily violates the laws and customs of war. Policy-makers should, however, remain alert to the possibility that while drones remain lawful, public opinion may one day turn against the use of unmanned systems precisely because of policy; as the chapter on lawfulness and legitimacy reminds us, these two concepts are linked, but distinct.

The Likelihood of Intervention

Another, more general, criticism of drones is that, by offering the absence of personal and political risk, they 'lower the bar to war'.[8] By inducing a 'false faith in the efficacy and morality of armed attack', unmanned systems could 'weaken the moral presumption against the use of force'.[9]

These, too, are critiques that must be taken seriously. The decision to take military action must always be made heavily. If the object of war is to make a better peace, then it must be waged with due regard not just for one's own cost in blood and treasure, but also for that of the adversary.

Yet it is a mistake to ascribe too much to technology as a dynamo of intervention itself. It is true that major Western militaries now prepare for an era of 'light-footprint' intervention born of budget austerity and war exhaustion from the protracted counter-insurgencies of the post-9/11 era. But the Western record of intervention has not been linear. For the Libya intervention, there is the Syria non-intervention; the West intervened firmly in Bosnia in 1995, but only after the earlier failures resulted in the worst massacre in Europe since the Second World War at Srebrenica; the withdrawal from Somalia and the shameful inaction over Rwanda sits in the historical record alongside the determined, forceful, sustained military action in Kosovo of 1999 and the preventative diplomacy in Macedonia of 2001. Technological capabilities can shape the form of intervention, but ultimately its drivers and determinants are political and moral. President Sarkozy and Prime Minister Cameron, for instance, pushed for intervention in Libya on moral grounds despite serious equipment deficiencies that meant reliance on American assets – and, in the case of Cameron, much against the counsel of his own military.[10]

The US drone campaign does suggest one possible way in which drones can facilitate persistent, global, low-footprint campaigns – in this case, of counter-terrorism. There is something to be said for the fact that a persistent *manned* campaign of strikes on sovereign Pakistani territory in pursuit of Al-Qa'ida would be politically more costly than relying on drones. Covert campaigns aside, other elements of the administration's policy might be troubling. The Department of Justice White Paper on drone targeting, based on Congressional authorisation in 2001 for the use of all necessary measures against Al-Qa'ida and associated forces, offers a broad, seemingly unconstrained global mandate, based on either direct threat or the inability of a host government to deal with groups that threaten the US.[11] Some states, perhaps, may find such a stance less worrisome; the Chinese government reportedly 'considered' using drones to kill a drug lord in Burma who wanted for the brutal murder of thirteen Chinese sailors.[12]

On the other hand, we should not disregard the unique political context that underlies the US drone programme in Yemen, Somalia and Pakistan:

three states with varying degrees of lawless territory; a historically novel, globalised terrorist threat; and, of course, the unprecedented destruction and impact on the American psyche of the 9/11 attacks. There is also the matter, in Pakistan, of a significant deployment of American and allied troops across the border in Afghanistan, fighting an insurgency that finds succour in the mountainous frontier between the two states.

And, again, care should be taken not to overemphasise the novelty of drone strikes. If long-range armed drones can be conceptualised as a form of unmanned 'deep strike', then such capability has long been provided by weapons like the Tomahawk and Storm Shadow cruise missiles.[13] Moreover, not all interventions will be of the type that can rely on drones. The French-led action in Mali early in 2013, for instance, primarily relied on rapidly deployed light armour and infantry to take ground from Islamist rebels, with air support as but one component of a combined-arms operation.

There is certainly the risk that widespread adoption of armed drones could provide more states with a politically easier means to intervene forcefully in the affairs of others – particularly as the next generation of unmanned combat air vehicles is developed to survive in defended airspace. Nevertheless, it is a risk that should be held in the full political and strategic context. It is far from inconceivable that those future interventions in the name of the Responsibility to Protect will be conducted on a basis similar to that of the Libyan operation of 2011, which demanded 'zero risk' to civilians.[14] (Though, as Beswick and Minor point out in their chapter, this did not translate into 'zero casualties'.) As military technology becomes more capable, the normative and legal shackles upon its acceptable use may also grow. In the end, the changes on each side of the equation may balance out.

Matching Means to Ends

One enduring lesson of foreign intervention is the primacy of effective strategy: that is, the matching of various means to the intended outcome. A warning that commonly emerges in the Waddington, Krishnan, and Hastings Dunn and Wolff chapters is of a failure to align tactical effect with strategic outcome. They do not dismiss the effectiveness of targeted killing by drones out of hand; but rather they speak to the tension between the two levels.

Unintended detrimental consequences of intervention – 'blowback'– are by no means a new phenomenon, nor an inherent feature of drone versus other kinds of strikes. A widespread view holds that drones are fuelling a political and societal backlash against the US.[15] Worse, unintended civilian deaths may be creating new grievances, driving new recruits to join terrorist groups, and undermining the legitimacy of the very governments the US is trying to bolster.[16] In other words, the covert drone programme is radical Islamism's latest recruiting sergeant.[17]

This is contested, as is inevitable when relying on anecdotal evidence. Some data suggest that the effect is overblown – one analyst conducting fieldwork in Yemen found very little causation between drone strikes and radicalisation.[18] The lack of information is a major problem for both policy-makers and the public in attempting to definitively determine the strategic impact of any intervention, not just drone strikes. Here, again, the secrecy of the CIA programme is an obstacle – what data we do have on it comes from leaks, rather than systematic analysis.[19] Neither is the US alone guilty of secrecy; in the aftermath of the UN Special Rapporteur's report on the legality of drone strikes in Pakistan, one might note that the Pakistani government's complaints to the Special Rapporteur seem to be contradictory given what is known from WikiLeaks documents about private approval.[20]

A lack of data may mean that talk of blowback is misguided, or it might not; Hastings Dunn and Wolff offer some clarity on the relationship between targeting policy and public anger in this regard. A bigger issue is that media reports tend to be unreliable from regions like the FATA, particularly when weapons forensics experts – who would be able to determine, for instance, what kind of weapon system has caused what kind of damage – cannot reach these areas.[21] Ultimately, the information problem may mean that we cannot conclude whether anti-Americanism or fragile support for local regimes is *caused by* or *coincident with* drone strikes. This highlights the importance of casualty-recording and damage assessment, outlined in this report, to the strategic conduct of intervention.

The Obama administration faces some tough dilemmas, and analysts should be careful not to downplay the security challenges it faces. It must balance the principles of justice and accountability with a very real terrorist threat; and reconcile the need to demonstrate a credibly tough security policy with the ending of a long occupation of Afghanistan while Al-Qa'ida still remains active in the region. Nevertheless, more transparency would provide demonstrable oversight and accountability without sacrificing the necessary operational secrecy of counter-terrorism. It might also help assuage the concern of allies and their publics who worry about what use the intelligence they provide might be put to. A wise long-term vision can balance the short-term demands to disrupt and disable terrorist groups with a longer-term focus to resolve the grievances that give rise to radicalism, and also preclude inadvertently developing norms of drone use that sit uneasily with the civilised conduct of war. Drones are but one kinetic element of a solution to terrorism that is, ultimately, political.

Hitting the Target?

The future of drones in warfare is still uncertain, to say nothing of the shape of tomorrow's interventions: events have their own way of confounding

previous assumptions and postures. Current trends indicate that drones will, however, be more numerous, widespread and capable.

It may also be reasonable to assume that in the near future the primary impact of drones will be tactical and operational. They may not so much shape intervention as a whole as they will assist on-the-ground operations, providing enhanced surveillance and on-call support. Precision strike will remain a vital ingredient in the conduct of Western hard-power interventions. But, as the UK's recent policies indicate,[21] preventative, non-kinetic engagement strategies with at-risk states are likely to be the norm.

Yet we cannot entirely dismiss the possibility – and, perhaps, some early indications – that larger, more capable drone systems might take flight and usher in other campaigns of persistent and deniable covert action. This will be an area to watch closely in future.

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