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Reaching Critical Will

The Humanitarian Impact of Drones

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Preface

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It is not difficult to understand the appeal of armed drones to those engaged in war and other violent conflicts. Those using force on behalf of states have long had the aim of subduing their opponents with as little harm to their own forces as possible. In addition, increasingly there are international and other norms that require more precise targeting, sparing those not directly engaged in the conflict.

Getting close to the target has traditionally placed one's own forces in harm's way. Drones provide an opportunity to bring an "unmanned" weapons platform close to the target, from which force can be launched via remote control. If the platform is destroyed by enemy fire, the cost is measured in money, not in the number of lives of one's own forces lost.

Drones also provide those who use it with the argument that the maneuverability of the platform, in close vicinity to the target, may allow more precise targeting. Even if the jury is still out on the veracity of the second claim, the argument persists that this may be the case in the future. The appeal of the first claim, on the other hand, is evident. In an age of technology, drones were bound to happen.

If a drone were to be used only in isolated cases, there would probably have been few questions asked. It is after all not easy to point out a principled difference between a single missile fired from a F16 flying at the speed of sound, when an on-board pilot presses the button, and the same missile being fired from a loitering drone, with the button being pressed by an operator in another country. However, what is

These problems are not insignificant or inconsequential. The gendered tensions, contradictions, and oppressions that manifest through the use of armed drones need to be part of the core understandings and considerations in determining policies and practices for arms control and disarmament in relation to these weapons. Understanding how drones are perceived in a gendered way by their operators and their victims is crucial to developing policies that can help break the cycle of violence. For example, acknowledging that current policies—which enable the use of armed drones without consent in host countries or in ways that undermine the dignity and value of human lives—have gendered motivations as well as impacts on gender equality and on peace and security suggests that a more holistic approach to the legal, political, operational, and moral questions around drones is necessary. This could include investigations into the psychological harm of operators that contains an assessment of whether these harms are produced by the conflict between the "emasculation" caused by "cowardice" or the inflation of a "predatory masculinity"—which may have serious implications, among other things, for interpersonal relations when the operator leaves the base.

It could also include an understanding that the predatory, aggressive nature of armed drones operated without consent and resulting in civilian casualties, psychological harm, and destruction of civilian infrastructure will result in a militarised masculine response from affected communities. Such an understanding should have significant implications for curtailing at least some policies around the use of armed drones that exacerbate this response, such as using armed drones outside of armed conflict or not sufficiently protecting against civilian causalities or of the open-ended overhead surveillance. Similarly, understanding how "signature" strikes can be acts of gender-based violence, and the reverberating effects this has on gender equality in other areas, could help change policies around targeted killings with the use of armed drones or other weapon systems.

These are some of policy implications that could come from a systematic gender assessment of armed drones; there are more possibilities. Such work is important from a legal, political, and operational standpoint, for those that want to continue to use armed drones to achieve military objectives. It is also important for those that want to end the use of armed drones or that want to address the problems of militarism and violent masculinities more broadly.

9. Moral and Ethical Perspectives

Peter Asaro

Dr. Peter Asaro is a philosopher of science, technology and media. His work examines artificial intelligence and robotics as a form of digital media, and the ways in which technology mediates social relations and shapes our experience of the world. His current research focuses on the social, cultural, political, legal and ethical dimensions of military robotics and UAV drones, from a perspective that combines media theory with science and technology studies. He has written widely-cited papers on lethal robotics from the perspective of just war theory and human rights.

In general, morality does not have much to say about new technologies, unless their use impinges upon principles that have a long held importance. This appears to be the case with drones. Armed drones share similarities to guided missiles and torpedoes, which have been used in warfare for more than a century. Armed remote control planes have been in use since World War II. However, the use of armed drones in recent armed conflicts, particularly in the Middle East and Central Asia, have cast these technologies in a new light. In part this is tied to the complex moral facets of the armed conflicts in Palestine, Afghanistan, Iraq, Pakistan, Syria, Somalia, and Yemen. It is also tied to the changing nature of warfare, particularly in occupied territories and against non-state actors.

In the context of this recent history, much of the focus on the use of drones stems from the policies and tactics developed by both Israel and the United States for "targeted killing". Targeted killing involves seeking out specific individuals for their role in military or terrorist operations and launching a "precision" military attack on that person, often (but not always) from a drone.[1] Targeted killing raises numerous issues on its own, and while drones enable this strategy, the final attack could also come from a traditional plane or other source. Still, the novelty of this practice, its technological complexity, and the powerful cultural image of the drone itself, has led to a great deal of public attention and concern other the use of drones in recent years. But targeted killing is not identical

1 Gregoire Chamayou, *A Theory of the Drone* (New York: The New Press, 2015).

to drones, nor is it only the application of them that raises moral concerns.

This chapter will consider the main moral responses to armed drones, particularly from scholarly publications. While the article cannot speak for all ethicists, it provides some of the prominent moral and ethical concerns that have been raised. Given the magnitude and scope of concerns over drones, and the sheer amount written about them, no comprehensive review is feasible. Instead, this assessment focuses on the main themes, perspectives, and arguments presented to date. The research has been confined to materials written in English.

The morality of warfare and weapons

The use of any weapon, or the use of any object as a weapon, raises moral considerations. In general, morality prohibits causing harm to others, and even threatening such harm. When discussing morality, it is necessary to reflect upon the question of *what* moral theory and *whose* morality should be considered. While philosophers usually restrict their considerations to a preferred moral theory, there are serious disputes about which theory should be preferred. We will not attempt to resolve such issues here, but rather will address the main moral theories that have the greatest influence in shaping law and policy. In addition to moral philosophy, we will also consider moral psychology. Morality shapes human judgment and behaviour in powerful ways that are only approximated by formal moral theories. Yet, we can study such moral behaviour and its psychological consequences empirically. The impact of psychological states such as sympathy, empathy, and guilt can thus be considered through this lens, without assuming the primacy of any particular moral theory.

The morality of warfare is challenging to most moral theories. According to most moral theories, the use of violent and lethal force is permissible (if at all) only under certain exceptional circumstances, such as in self-defence, the defence of another person, or, more debatably, in order to achieve a higher moral good or humanitarian benefit. Most moral theory considers the moral judgement and actions of individuals, while warfare is often viewed as a collective action, or individual actions towards the common defence of a society. Most moral traditions have their roots in religion and theology while modern moral theories generally seek to reach the same moral conclusions on purely rational arguments that do not depend on religious belief or faith. In European philosophy there is a long tradition of considering the morality of warfare initiated by St. Augustine and St. Thomas Aquinas, which is based in Christian theological justification of warfare and called just war theory. (See Chapter 10 for further investigation of religious perspectives on drones.) Asian philosophers have also considered the morality of warfare (such as in the *Mahabharata*), but primarily in terms of warrior duty (such as in the *Bhagavad Gita*) or leadership (such as in the writings of Confucius) and strategy (such as in *The Methods of the Sima* and Sun Tzu's *Art of War*).

This chapter will focus on the Western moral tradition of just war theory, and how it views drones and remote operated weapons. Much of the international humanitarian law (IHL) framework that came into effect after the Second World War—including the United Nations, the Geneva Conventions, and the legal precedents of the Nuremberg tribunals—have their conceptual roots in just war theory. This is the underlying moral basis of the legal framework that governs international armed conflict and that informs the training of what is

deemed acceptable in warfare for military professionals. The modern restatement of just war theory was written by Michael Walzer in 1977,[2] and while the finer points of the theory are still debated by philosophers, the general principles are well established.

Just war theory divides war into three temporal stages named in Latin terms, and considers each morally independent (though this is also debated).[3] *Jus ad bellum* concerns whether it is just or moral to go to war, *jus in bello* concerns the morality of how war is fought, while *jus post bellum* concerns the morality of how a war is ended (including terms of surrender, armistice, reparations, and reconciliation). Most of the just war theory literature focuses on *jus in bello*, but there are important debates on when humanitarian concerns, rather than strict self-defence, justify military intervention, as well as a growing literature on just resolutions of violent conflicts and ensuring long-term peace. The moral consideration of *jus in bello* relies on two fundamental moral principles: the principle of distinction and the principle of proportionality. The principle of distinction holds that enemy combatants are morally liable to be killed, while civilians and non-combatants are not liable to be intentionally killed, and there is a moral duty to make this distinction and to avoid harming non-combatants. It is morally permissible in some cases to kill civilians and non-combatants, but only unintentionally or as an undesired (even if foreseeable) consequence of attacking a legitimate military target. This is the long debated Doctrine of Double-Effect (wherein the intended effect is on enemy combatants, and the undesired effect is on civilians). The principle of proportionality considers the magnitude of an attack, and whether it is justified given the purpose of the attack, and whether it presents a disproportionate risk of harm to non-combatants.

In general, just war theory does not really consider the morality of any particular weapon. Morality concerns the decision to use the weapon (is the target of an attack justified?), and the expected effects of the use of the weapon (does it pose disproportionate risks to non-combatants?). The use of certain weapons has been deemed immoral, and in some cases also illegal, because their use necessarily fails to conform to the principles of distinction and proportionality. Thus, because landmines and cluster munitions have uncontrolled and deadly effects on civilians during and long after conflicts, they have been deemed indiscriminate by nature. Similarly, the effects of fragmentary and incendiary bullets, and permanently blinding lasers are disproportionate to their military advantages (in legal terms they cause "unnecessary suffering and superfluous injury to combatants"), while chemical, biological, and nuclear weapons are both indiscriminate and disproportionate. All of these weapons have been prohibited through international agreements.

It is important to note the different notions of "weapon" in discussions about drones. They have been developed and used in recent years, particularly by the Israeli and US militaries, as remotely operated weapons platforms. That is to say, militaries view the "weapon" as a system that can include not just the final projectile, munition, or energy release, but also the launching system, the transport and delivery platform, and even the maintenance, logistical, and intelligence support networks necessary to execute an attack with the system. Accordingly, it is best to consider all weapons as "weapons systems," and to also consider the human

2 Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations* (New York: Basic Books, 1977).

3 Jeff McMahan, "The Sources and Status of Just War Principles," *Journal of Military Ethics* 6(2), 2007, pp. 91–106.

operators, their training, their situational awareness, and the larger command and control structure around them as significant elements of the weapons system. Thus, a weapons system might be as simple as soldier and gun, within a traditional military command and control hierarchy. Or a weapons system might be far more complex, such as a remotely operated drone firing a steerable missile, launched from a remote logistical support base, monitored and controlled from thousands of miles away by a small team of operators, through a network of satellite, ground and radio communications networks, supported by remote intelligence analysts and databases, operating within command structures that may switch between major military commands, joint force structures, covert and traditional military operations, or even between command hierarchies of coalition and treaty partner nations.

The armed drones of most moral concern have been those operating towards the more complex end of this spectrum. As we will see below, the complexity of the weapon system itself, and it's distributed, compartmentalised, and mediated structure, lends itself to a set of moral concerns that cannot be easily reduced to a single element of the larger whole.

Given this overview of the morality of weapons and warfare, and just war theory, we turn to the question of whether the use of drones as a weapon, or as a weapons platform, raises any unique moral questions, or challenges our standard understanding of the justified use of weapons. That is, what special moral considerations are raised by the use of armed drones?

Drones and just war theory

When we look at drones through the lens of just war theory, we can consider a variety of moral questions. In terms of *jus ad bellum*, the justification of going to war, the use of drones raises the question of whether they lower the thresholds of going to war.[4] That is, if we accept the view that remotely operated weapons greatly reduce the physical risks to the combatants who operate them, then this should reduce the political risks for leaders to start a war. If true, this is what philosophers and economists call a "moral hazard"–a situation in which one can systematically avoid negative consequences for one's actions, thus eliminating the normal disincentives for taking those actions. The argument is that drones provide a "risk free" form of warfare, or military intervention, and as such make warfare more likely. Assuming that making warfare more likely is bad, then one could argue that drones have a negative effect on the moral reasoning and actions of political leaders by making it easier for them to go to war.

There are several problems with this line of argument, however. First, this argument depends on two significant empirical claims, which may or may not be true. The first empirical claim is that drones reduce the physical risks to combatants in warfare. While this seems easy to argue for the remote operators of drones, it is not necessarily true. Remote operators could still be attacked at their remote locations, by traditional military means or by guerilla or terrorist tactics. Moreover, once a war is started, it may escalate or expand, and it may not be easily contained to a single means of warfare, or a constrained geographic area. As such, it quickly becomes likely that other types of forces and weapons will become involved in the conflict, thus putting combatants at risk.

The second empirical claim is that lowering the risk to combatants makes war more likely, or might make it easier for political leaders to choose military action over other diplomatic options. This claim appears to have significant evidential support from the United States' use of drones for targeted killings, particularly in Pakistan and Yemen. Because Pakistan and Yemen are allies of the United States, and do not wish to have a large US military presence in their territory, it is politically difficult to launch a full-scale military operation in these areas. While suspected enemies could be attacked with traditional aircraft or special forces operations, those carry significant risks of pilots or commandos being killed or captured. In this case, drones provide a means for military attacks with reduced risks, and so we have seen their increased use in this manner. Such considerations may or may not weigh on the politicians who actually make the decisions to use military force.

The other assumption behind the argument that drones make armed conflict more likely is that such conflicts are morally wrong, or that the use of armed force should be an option of last resort. But according to *jus ad bellum* there are morally justifiable reasons to become involved in armed conflict, namely self-defence, defence of an ally, or to intervene to avert a humanitarian crisis, genocide, or crimes against humanity. If a government is deciding whether to intervene to aid an ally who is under attack, or to intervene for humanitarian reasons, then the reduced risks of that intervention would be good. Arguably, the ability of North Atlantic Treaty Organisation (NATO) forces to intervene on behalf of Libyan rebels using remote operated and long range weapons, rather than the much riskier use of ground forces, may be such a case. Of course, drones are not unique in offering reduced risks. Many weapons that give a decisive military advantage could be argued to reduce such risks, along with military superiority in general. Moreover, just war theory does not require combatants to put themselves at risk in order to be morally justified in killing enemy combatants, nor is there any requirement to avoid radical asymmetries in military strength. So while it may be true that armed drones and other remote-operated weapons make it easier for politicians to go to war, it still matters whether or not those wars are moral.

Jus in bello and the moral predators debate

Once at war, there are various questions to ask regarding the *jus in bello* morality of the use of drones and remotely operated weapons. One way of approaching the question of the morality of a particular weapon or means and method of warfare is to consider whether its use is in principle better or worse than other weapons, or means and methods of warfare. If we start from an assumption that an attack is morally justifiable, and that the target of the attack is morally and legally justified, we can greatly constrain the number of moral factors involved in choosing one weapon over another with which to attack the target.

Assuming that the war is justified, and the attack is made by one combatant against a legitimate enemy combatant, the main moral criteria to targeting and attack are discrimination, proportionality, and military necessity. Discrimination concerns whether the attack will discriminate between combatants and non-combatants. Proportionality concerns whether the nature and magnitude of the attack is

4 Peter Asaro, "How Just Could a Robot War Be?" in Adam Briggle, Katinka Waelbers and Philip A. E. Brey (eds.), *Current Issues in Computing And Philosophy* (Amsterdam, The Netherlands: IOS Press, 2008), pp. 50–64.

justified, as well as the magnitude of risk posed to non-combatants and civilian infrastructures is warranted. Military necessity concerns the strategic value of a target, the risks of failing to attack it, and figures into the proportionality calculation that weighs the value of eliminating a target against the risks to non-combatants.

When military commanders and their subordinates are selecting military objectives and strategies, the choice of a particular weapon features as only one element of the overall determination. While certain weapons may be unilaterally forbidden on legal or moral grounds, such as chemical or biological weapons, there is great discretion in the selection of the best tactics and weapons to achieve an effect or objective. Within the military, there will be strategic decisions as to which weapons platforms and assets are available and capable of achieving the desired results—such as whether to launch a long-range guided missile, or use a "manned" or "unmanned" platform to deliver a munition. At a tactical level there is *weaponeering*—the job of selecting an appropriate weapon or munition to achieve the desired effect—determining the size of the bomb to drop from an aircraft to destroy a target, or how to steer a missile to direct its blast effects away from vulnerable civilians. There are explicit and implicit moral elements to all of these strategic and tactical decisions insofar as they all involve questions of discrimination, proportionality, and military necessity.

Remotely operated drones are not themselves forbidden under any such moral or legal rules—they are not intrinsically or by their nature indiscriminate or disproportionate, while like many weapons they could be used indiscriminately or disproportionately. Insofar as they deploy weapons or munitions that are considered morally and legally legitimate in other contexts, there is no *prima facie* reason to think that this might be problematic.[5]

Insofar as drones and remote operated weapons enhance the discrimination and proportionality of attacks compared to other weapons platforms, it could even be argued that they are morally superior or desirable weapons. Indeed, it has been argued that remotely operated drones permit both the use of smaller and more precisely-guided munitions (thus reducing unintended civilian harms and collateral damage) and permit more information gathering and longer deliberation on whether to attack a given target. Strawser argues that these two factors makes the use of drones morally superior to other weapon systems, and even argues that if so we may have a moral obligation to use such weapons.[6]

5 Indeed, the U.S. military determined that no additional Article 36 review of armed Predator drones was necessary as the both the unarmed versions of the Predator and the Hellfire missiles with which it was being armed had already been reviewed and approved. See Noel Sharkey, "Killing Made Easy: From Joysticks to Politics," In Sibylle Scheipers and Hew Strachan (eds.), *The Changing Character of War*, (Oxford: Oxford University Press, 2011).

6 B. J. Stawser, "Moral Predators: The Duty to Employ Uninhabited Aerial Vehicles," *Journal of Military Ethics* 9 (4), 2010.

It would seem at first look that any weapon system that improved decision making and precision in attack would be morally preferable, in general. Presumably fostering better informed and considered decisions leads to better decisions. Allowing more time for determining when to strike a target also presumably allows for choosing times that reduce the risks of civilian impacts. Using smaller munitions with more accurate targeting ought to reduce civilian impacts compared to larger munitions with less control.

As with other empirical claims, whether the use of drones actually provides more time for deliberation processes in practice depends on how they are actually used—it is not a necessary feature of their use. Insofar as they are actually used in a manner that provides this additional time for deliberation, there are further empirical questions of whether that time is actually used and used effectively, and if it actually results in improved targeting decisions that reduce the impacts of attacks on civilians overall. It has been argued that the use of precision guided-munitions has actually resulted in longer targeting lists because they greatly reduce the cost of bombing any given target. So while the risks to civilians from any particular attack might be reduced, the total number of attacks might increase enough to result in a greater overall risk to civilians.

There are also significant concerns over whether the kind of aerial surveillance offered by drones is appropriate or sufficient to accurately identify legitimate targets. Traditionally, the selection of bombing targets rests on a variety of intelligence sources. Because drones are essentially surveillance platforms carrying weapons, there may be a tendency to rely solely upon the drone's sensors to determine targets, which may result in distortion or bias in targeting.

Within US use of drones for targeted killing, there are two types of targeting: personality strikes against a known person and signature strikes targeting people or groups based on behaviour observed through the sensors of the drone as hostile or suspicious. Determining which behaviours seen on aerial video constitute hostile activities can be challenging, particularly in cases where the targets are not actively engaged in fighting or clearly conducting military operations. Similarly, there are various cases where farmers working their land, or fixing a ditch, have appeared to drone operators as combatants planting a roadside bomb. The "soda straw effect" of looking at a zoomed in image can cause operators to misunderstand a larger overall scene. This phenomenon has been blamed to some mistaken "friendly-fire" incidents with drones.

Related to the limits of drone surveillance for making moral decisions, it has been argued that the extreme remoteness of drone operators, and the consequent moral and emotional distance from their targets poses its own kind of moral problem. It is to this we now turn.

Drones and moral psychology

Beyond the morality of using a drone, one can ask how the use of drones and remotely operated weapons impacts the psychology of drone operators, and what moral consequences this might have. The literature on drones has focused on two key issues of the psychological impacts on a drone operator. One issue is whether the physical distance of drone operators from their targets implies a moral and psychological distance. Closely related to this is whether the videogame-like nature of drone operations leads operators to treat drone operations like a game, or whether the mediation of observing people through the cameras of a drone tends to dehumanise the people observed. The other issue concerns the psychological health of drone operators themselves, and whether they can experience combat trauma remotely, and whether they are susceptible to post-traumatic stress and moral injuries.

Military psychologist Lt. Col. Dave Grossman spent many years studying new recruits in basic training and their willingness to kill the enemy in combat. Grossman published an often reproduced graph of the willingness of combatants to kill based on physical distance.[7] According to this graph, it is psychologically easier to kill from great distances, such as with long-range missiles or artillery, somewhat more difficult with mid-range weapons such as guns, and hardest to kill in close range with knives or in hand-to-hand combat. The empirical data to back up this graph is lacking, but it carries a powerful intuitive force as it seems to most people to be much easier to "pull the trigger" of a weapon if one cannot directly see the potential victims of one's attack.

According to moral psychology, our reluctance to cause pain and suffering to others is related to our ability to sympathise and empathise with others. To the extent that we distance ourselves physically and emotionally from people, the easier it is for us to take actions that harm them. As drones allow a vast physical distance between operators and victims, it has been argued that there must be a similar moral distance.

7 Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society* (Boston, MA: Little, Brown and Company, 1995).

Some have argued that drone operators might become "playstation warriors". This implies on the one hand that drone operators are not true warriors, located so far away from the battlefield and not taking the risks of those on the ground. And on the other hand this implies that drone operators engage in warfare through a videogame-like interface, and as such treat their work as they would a videogame—trivializing the killing and destruction they might do as if it were merely a game. Studies of the effects of engaging in videogame violence on real world aggression and violence have shown only weak effects on behaviour.[8] Moreover, most people are quite capable of distinguishing reality from a game, and disciplined professional drone operators do not take their combat duties lightly.

Recent studies of drone operators have found evidence of post-traumatic stress disorder (PTSD).[9] While at slightly lower levels than most combat military personnel, they are somewhat higher that non-combat military personnel. This suggests that drone operators do experience combat trauma despite their physical distance from the battlefield, and despite not being subject to personal bodily risk themselves. This also suggests that the technological mediation of drones is sufficient to communicate the trauma of combat.

8 Craig A. Anderson, "Violent Video Games: Myths, Facts, and Unanswered Questions," *American Psychological Association Science Briefs*, 2003.

9 Wayne Chapelle et al., "Symptoms of Psychological Distress and Post-Traumatic Stress Disorder in United States Air Force 'Drone' Operators," *Military Medicine* 179, 63 (8), pp. 63-70; Wayne Chapelle et al, "An Analysis of Post-Traumatic Stress Symptoms in United States Air Force Drone Operators," *Journal of Anxiety Disorders* 28, 2014, pp. 480-487.

In addition to PTSD, there is growing interest in the related, though distinct, phenomena of moral injury. While the psychological diagnosis of PTSD is generally framed in terms of the direct experience of a significant bodily trauma, moral injury focuses on the psychological impacts on soldiers who violate their own morality.[10] While a soldier might experience PTSD after seeing their best friend killed beside them, another soldier might experience a moral injury from mistakenly killing a civilian. The realization of one's own morally wrongful actions can carry a heavy psychological weight beyond simple guilt, and can undermine one's sense of identity, of self-worth, and disrupt personal and professional relationships. While psychologists debate the appropriate diagnostic criteria for both PTSD and moral injury, it is clear that drone operators along with other combatants, experience psychological effects from the morality of their choices and actions—effects that can remain for a lifetime and sometimes require professional treatment.

10 Maguen, Shira, and Brett Litz,"Moral Injury in Veterans of War," *PTSD Research Quarterly*, Vol 23 (1), 2012, pp. 1-6; The Moral Injury Project. (n.d.) "What Is Moral Injury," http://moralinjuryproject.syr.edu/about-moral-injury/.

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