

Drones: The Future of Warfare?

Written by Daniel Bruntstetter

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DANIEL BRUNTSTETTER, APR 10 2012

Since President Obama took office, the use of and hype surrounding drones has greatly increased. Obama has conducted more than three times as many drone strikes per year compared to his predecessor in the White House.[1] The increase use of drones points to a potential revolution in warfare, or at least a shift in the perspective of how wars will be fought in the future. As robotics expert P.W. Singer argues, “the introduction of unmanned systems to the battlefield doesn’t change simply how we fight, but for the first time changes who fights at the most fundamental level. It transforms the very agent of war, rather than just its capabilities.”[2]

The three major reasons drones are seen as the future of warfare are: they remove the risk to our soldiers, they make fewer mistakes than other weapons platforms, and technology will continue to improve such that drones become even more precise, efficient, and infallible in the future, thus rendering less precise, efficient and fallible *human* forms of war obsolete. Drones are thus seen as marking “a step forward in humanitarian technology,” and viewed as “a weapon of choice for future presidents, future administrations, in future conflicts and circumstances of self-defense and vital national security of the United States.”[3]

Yet, there has been much criticism of these assertions. Journalists challenge the claim that there are diminished civilian deaths from drone strikes, while just war scholars suggest that drones loosen the moral restraints on the use of force and legal scholars grapple with the relation between drones and international law.[4] Notwithstanding these ethical and legal challenges, and despite what advocates say about their place in the future of armed combat, drones are, like any weapons platform, inherently limited in what they can do.

In this brief article, I make three claims to contextualize the idea that drones are *the* future of war to shed light on the circumscribed role they might play in the foreseeable future. First, that drones are an improvement – in terms of providing surveillance capabilities and satisfying the rules of war – compared to previous technology. Their technical *advantages* (loitering capacity, removal of risk to pilots, and precision) make them an important addition to any military arsenal. Second, however, drones are nevertheless limited in their potential. While perhaps the best option to fight Al Qaeda, they will not, due to their technical and tactical *limitations*, fully replace weapons with greater destructive and evasive capabilities because they are not equipped to respond to all scenarios within the subset of international crises. Third, the extent to which drones are the weapon of the future, they will not, despite the imagination of some pundits, remove entirely the human element from the future of war. Rather, humans, despite the hype surrounding drones, remain an essential piece of the future of war, and are subject to the inevitable risks associated with war.

Technical Advantages of Drones

The advantages of drones compared to other military options are well publicized, and fall into two categories.[5] In terms of surveillance, drones are capable of slipping across international borders with relative ease without putting human personnel at risk. Their ability to loiter over targets allows them to observe “patterns of life” to provide surveillance data 24/7, identify and track potential targets, and determine the best time to strike to avoid civilian casualties.[6] This leads to the second advantage: drones are claimed to be highly effective at satisfying the rules of war.

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In terms of lethal use of force, the pinpoint accuracy of their missiles and computer software that models the blast area of each proposed strike greatly reduces collateral damage compared to other weapons systems, and potentially could even eliminate it. In the words of one proponent, drones provide a “limited, pinprick, covert strike” in order “to avoid a wider war.”[7] Moreover, the removal of pilots from the zone of combat – drones are operated from a facility well removed from where the fighting takes place – arguably eliminates the threat to our soldiers and allows drone operators to make better targeting decisions because they do not fear for their own safety. All of this adds up to considerably diminished number of civilian casualties. According to one scholar, these advantages lead to an “ethical obligation” to employ drones instead of other more risky tactics. [8]

These advantages have, thus far, dictated the use of drones by the United States. Despite a UN Special Committee Review on drones in 2009, and two hearings hosted by the U.S. House of Representatives in 2010 to discuss the moral and legal implications of drones, they have been the weapon of choice in Obama’s “war on Al Qaeda.” Yet, it is important to remember that this success in fighting terrorism should not be taken as evidence of drone effectiveness in all situations.

Tactical Limitations of Drones

Drones have tactical limitations, and will not likely completely replace, in the foreseeable future at least, other more conventional forms of weapons. Rather, they are best seen as one part of the military arsenal, the default choice in circumstances where their advantages can be exploited and their weaknesses cannot, but secondary choices in scenarios where their weaknesses limit their effectiveness. In this section, I point to three limitations of drones.

First, the effective usage of drones requires air dominance because drones operate at slow speeds compared to spy planes and fighter jets, and are relatively easy to shoot down. In all of the situations in which they have been deployed to kill discriminately they have only been used when they cannot be attacked by an opposing air force or substantial anti-aircraft system. For example, the U.S. has been flying drones into Pakistan and Yemen for years, having obtained tacit consent to do so from local governments. However, in Pakistan, increased incidents of alleged civilian casualties and friendly fire mistakes recently placed a temporary freeze on drone activity, as the U.S. seeks to normalize drone deployment with the Pakistani government. [9] Moreover, the Arab Spring has led to a transitional government in Yemen that threatens previous norms governing drone usage.

Even with aerial superiority, drones have limitations. While they have been successful in destabilizing Al Qaeda activities, leading Bin Laden, if we believe reports of his final weeks, to be afraid to traveling out in public because of the surveillance capacities of drones to track daily life-patterns, this surveillance requires a clear view from the skies. Terrorist cells have already begun to relocate to heavily forested areas where current drone surveillance technology cannot penetrate.[10] While limiting the range of terrorist mobility, the effectiveness of drones to observe, track and kill alleged terrorists is not unlimited. Perhaps in the future, there will be bird-sized drones that can penetrate the forests – reports suggest such technology is being developed – but for the moment, safe-havens beyond the vision of drones exist.

Another way to control the air space is through using conventional air force to first obtain control over the skies, thus allowing drones free reign to maneuver. In the Libya campaign, drones were only used after more conventional forces achieved aerial domination. And even then, they were used in conjunction with fighter planes and armed rebel forces to achieve the goal of overthrowing the Gadhafi regime. They were thus not the dominant tactic, but one of many pieces of the military puzzle.[11] This limitation points to one of the reasons why drones have not been employed – despite the call of some scholars – to create a no-fly zone in Syria to stop the killing of civilians by the Assad regime.[12] Quite simply, they could not succeed without more robust military force being employed first to control the skies. The risk of doing so, however, is escalation to a wider war, which would erode the advantages of drones cited in the previous section.

This leads to the second limitation: drones are ineffective at inducing recalcitrant states with anti-aircraft capacity – such as Syrian or Iran – to cooperate with the international community. Despite claims made by drone proponents that the United States can undertake strikes even without tacit consent of a host country, this may not be the most

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effective or prudent course of action.[13] If a drone strike in these countries would be taken as an act of war by the local governments, then the risk is an escalation in violence and a wider, unpredictable war. Moreover, given the penchant for drones strike to serve as a recruitment tool for terrorists, [14] it may be more prudent to limit, as the Obama administration has done, the deployment of drones in certain areas (such as Somalia) in order to avoid proliferating insurgent-type wars in new battlegrounds. [15]

Third, drones are very effective at killing targets, assuming the identity of the deceased can be effectively identified, but this may not always be the best choice in the long-term war against Al Qaeda. Killing a target eliminates the opportunity to obtain additional information, either through interrogation of the subject or recovery of relevant documents or electronics.[16] Rather, it may be of greater strategic value to employ alternative means, such as the special-ops mission to kill Bin Laden in which drones played a surveillance role only, in order to recover intel and identify deceased targets.

Risk and the Human Element

While science fiction buffs will want to claim that unmanned drones are the future of armed conflict, the reality is that drones require sustained human presence: at the in-region bases from which they are launched, at the remote bases from which they are piloted, in the combat zone where informants provide (reliable?) information on potential targets, in the intelligence community where chatter-data helps to contextualize the decision to undertake targeted killings, and in the upper echelons of government where the target list is generated. At the time of writing, each drone deployed in the air requires hundreds of humans to operate and guide.[17] While drones have been lauded as the future of war because they remove the risk to pilots and reduce collateral damage, the risk to the humans who operate them is not altogether eliminated. In this section, I want to delineate five areas of risk that should be considered when thinking about drones as the future of war.

First, while removing pilots from the risk of death by enemy fire, drone operators incur significant levels of risk related to PTSD. Numerous studies have suggested drone operators suffer from the same kinds of conflict-zone trauma as other military members, despite not being in the line of fire. [18] These negative effects, and their long-term consequences, need to be understood before the claims that drones represent the cleaner face of future war guide public opinion. Second, drones may be piloted from a distance, but they must be launched from areas close to their zone of deployment, such as Afghanistan. These areas are not safe-zones. The bases from which drones are launched, whether manned by soldiers, intelligence operatives or contractors, are at are at risk of attack. A prime example of such risk is the suicide bombing in 2009 at the US Forward Operating Base Chapman in Afghanistan that killed seven CIA employees involved in the drone program.[19] Third, because the effectiveness of drones requires knowledge about would-be terrorists, there is need for informants, and their handlers, to provide accurate information about terrorist movement. These individuals carry out their tasks at great personal risk. In short, drones, which can be shot down without the loss of the pilot's life, still require in-field as well as out-field operators, each of whom is subject to risk, whether deeply psychological or physical.

Fourth, despite the belief that drones are more infallible than other technologies, mistakes still happen. Incidents of friendly fire casualties have resulted in the deaths of U.S. as well as Pakistani soldiers, the latter fueling a feud between the U.S. and Pakistan that limited, for a time, drone operations, thus giving Al Qaeda a vital respite. Finally, it is important to note the risk to non-combatants – both in the zone of operation and elsewhere – who are at risk because of drone strikes. Regarding the former, with each drone strike, despite the U.S. government's best attempts to limit or eliminate non-combattant casualties, civilians are constantly at risk of being 'in the wrong place at the wrong time'. Reports of civilian casualties, whether due to error or as legitimized collateral damage, abound. [20] In addition, because drone strikes require local informants, innocents are at risk insofar as Al Qaeda leadership, struggling to identify who is an informant, decides to accuse and execute civilians on trumped-up charges of spying to set an example.[21] While such risks may (dubiously?) satisfy the just war principle of double effect, it may also lead to a second risk: increased terrorist recruitment, which could result in retaliatory attacks that put innocents outside the zone of operations at risk. In short, the effectiveness of drones, which give the illusion of success in fighting terrorism through the use of force, may actually perpetuate the cycle of violence.

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Conclusion

Drones will inevitably be part of the future of warfare insofar as the advantages they provide can be exploited by political leaders. However, their place in the future of armed conflict will be constrained by their disadvantages and limitations. To the extent that drones are subject to tactical limitations, and thus subordinate to other weapons options and tactics that are less discriminate, the impact of their advantages is limited. It is therefore important to see drones part of a wide array of surveillance and military options, not a replacement for these alternatives.

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[3] Kenneth Anderson, U.S. Congress, House of Representatives, Committee on Oversight and Government Reform, "Rise of the Drones: Unmanned Systems and the Future of War," Hearing before the Subcommittee on National Security and Foreign Affairs, 111th Cong., 1st sess., March 23, 2010.

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[5] Ronald C. Arkin, "The Case for Ethical Autonomy in Unmanned Systems," *Journal of Military Ethics* 9, no. 4 (2010), pp. 332–41; in contrast, see Noel Sharkey, "Saying No! to Lethal Autonomous Targeting," *Journal of Military Ethics* 9, no. 4 (2010), pp. 369–83.

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[10] "Drones at Issue".

[11] "Libya: The Real U.S. Drone War"; <http://www.wired.com/danger room/2011/10/predator-libya/>

[12] "Drones for Human Rights"; <http://www.nytimes.com/2012/01/31/opinion/drones-for-human-rights.html>.

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[20] "Effective Counterinsurgency".

[21] "Drones at Issue".