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“The Sort of War They Deserve”? The Ethics of Emerging Air Power and the Debate over Warbots

Benjamin R. Banta

Department of Political Science, Rochester Institute of Technology, Rochester, NY, USA

ABSTRACT

As new military technologies change the character of war by empowering agents in new ways, it can become more difficult for our ethics of war to achieve the right balance between moral principle and necessity. Indeed, there is an ever-growing literature that seeks to apply, defend and / or update the ethics of war in light of what is often claimed to be an unprecedented period of rapid advancement in military robotics, or warbots. To increase confidence that our approach to this development finds success in appropriately constraining war, this article compares our current discourse to the ethical debate over the rise of air power during the interwar period. As moral norms largely failed to constrain air power in World War II, by highlighting the interrelated processes of technological change, ethical debate, and the eventual reconciliation of war practice and war ethics, this historical case offers insights that can help military ethicists maintain their “critical edge” as remote and autonomous robotic weapons continue to mature and proliferate.

KEYWORDS

Just war; warbots; air power; comparative ethics

George R. Lucas Jr. (2013, 1271) remarks that, when it comes to emerging military technologies (EMT), “the language of morality and ethics has served us poorly ... and presently serves to further confuse us.”¹ He argues the ethical debate centered on lethal “unmanned or remotely piloted vehicles [UAVs] ... autonomous weapon systems and cyber warfare” has involved an overconcentration on the nature of ethics itself, and an empirical focus mired in a “science-fiction debate” about the prospects for something like “artificial-machine intelligence” (Lucas 2013, 1271). His solution is to focus on the here and now of EMT capabilities and the “soft-law” norms emerging from actual use (Lucas 2013, 1281). While also hopefully avoiding the esoteric and fantastical, this article takes a different approach to address the possibility that our attempts to grapple with the moral implications of these emerging weapons has been less than helpful. As there are also dangers in concentrating too much on the here and now, I attempt to draw some lessons for the ethics debate over “warbots”² – a category meant to include everything from the currently proliferating UAVs to the largely still developing lethal autonomous weapons systems (LAWS) (see Riza 2013, 16–17; Galliot 2015, 4–8)³ – by

comparing it to the ethical discourse on emerging air power capabilities during the early to mid-twentieth century.

Beyond the standard contextual similarities or dissimilarities that usually justify comparison, of particular importance is the possibility of a shared discursive phenomenon. Speaking directly to the air power case, the philosopher G.E.M. Anscombe (1961, 53–56) connected the “policy of obliterating cities ... adopted by the Allies” in WWII to a core dilemma for the ethics of war: “Principles that are mistakenly high and strict are a trap; they may easily lead in the end directly or indirectly to the justification of monstrous things.”⁴ This occurs, Anscombe (1961, 53–56) reasoned, because as acting morally with respect to war becomes synonymous with some “ideal” that most determine we are “unable to follow,” people “become convinced that a number of things are wicked which are not; hence seeing no way of avoiding wickedness, they set no limits to it.” From this dialectic of ethical extremes a synthesis; many paid “lip-service” to the rules in order “to prevent any doubts about the obliteration bombing of a city” (Anscombe 1961, 57–59). To summarize, as war ethics became overly pacifistic this paradoxically enabled a militarist rejection of the need for moral considerations. And in response to those disparate competing positions many citizens, soldiers, and politicians succumbed to barbarism while calling it restraint, damaging not only innocent bodies but the force of morality itself.

These three basic positions provide the template for the second section’s analysis of the air power case. In service of the comparison to our present case of warbots, though, I go deeper than Anscombe into the ethical structure of and interaction between each. She concluded the pacifist component was mainly responsible for producing “a universal forgetfulness of the law against killing the innocent” (Anscombe 1961, 57). I investigate the ways the technology of air power itself, as an object within the ethical analysis of war, played a role in generating such a troubling dynamic. Anscombe (1961, 56) only passingly comments upon this issue, but it was clearly relevant to the way the positions she stakes out developed.

When Britain’s official history of air power in WWI, written in 1935, quipped that “democracies, perhaps, get the sort of war they deserve,” the author was commenting not only on the verities of democracy, but also embracing technological determinism (Jones 1935, 152). Unfortunately, too many at the time also thought that if a technology enables targeting democracy’s soft underbelly it simply would, and possibly even should, be used as such. But as evidenced by the widespread view that much of the area bombing in WWII, especially in the last year of the war, was done “without moral (and probably also without military) reason” (Walzer [1979] 2006, 261; Glover 2012, Ch. 11; Garrett 1993; Schaffer 1985) – as well as the eventual codification of restrictions on aerial targeting in the late 1970s – such technological determinism was unfounded and unfortunate. Rather than something “deserved,” the modes of warfare enabled by new technologies are at least partially the result of the intersection between *conceptions* of technological change and the nature and ethics of war. With that the case, the question animating this article comes to the fore: how should our ethical conceptions of warbots be calibrated to best promote their morally appropriate use? Unfortunately – and central to the need for a past case to compare to our present – the next section explains how EMT can make it difficult to avoid dangerously disparate ethical highs and lows.

Just war, the ethics of technology, and a historical-comparative approach

The most common framework for the ethics of war, the just war tradition, has long recognized war as a realm of such necessity and unpredictability that policymakers and soldiers are expected to feel intense pressure to resist moral pleas for restraint. As such when attempting to take “the normal practices of moral judgment” and extend them into this “*extreme realm*” (Rengger 2013, 69), theorists must take active steps to, as Michael Walzer (2002, 935–936) puts it, maintain a position at “the critical edge of justice,” aiming to produce a “doctrine of people who do expect to exercise power and use force” that also implores those people to “recognize the humanity of their opponents.” In this way, theorists are beset by a dual anxiety. Too restrictive and no one with power will listen, too permissive and the powerful gain destructive moral cover. We can see this balancing act in the way just war theorists typically position themselves between the ideal-typical poles of pacifism and militarism, and in the way the theory contains a mixture of deontological and consequentialist criteria (Johnson 1999, 27–38). This latter feature, for instance, allows just war theorists to remain anchored to principles like the right to life and political self-determination, though with enough leash to account for the necessities of violent conflict. Unfortunately, as Scott Sagan (2016, 6) writes, technological change can “pose complex challenges to the traditional standards that we use ... to judge governments’ and individuals’ actions in war.”

Technological change should never be assumed the primary factor in the changing character of war; social and political change are often as, if not more, important (Bacevich 1996; Black 2013). But as the philosopher of technology Hans Jonas (1982, 891–893) contends, modern technologies contain an extraordinary degree of “inherent dynamism”; even with well-intentioned use they involve such “vastly enhanced human power” that “they have a way of enforcing their employment in the large and ever larger and making that employment an incessant need of life.” Indeed, as a field the ethics of technology has largely moved beyond what Andrew Freenberg (1999, 7; see also Winner 1980) describes as the “common-sense view that technology is a neutral means to serve any end.” And few beyond those working in industry theorize modern technology as a wholly or even largely emancipatory or progressive element in society (Hanks 2010, 2). Rather, across a range of positions that can be broadly divided between those who see modern technology as “autonomous” – a force that essentially controls us – and those who see it as a product of society, most take a decidedly pessimistic view of our ability to utilize it toward the ends of humanity (Freenberg 1999, Ch. 1; Tabachnick 2013).

Any significant EMT should engender, then, at the very least new levels of uncertainty about the moral contours of war. Even more, especially dangerous is an unintentional lapse into what Ronald L. Sandler (2014, 5) calls the “innovation presumption,” an at once optimistic *and* deterministic view of technology reflected in its uncritical embrace. At present, and following Henrik Syse’s (2014, xi) delineation, the debate over warbots involves optimists who tend to emphasize the *fact* of new technical capabilities, and rather easily translate these facts into better accordance with *values* (Kreps and Kaag 2012, 272–275). And it involves pessimists who tend to emphasize the way these new facts might problematically alter the propensity to think deeply about our values and translate them into the practice of war (Kreps and Kaag 2012, 285). One side veers

closer to the view of warbots as a mere means, the other to a view of warbots as an autonomous force. Who is closer to the truth is an open question.

It is difficult to say in the midst of its emergence that a *particular* military technology has a particular nature that should impinge on our ethics in a particular way. Not only are future technological capabilities often uncertain but the ways in which a technology “mediates” social relations depends partly on how humans conceive of its legitimate use (Sandler 2014, 5–8). Put another way, warbot evolution will be shaped somewhat by the way ethical discourse addresses it. Thus in taking every available step to form ethical positions in the moment that in hindsight are not, in Anscombe’s terms, either “mistakenly high”, low, or that merely pay lip-service to principles, it is crucial to understand how ethical discourse itself can play a role in, and often become complicated by, the process of a military technology’s emergence. For that level of understanding we need knowledge from the past, a comparative ethics that, as John Kelsay (2010, 228) defines it, offers “descriptions of human beings engaged in the normative assessment of behavior.”

The humans engaged in the normative assessment of emerging air power pose a prime historical case for comparison to our debate over warbots. First, even though the ethical discourse on emerging air power was less focused within the just war tradition than the present debate over warbots (Johnson 1981, 281–283; 327), just war is a pluralist tradition that evolves through fields as disparate as the technical, legal, or military – something both debates feature heavily due to the perception of a rapidly changing character of war and the technological artifacts at the center of those changes (Garrett 1993, 64–74; Coker 2013). Second, the context of each case involves the same basic moral world: a society of states whose people by and large, as John Mueller (2004, 40) writes, view war as “repulsive, uncivilized, immoral, and futile.” As such, and as with warbots at present, emerging air power was first mainly legitimized as a tool powerful states could employ to manage much weaker foes (Hoffman 1989, v-vi; Black 2016, 50–53). Meanwhile, any robust effort to control the emergence of air power at an engineering level was stymied by visions of a transportation revolution (Biddle 2002, 152), mirroring the way proposed warbot restrictions often grate against the momentum of a civilian robotics industry (Singer 2009, 7–8). Finally, like warbots, for some airpower promised increased force protection and precision, and with that a widespread hope that war could be made less destructive (Biddle 2002, 36). For others, the greater distance air power afforded soldier from target, and the distant targets with which the soldier could now make contact, brought with it the same age-old ethical concern with human distance from war that is central to the warbot debate (Riza 2013, Ch. 4; Garrett 1993, 81–82). Taken together – the terms of the debates, the contexts of their emergence, and crucial features of the technologies themselves – these details reveal cases comparable enough that the failure to develop a workable ethics of aerial warfare before the technology was unleashed can serve as a lesson for the present.

The ethics of emerging air power

On the eve of WWII British Air-Commodore L. E. O. Charlton (1937, 494) echoed many when he called air power “a new and revolutionary method of waging war.” And yet at that moment, with at least half a century of serious speculation on its revolutionary potential, and over two decades after it was first used as a weapon of war, there was still no firm

ethical or legal agreement on air power's proper use as a weapon of war (Biddle 2002, Ch. 1). The closest the world came was the 1923 Hague Rules of Air Warfare (Commission of Jurists 1923).⁵ Developed by jurists, military experts and diplomats from the United States, Great Britain, France, Italy, Japan, and the Netherlands, they would have made munitions factories and the workers in them fair game, as well as towns and cities in close proximity to the frontlines. But in condemning any aerial attack that "cannot be done without the indiscriminate bombardment of the civilian population" the proposed rules ran into difficulties categorizing the civilian (Garner 1924, 74), and contradicted an ascendant "principle of military effectiveness" said to make futile any attempt to curb means that help achieve victory (Royse 1928, 212). The rules never came close to ratification.

This may have been partly due to the fact that the most vociferous moral critics of air power were, as the distinguished American statesperson Charles E. Hughes (1927, 4) lamented, "so intent on abolishing war, that they have no patience with regulations of war." Instead many, like the American peace activist Elvira Fradkin (1934, 168; see also Baldwin 1932), assumed that "no rules can hold back the aerial bombing when the urgency is great." And so efforts like the 1923 Hague Rules were seen as useless against a weapon that, as one international law professor asserted, would "certainly destroy civilization" by turning war into terrorization (Read 1923, 488). From here even some self-consciously strategic interlocutors such as Charlton (1937, 200, 217; see also Bratt 1931) argued that because "the menace of the clouds" would make war "obviously suicidal" it was necessary to abolish "the evil of war" through "collective security." Most spoke in terms of the need for disarmament or the "outlawry of war" (Levinson 1921; Robins 1925; Noel Baker 1926; Warner 1926; Nichols 1933).

Articulated in the aftermath of a "Great War" so shockingly destructive that peace movements and pacifism more generally "reemerged stronger than ever" (Hunt 2010), the argument from peace movement luminaries like John Dewey ran on a dual track. On the one hand, there was "the uncertain estate, the almost chaotic condition, of moral conceptions" at the international level (Dewey 1923, 85). On the other hand modern war had brought about forces "so powerful that they have escaped from moral control" (Dewey 1923, 85). In concluding that this situation could only be rectified by outlawing war, air power's moral critics made two fundamental errors:

First, their morality, as Anscombe recognized, was impossibly demanding given the context. Dewey (1923, 85) lamented that international relations did not reflect "the habits, to say nothing of the ideals, of the average decent man and woman in their ordinary affairs" – essentially reducing a proper international ethics to the moral codes that guide inter-personal conduct. Ignoring the just war tradition, he juxtaposed this moral goal to what he saw as a then operative "Hegelian" morality whose "whole tendency was toward an intellectual glorification of the national state" (Dewey 1923, 93). As the Chairman of the Board of the Foreign Policy Association put it, to "remove the cloud of war" the only acceptable ethical strategy was to push for "a new philosophy, that will not merely preach, but will more and more nearly practice, the Golden Rule" (McDonald 1927, 195–196). In short, either one was an arch-realist and would let war destroy civilization, or one was a pacifist and would not.

The second and even more damaging problem was that this ethic was often presented as *following* from the supposedly indisputable fact that new weapons like air power would

be used indiscriminately. To give an early example, like Dewey, former US Secretary of State William Jennings Bryan (1915, 265, my emphasis) professed in 1915 that the “doctrine that ‘might makes right’” was the true cause of international strife, and that the “*one code of morals known among men ... the code that regulates individual life ... [must be] invoked for the regulation of international affairs.*” But before coming to this conclusion Bryan (1915, 263) presented this picture of warfare: “nothing so horrible has ever been known before ... they have taken possession of the air, and thunderbolts more deadly than the thunderbolts of Jove fall as if from the clouds on unsuspecting people.” Even a self-described just war theorist concluded that war involving widespread aerial bombardment would be so indiscriminate that it could not be used as a “legitimate means to some ideological or political end” (Ryan 1933, 119–120). Such factual assessments may have broadened the appeal of this pacifistic ethic, but they also involved conflating technical capability with eventual usage. Precisely not taken into account was the crucial ethical question of an agent’s responsibility to others in the *use* of the new weapon. The weapon simply was – a force that would compel agents to barbarism.

The converse position on air power, developed famously by the Italian Giulio Douhet and taken up mainly by other strategic thinkers like Hugh Trenchard of Britain’s Royal Flying Corps and Billy Mitchell of the US Air Service, is well-known and space constraints prevent a full account of their arguments. What is pertinent for us is the way these morale-focused “prophets” of strategic bombing – the theory that air power could essentially alone achieve victory⁶ – dealt with the ethical questions that arose from the most controversial aspect of their vision: that air power *should* be aimed overwhelmingly at cities and the people in them.

Evincing the same technological determinism evident amongst critics, Douhet ([1921] 2009, 9) claimed the norm of discrimination was merely a function of “the fact that *it was impossible*” in the past to reach the civilian population without dealing first with the enemy’s soldiers; now that “*it is possible*” with air power it simply would be done. Agreeing also in a way with the notion that air power would have civilizational consequences, he dismissed non-combatant immunity as a “peculiar traditional notion” that the realities of air power and total war would flip on its head (Douhet [1921] 2009, 195). All members of a nation were said to be combatants and so “a soldier, a robust young man, should be considered to have the maximum individual value in the general economy of humanity” (Douhet [1921] 2009, 195). As WWI flying ace Major Oliver Stewart (1936, 98; see also Hart 1925, 42–53; Kenworthy 1930, 120; Murphy 1931, 24–26) put it, for “any industrial civilization” even the “blind bombing of a town” was now legitimate because towns were “a nexus of communications ... propaganda ... [and] government.”

The final leg of the argument was that civilian targeting would, if not prevent it in the first place, “tend to end ... war” quickly by taking it out of the trenches and into the lives of those least equipped to handle it (Ashmore 1929, 153–155; see also Douhet [1921] 2009, 61; Fuller 1923, 148–151). In essence, with the qualitative moral distinction between soldiers and civilians erased, war’s morality could hinge solely on the relative quantity of destruction. To this morale bombing enthusiasts had only to compare their predictions to the millions lost in the trenches of WWI (e.g. Hart 1925, 50).

To be fair, this argument was controversial at the time. But it was still articulated, and was eventually internalized into official doctrines in both Britain and the US (Schaffer

1985, 25–34; Garrett 1993, Ch. 2). The conditions of possibility for this discourse to exist, then, are of crucial importance. How is it that anyone could have thought it sensible to claim the direct targeting of civilians would be “more humane than wars in the past” (Douthet [1921] 2009, 61)? The answer is, of course, partially the same yearning to avoid the trenches that motivated air power’s pacifistic critics. But there is another more subtle condition in the connections between these two discourses.

Both positions shared the notion that air power *necessitated* civilian populations be placed at the center of warfare. The technological determinism undergirding that formulation tied any general movement against war to a consequentialist base; pacifism as the logical necessity of what war with air power would now be, rather than as a strict opposition to killing on principle. If one thought war simply could not be avoided at some point in the future, or if it were possible to imagine air power not being an “uncontrollable monster of destruction” (Keating 1938, 280), then the moral plea was undercut. Given that plea’s moral all-or-nothingness, rejecting it also meant dampening the need for moral considerations altogether. Strategists like Douthet could then put forth speculative utilitarian arguments that elided or dismissed the idea of non-combatant immunity. In all of this, moreover, the concentration on the revolutionary way air power would be utilized facilitated incredibly utopian and vague thinking on the weapon’s connection to ends. It either required an end to war – to be outlawed along with a fundamental shift in human moral capacity – or promised a swift end to wars by way of civilian slaughter.

Perhaps it is not surprising that with the edges of the debate being at once extremely disparate and yet also containing key overlaps, the more widely held “war economy” position would be susceptible to internal contradiction and self-delusion. For many, where the leap to pacifism was too far, and for whom the explicit promotion of civilian slaughter seemed distasteful, it was better to envision air power being used

to paralyse the enemy’s higher administration, to interrupt his munitionment, to interfere with his life and business, to disturb and disorganize his productivity, to destroy his moral [*sic*], to weaken his will and capacity as a national organism to continue to struggle. (Spaight 1925, 4)

In this formulation from one of its more prolific advocates, former Principal Assistant Secretary to the British Air Ministry J. M. Spaight,⁷ morale was an effect of targeting the most crucial aspects of a state’s economy and military. Spaight (1940, 18) explicitly rejected the way terror bombing advocates foremost valued “the destruction of *morale*, the disturbance of life, the dislocation of routine.” A war economy approach may involve killing “quasi-combatants” working in heavy industry (Spaight 1938, 375), but this admittedly enlarged “conception of military necessity” was the price to pay to prevent war from completely devolving into a strategy of “terrorization” (Spaight 1925, 6–7).

Unfortunately, this position’s calculus of military necessity made no account for human responsibility toward the innocent in war, and hinged instead on a technical question. Spaight (1925, 3; see also Colby 1925; Royse 1928) contended militaries “have never hesitated to destroy private property or to devastate an enemy territory *when they were in a position to do so and when it was necessary for the success of their operations.*” With air power, of course, militaries were now in a position to target civilian centers directly. Would that be necessary? Spaight (1925, 7; see also Manisty 1921; Garner 1924; Quindry 1931) reasoned that

air power ... *will see no advantage* in attacking the kind of property (citizens' dwellings, retail shops and the like) which can only be destroyed at the price of heavy human losses. Air forces will seek bigger game – the kind of property the destruction of which must have an important repercussion on the whole fabric of national life and business. But that is just the kind of property in regard to which measures of life-saving can be most readily organized ... *war on property must replace war on life. Humanity will surely gain by such a change* (my emphasis).

The moral good rounding out this perspective hinged on whether it was technologically feasible to target the “bigger game” of the war economy, with little by way of a limiting principle for aerial strategy if this was not possible.

The British in particular paid lip service to this perspective throughout the war, even as they were choosing to bomb relatively inconsequential cities *instead* of what were reasoned by many officials at the time to be militarily crucial targets like oil refineries and munitions factories (Garrett 1993, 52–56).⁸ In 1944 Spaight himself mounted a defense of Britain's “area bombing” with a confused and defensive book entitled *Bombing Vindicated*. He maintained that Britain was not adopting a “barbarous war against the civil population,” yet in the next breath offered the “true perspective” on Britain's bombing strategy as, quoting Trenchard, “making the Germans realise the horror of war on their own great cities and towns, and interrupting and dislocating the whole civil life of their nation” (Spaight 1944, 50–51). He seemed to admit that his prior sense of the precision with which air power could carry out the war economy strategy was too optimistic, but that this meant British Bomber Command should be forgiven if in attempting that strategy it also required the “bombing of populated centres” (Spaight 1944, 116). And quite tellingly he took pains to “prevent any possibility of misunderstanding ... [that he was] advocating anything in the nature of frightfulness in air warfare” (Spaight 1944, 121). Unfortunately, those who mattered most, like Sir Arthur Harris, the head of British Bomber Command, were explicitly advocating “frightfulness” (Garrett 1993, 11–20). In effect, Spaight and many others offered the cover of moral ambiguity to statements like Churchill's boasting in 1943 of the “systematic shattering of German cities” (quoted in Ford 1944, 262).

Despite all this it must be noted that widespread terror bombing did not occur at the outset of WWII. And even when civilian centers began to be targeted with aerial bombardment more frequently by late 1940, military and political leaders were quick to portray their own actions as aimed at military targets first and foremost and to condemn similar attacks by the enemy as indiscriminate and barbaric (Conway-Lanz 2014, 49–50). Clearly the weapon did not *necessitate* civilian slaughter. Without a widely shared and workable ethic, though, not only did this occur but later in both Korea and Vietnam there arose “a familiar pattern of an air force, in frustration, turning to an increased emphasis on civilian morale” (Biddle 2002, 292–298). Morality and practice would not come into some semblance of alignment until 1977 with Protocol I Additional to the Geneva Conventions.

By then political and strategic leaders, responding partly to greater public concern for civilian casualties in war, began to change their moral and instrumental views on the effectiveness of morale bombing (Crawford 2014). Concomitantly, a revival of just war theorizing led to more cogent moral reflection on the problems presented by air power. Resisting both the technological determinism and idealism of much of the interwar debate, Walzer ([1979] 2006, 145–146; see also Anscombe 1961, 67) admitted to the fact that “war today is as much an economic as a military activity ... But ... [t]he relevant

distinction is not between those who work for the war effort and those who do not, but between those who make what soldiers need to fight and those who make what they need to live, like all the rest of us.” Here we see a moral recalibration of the war economy position sketched above. A wider conception of targets rests not only on a determination of some technologically-enabled view of the militarily advantageous but also on the moral character of human activity in relation to war.

Such conceptualizations were certainly not unimaginable prior to WWII. The more abstract notion of a legitimate military target embedded in Walzer’s argument, and many concepts in the eventual legal codification, can be seen in nascent form in the 1923 Hague Rules (Hanke 1993). The Rules’ influence were even apparent amongst military commanders during WWII (Hanke 1993, 21–28, 32–36), suggesting that with more efforts like them – both at the official and civil society level – it might have been possible to get a quicker jump on the problems presented by the emergence of air power. This possibility, and the character of the discourse that operated in its stead, points to some general but also salient lessons.

Maintaining our critical edge in an era of emerging warbots

This final section distills from the above two main tendencies that facilitated the process Anscombe described and offers examples of the way our current discourse on warbots at times comes close to falling prey to them. These tendencies, as I have argued, interrelate with the emergence of purportedly revolutionary weapons like air power and warbots, and can be deleterious to our ability to offer an appropriate ethics of war in relation to them. The examples offered are merely illustrative and not meant as a definitive indication of wholesale problems in the discourse, nor as an indication they are egregiously flawed relative to others. More modestly, being made aware that we might, in even our best efforts, display some of the same problems seen in the air power discourse can only help improve our ability to effectively debate the continuing emergence of warbots.

First, the air power case demonstrates the danger in letting assessments about the abstract capabilities of a technology equate with how it will, or more dangerously how it should, be utilized. Not only is it likely these technical assessments themselves will be flawed in quite serious ways, as they were especially for “war economy” advocates, but such a conflation between capabilities and actual usage grants them an unwarranted moral weight. We begin to elide crucial ethical questions of human intention and responsibility, seen most egregiously in the way air power opponents and morale bombing enthusiasts turned knowledge that air power could target civilians into disparate and equally flawed contentions about the morally necessitous. Unfortunately, we can see this tendency amongst even some of the more cogent and impassioned interlocutors in the ethics debate over warbots.

Christian Enemark (2014, 374) contends that even current lethal UAV use takes war into the realm of *vis perpetua*, or perpetual force, because its capabilities promote an “actor’s intent to sustain (perpetuate) the use of force in a way that is temporally unlimited.” He writes that

drone technology is better conceived as not merely transforming the character of war (as so many other technologies have done in the past) but rather as enabling a form of violence so

fundamentally different in nature that it is difficult to conceive of as war. (Enemark 2014, 367)

We are left with an “ethically untenable” lack of temporal limits that is in “large measure ... a function of the powerful and enduring temptation to violence offered by drone technology” (Enemark 2014, 375). The degree to which this reading ties the nature of the technology to its modes of use leads Enemark (2014, 371–372, 379; see also Riza 2013, 48) to counsel that for now, at least, the proper “governance solution” is “outright prohibition,” lest drones take war to an unethical “point of no return.” If, of course, the factual contention on the degree to which warbots themselves, rather than a current and possibly temporary context, induces certain intentions is wrong, the easy dismissal of this high bar for moral rightness may be damaging to efforts at a more balanced and effective ethics.

The discussion of future warbot capabilities is even more fraught with the tendency to let predicted technological capabilities drive the ethical discussion. In his promotion of continued research and development on fully autonomous warbots – rather than the preemptive ban being promoted by a growing number of experts and officials⁹ – the “roboethicist” Ronald Arkin (2010, 333–334) contends that while they may never “be able to be perfectly ethical in the battlefield,” he is “convinced that they can perform more ethically than human soldiers” due to what will eventually be better than human perception and cognition, and the lack of sometimes panic or aggression-inducing emotions. Arkin (2015, 46) is primarily motivated by the “utterly and wholly unacceptable” propensity for humans to kill civilians in war. A concentration on what might be technologically possible, though, blinds him to the illogic of his “optimism for robots being able to exceed human moral performance” (Arkin 2015, 46). For at the same time he justifies this optimism with a concomitant “pessimism in reforming human behavior,” much of his case rests on the way those same incorrigible humans are expected to put these warbots in situations with a “bounded morality” that fits their programming (Arkin 2015, 46–47). Focused on the technologically possible, Arkin downplays more politically attuned fears about how such warbots may proliferate and be utilized by ill-intentioned actors, to say nothing of their possible propensity to tempt unnecessary violence by the ostensibly well-intentioned.

This is not to say we should ignore the evolving nature of warbots as they emerge. As James Carafano (2013, 1264) writes – in an article otherwise dismissive of technology’s role in the ethics of war – it “is a mistake to believe the ethical application of technology in war can be determined in absence of a practical understanding of how the technology is applied.” The key, as John Kaag and Whitley Kaufman (2009, 586) write, is to not confuse “technical capabilities and normative judgments by assuming that ... weaponry facilitates ethical decision-making,” for this results in forgetting “what ethical judgment entails, that warfare must be regarded as a strictly human activity and that moral responsibility can never be transferred to the technology that is employed therein.”

The second tendency to ward against is the way air power encouraged a concentration on *jus in bello* elements abstracted from and to the detriment of *jus ad bellum* concerns. New dilemmas over proper means may be those most obviously highlighted by an EMT, but focusing on them too much can only feed into the endemic tendency in war to “redefine initially narrow goals in order to fit available military forces and technologies” (Walzer [1979] 2006, 120). In the air power case, a fixation on the technically feasible tactic of bombing cities fed into vague and hyperbolic visions for what war can and should

accomplish; that it would destroy civilization, or end with a quick burst of slaughter. With those unrealistic ends as a guide it became more likely that, along with the inevitable uncertainties of war, agents were tempted to transform vaunted new means into something close to ends in and of themselves.¹⁰

This tendency is mainly evident in the most ardent supporters of warbots (though see Leveringhaus 2016, 13–15). Bradley J. Strawser (2010, 343), for instance, lauds the ability of lethal UAVs to reduce risk to those deploying them, and calls for a moral mandate to use them “unless there exists a countervailing good that outweighs the protection of the agent.” This “principle of unnecessary risk” is an uncontroversial position in line with traditional just war thought (see Walzer [1979] 2006, 144). The crux is whether a “countervailing good” like the ability to rightly choose to use force or the ability to accomplish a right intention is likely to be harmed by the widespread use of lethal UAVs. Strawser (2010, 358), however, sidesteps any deep grappling with such *ad bellum* concerns by stressing the caveat that he is assuming, for the sake of elucidating his mainly *in bello* argument about unnecessary risk, that UAV “employment is done as part of a fully justified war effort meeting both *jus ad bellum* and *jus in bello* criteria.” Unfortunately, the bulk of the argument, as Uwe Steinhoff (2013, 204; see also Schulzke 2011) points out, then seems to actually be about pointing to the “wide range of cases that are quite common in war” in which drone usage does not conflict with goods such as the ability to properly assess *jus ad bellum* criteria (see Strawser 2010, 358–361). The problem with this analytic slippage is made obvious when Strawser (2010, 362) concludes by admitting that “in the current context ... much, if not all, actual UAV employment is part of military actions that are morally questionable or outright impermissible.” His attempted bracketing of *ad bellum* issues seems to lead him to never directly consider whether some of the very *in bello* goods he sees the weapon enabling might also be partly the cause of the actually existing unethical decisions to use it in the first place.

Indeed, for critics the main concern is that the level of impunity warbots grant soldiers will make it too easy to go to war, and from there to lax thinking about who deserves targeting and how their deaths are getting us to the just ends we might seek (Braun and Brunstetter 2013; Galliot 2015; Roff 2014; 2015). But to a warbot optimist like Kenneth Anderson (2012, 388), such questions make little sense, and so should not stand in the way of the possibility that the combination of distance and precision that seems technically feasible with warbots gives us a chance to break the “proportionality trap” – the idea that gains in force protection usually reduce protection for civilians. Echoing Strawser, for him the “too easy” argument imagines that we have the epistemic wherewithal to predict some future level of recourse to war in which it is enacted so often it becomes an “inefficient” means of bringing about more security and peace (Anderson 2012, 395–397). Determining just cause in individual situations is enough, and applying the best means available after such a point then need not have any wider ramifications for the moral character of war (Anderson 2012, 397–399).

The air power case would suggest that we must not dismiss the *jus ad bellum* difficulties that warbots might generate. Given the temptations they often present, and the way they might discombobulate our ability to think clearly about the purposes war is meant to serve, we would do well to return even more than usual to the question of why we fight. In what specific way should a weapon be utilized in order to serve just ends? Is the capability offered by the new weapon altering how we conceive of ends in the first place? Far

from sending us down an epistemic rabbit hole, these concerns must drive our ethics of war especially when facing a possibly revolutionary EMT.

And once war comes? Efforts must be made to push against what, in the air power case, was a tendency to stretch the assessment of military necessity and the civilians and civilian infrastructure this put in danger. In discussions of warbots at least, just war theorists may need to continually focus on hardening the lines between combatant and civilian, and possibly even expanding the realm of the latter. Walzer (2002, 934) warns that the “triumph of just war theory” may lead to a dangerous form of hypercriticism, whereby we feel the urge to “condemn and oppose very seriously and then to raise the theoretical ante ... [by making] noncombatant immunity into a stronger and stronger rule, until ... every war is unjust.” Fair enough. But if we are challenging our engineers to develop weapons that are better capable of precision partly because the dividing lines between civilian and combatant are fuzzier than ever, we might also challenge our political and military leaders to operate from a much stronger presumption of innocence so as to preempt the tendency for new weaponry to assuage what should be increased ethical anxiety as battlefield lines grey. As it stands, unfortunately, for the US military at least there has been a positive relationship between increasingly precise weaponry and increasingly permissive notions of a “military objective” (Shue 2011). Just war theory may have triumphed, but the very military technologies supposedly designed to adhere more and more to its precepts cannot be let to soften the critical edge we need when thinking about the ethics of war. The air power case is a stark reminder of what can happen when they do.

Notes

1. For a primer on the ethics of EMT see Demy, Lucas, and Strawser (2014).
2. Though this term is not widely used (though see Sparrow 2009), my students and I found it to be the most efficient and accurate term available. The more common catch-all term, “killer robots,” can be misleading because the ethics of killing and the ethics of war are not usually thought to be synonymous.
3. Some prefer a hard division between remote-controlled weapons (e.g. UAVs) and LAWS, the latter being distinct because “the weapon system, not a person, selects and engages targets” (Horowitz 2016, 26). This article assumes it is more important to view military robotics, and its defining feature of machine autonomy, on a spectrum, where something like a landmine exists near a pole with the least autonomy and where LAWS exist at the other end (Asaro 2008, 51). In this sense even concerns specific to as-yet developed LAWS, such as whether they break a special moral requirement for humans to directly make decisions to kill, are at this point superseded by a more general and at present real concern that the cutting edge now and into the near future involves weapons that enable a qualitatively distinct level of detachment from war.
4. My thanks to Matt Evangelista for pointing me toward this essay.
5. For works beyond those cited below who in my reading also came close to an appropriate ethics of air power see Moore (1924) and Nickerson (1933).
6. Strategic bombing advocates split on whether morale or a “war economy” should be the mechanism by which air power would win a war. On the notion of strategic bombing theorists as “prophets” see Grosscup (2006, Ch. 2).
7. He was not necessarily the dominant voice espousing this position, but his articulation encapsulates the key nuances of the broader discourse. Other than quotations cited in the text, see especially Spaight (1933).

8. This is not to forget the ability of Americans to delude themselves, evidenced most starkly in President Truman's absurd initial assurance that "the first atomic bomb was dropped on Hiroshima, a military base." Quoted in Degroot (2011, 98).
9. See the Campaign to Stop Killer Robots, <http://www.stopkillerrobots.org/>; and the Future of Life Institute, "Autonomous Weapons: An Open Letter from AI and Robotics Researchers," http://futureoflife.org/AI/open_letter_autonomous_weapons.
10. This tendency is evident in the obstinance with which Britain's Sir Harris sought to continue morale bombing even in the face of explicit commands to do otherwise (Garrett 1993, 52–56).

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Notes on contributors

Benjamin R. Banta is a specialist in international ethics, war studies, American foreign policy, and qualitative methodology. His previous work examined US moral responsibilities toward Iraqi refugees, the *jus post bellum* update to just war theory in light of the changing character of war, the analysis of discourse as a causal mechanism, and humanitarian war.

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