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ORIGINAL PAPER

Autonomous weapon systems impact on incidence of armed conflict: rejecting the 'lower threshold for war argument'

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Abstract
Some proponents of a ban on Autonomous Weapon Systems (AWS) believe adopting these would lower the threshold for war, and is thus morally undesirable. This paper argues against that thesis. First, removing a single constraint on warmaking does not automatically make war more likely. Analysis of the causal input of other more potent restraints shows this holds true for just a fraction of potential conflicts. Secondly, AWS adoption would also impact other restraints on war in ways that are complex and unpredictable. Without a thorough analysis of these other impacts, AWS' adoption impact on the incidence of war cannot be said to be significant enough to warrant action. Thirdly, war ethics does not aim to reduce the number of wars simpliciter, but to resist, deter, and thus reduce occurrence of unjustified aggression. Consequently lowering the threshold for defensive war, especially for wars of collective defense and/or humanitarian interventions, would be a good outcome, potentially offsetting a possible negative effect on the incidence of aggressive wars. Last but not least, states that already restrain themselves from aggressive warring by sufficiently robust alternative mechanisms cannot be required to eschew AWS adoption for that reason. Taken together, these arguments prove that the impact of AWS introduction on the incidence of war cannot be discerned through a priori philosophical analysis alone. Consequently 'lower threshold for war' argument cannot support calls for an AWS ban.

Keywords Autonomous weapon systems · Killer robots · Military technology · Armed conflict · Frequency of war · Just war theory · Military ethics · Ethics of military technology

Introduction

Autonomous Weapon Systems (AWS) are uncrewed weapon platforms that, once launched, are capable of finding and engaging targets without input from a human operator[1]. Several authors claim that AWS adoption would lower the threshold for engagement in armed conflict (Asaro, 2008, 56–58; Gubrud, 2014, p. 39; Heyns, 2013, 11–12, 57–62; Sharkey, 2012, p. 122; Wagner, 2014, 1418-21)[2]. The claim has also been advanced by NGOs advocating a global ban on AWS development and use (PAX, 2014, 8–10; Human Rights Watch, 2018, 6). As AWS would be devoid of intrinsic moral value, their loss would not entail casualties. Thus using them in warfare should be politically easy and ethically unproblematic. Leaders able to field AWS would therefore employ them in cavalier manner, increasing the overall frequency of armed conflict (Likelier Wars Thesis – LWT). This empirical claim is followed by asserting that this outcome would be ethically bad. Together these two premises form a Likelier Wars Argument (LWA) in favor of a global ban on AWS.

This paper explores several issues with LWA. I start with analyzing the extant literature, distinguishing actual claim being made from its trivially true weak version and distinct claims regarding other putatively negative consequences of AWS adoption. I then compare the significance of casualty aversion and other restraints on warfare, demonstrating that its impact is genuinely significant mostly in liberal democracies, where other powerful restraints on war already exist.

[1] The definition I use is functionally identical with the commonly used definition provided by the US Department of Defense (US DoD, 2012, 13–14), as well as with the definition adopted by the ICRC (2021, 5).

[2] C.f. Meier (2017, 447–456); Wood (forthcoming).

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In contrast, when these other restraints are absent, as they are in most autocracies, casualty aversion alone has little impact. Additional complexity and uncertainty is introduced by AWS adoption's impact on other remaining restraints for war. Given that the scale of the effect consequently remains unknown, we cannot presently determine how much support for the global AWS ban the LWA can provide even if its second premise was correct. I subsequently challenge this normative premise, namely the claim that a greater number of conflicts would necessarily constitute a morally bad outcome. Indeed, for liberal democracies, who would be most affected by the removal of casualty aversion as a restraint on war, it is the undue reluctance to enter armed conflicts that seems to be a greater moral problem. Finally, I argue that even if the LWA was enough to establish that a non-negligible negative outcome will follow universal AWS adoption, it could not support the duty to support the ban in the case of countries that properly restrain themselves from unjust warring with alternative and sufficiently robust mechanisms.

Formulating the Likelier Wars Argument

This article is concerned with a particular argument against the ethical permissibility of AWS adoption that links an essential feature of all AWS (their expendability) with a specific effect (removing casualty aversion as a restraint on warmaking) bound to produce an outcome (more frequent occurrence of interstate armed conflict[3]) that is alleged to be ethically bad. That argument is most clearly expressed by Markus Wagner:

> The reduced political price if casualties to one's military personnel can be avoided is likely to become an even larger consideration subsequent to the deployment of AWS in armed conflict. At least in democracies, the loss of human life—especially the lives of fellow citizens—is a fundamental impediment to either engaging in or maintaining armed conflict. Casualties are a significant reason why armed conflicts are not more common. Sending an army of machines to war—rather than friends and relatives—does not exact the same physical and emotional toll on a population. This lowered cost may reduce the rigor with which states pursue nonviolent alternatives, thus encouraging armed conflict that may not have arisen without the option of deploying AWS and therefore avoiding the political costs that come with wartime casualties. (2014, 1420)

I call Wagner's claim Likelier Wars Thesis (LWT). I take his point to be essentially identical with Noel Sharkey's, who bluntly asserts that "without bodies coming home, citizens will care a lot less about action abroad, except in terms of the expense to the taxpayer" (2012, 122). Christopher Heyns also voices this concern[4] (Heyns 2013, 11), as does Mark Gubrud (2014, 39). These and other authors also mention a number of other concerns about AWS adoption that are best discussed separately from this one for analytical clarity[5]. Thus the sole purpose of this paper is estimating whether and to what extent removing the restraint of casualty aversion would be bad; it does not aim to judge its interaction with other factors (unless explicitly mentioned) or to make claims about general permissibility of AWS adoption. Doing so in further research would be most desirable; yet this further, more complex analysis only becomes possible when the analysis of each putative problem with AWS adoption has been completed individually.

Seeking analytical clarity I further limit the scope of this article to interstate conflicts. Interstate conflicts are quite clearly what the cited authors refer to; more importantly, many of the following considerations are inapplicable to non-state actors, who do not field regular armed forces, practice statecraft or foreign policy or remain answerable to their citizen body[6]. Nor would non-state actors qualify as parties to a global AWS ban. Thus while potential AWS

[3] Following the methodology of the Uppsala Conflict Data Program (Davies, Petterson & Öberg 2023, 693), I define war as any armed conflict, whether inter- or intranational, resulting in more than one thousand battle-related deaths annually. My definition of war is thus sociological rather than legal, such as the one provided by the ICRC (2008), and is focused on the intensity of violence and the human toll, this being the most obvious form of moral harm inherent in war. While legitimate research methodologies may be based on other definitions (Herre, 2023), and while these definitions sometimes include fine grained distinctions between high- and low-intensity conflicts (SIPRI, 2022, 2), I adopt this particular definition in order to differentiate between combat and one-sided massacre of civilians on uncontested territory, as the latter type of atrocities is beyond the scope of the paper for reasons explained in Footnote 5. I use the term 'war' interchangeably with the term '(armed) conflict' for linguistic convenience.

[4] Heyns also indicates that widespread AWS adoption would weaken inhibitions on warfare by removing our aversion to hurting others, which would be true for robot-on-robot warfare. As the aversion to own casualties can be argued to be historically much stronger, I focus on the latter.

[5] Another unique AWS feature that could make mass violence more likely is their absolute obedience to orders, which could encourage state violence against civilians (Asaro, 2019, 546−48). Given the complexities involved, this feature of AWS should be subject of its own separate study. The same is true for AWS potential to disrupt the strategic nuclear balance (Sauer, 2020, pp. 251-2); enable violence by non-state actors (Kwik, 2022) or to lead to unwanted escalation of border tensions in the so-called "flash war" scenarios (Altmann & Sauer, 2017, 128-9; Asaro, 2012, p. 692). I do believe this are important issues that need to be addressed by any comprehensive treatment of overall AWS strategic impact or ethical permissibility. Consequently approaching all of them with enough depth and rigor within a single article is impossible.

[6] To a degree that a non-state actor has these features, as several existing quasi states do, these concerns would apply to them as well. Still, quasi-states would be a decisive minority among the actors I discuss.

proliferation to non-state actors, or their use in non-international armed conflicts should be a subject of intensive study, this article focuses elsewhere.

Let us examine several key features of LWT, or at least of its most plausible version. First, LWT concerns the *average probability* of interstate conflict occurrence. Its proponents do not claim that any specific conflict will necessarily occur, or even that the probability of any specific conflict occurring will rise, or rise significantly. It being true is thus compatible with a number of potential conflicts becoming less likely due to AWS adoption.

Secondly, the probability of conflict occurrence is to be measured over time, presumably over a significant period of time. We are discussing probability per decade or per century subsequent to AWS adoption, not just very immediate effects.

Third, charitable interpretation requires a version of LWT that claims average probability of interstate occurrence over time will rise *to a morally significant degree*. Conversely, assuming too weak a version of the LWT would be uncharitable, because it would strip the ensuing argument of all force. On LWT's weak version, AWS adoption would make average potential interstate conflicts more likely by a value that would be insignificant in absolute terms, say, one chance per trillion over a decade. This would not be difficult to prove at all, given that casualty aversion uncontroversially constitutes a genuine restraint on warmaking. But it would also fail to render significant enough support to the pro-ban case[7]. Hence the need for establishing not only the fact of the influence of AWS adoption on the likelihood of armed conflict, and the direction of this influence (making conflict more likely), but also this influence having a significant enough scale.

We have thus formulated one premise (LWT) of the Likelier Wars Argument for the AWS ban (LWA). The other premise simply asserts that increased frequency of armed conflict would be a bad thing. The LWA has thus the following form:

Premise 1 (LWT) By lowering or removing casualty aversion as a restraining factor on entering armed conflicts, AWS adoption will in the long run make the average potential interstate conflict more likely to occur to a morally significant degree.

Premise 2 It is morally bad for interstate armed conflicts that would otherwise not have occurred to occur.

Conclusion AWS adoption will lead to a morally bad outcome.

LWA's conclusion is logically valid. If LWA's premises are all true, there is indeed a moral reason to oppose AWS adoption. I will challenge Premise 1, or LWT, in Sect. 2, and Premise 2 in Sect. 3, with Sect. 4 casting doubt on LWA's ultimate relevance to key actors. Before I present my doubts, let me briefly mention two lines of argument I will not utilize.

First, I will not challenge is the claim that AWS are expendable, that is, that when they suffer losses these losses are not meaningful in the moral sense, and that their widespread adoption would indeed reduce friendly casualties. Other uncrewed systems share this advantage to a lesser extent; however, their use still involves operators who may become high-value targets for the enemy. In the foreseeable future the inclusion of neither unmanned or autonomous platforms is likely to eliminate human involvement in war; indeed, it can be argued it will only shift humans into different roles, without a significant decrease in the overall number of human combatants (Watling, 2024). Still, AWS adoption is likely to limit the number of frontline troops, and to an even greater extent frontline troops charged with the most dangerous combat tasks, such as clearing buildings is urban combat (Zajac, 2022, 169–170). I will thus assume that while widespread AWS adoption would not completely eliminate human military casualties, it would indeed limit them significantly and beyond what can be achieved with the adoption of human in-the-loop uncrewed platforms.

Secondly, one could claim that if LWA works for AWS adoption, it also works for adoption of every other casualty-reducing military technology, not only drones, for which this counter-claim has originally been raised by Bradley Strawser (2010), but also for such phenomena as battlefield medical care, body armor or even shields. It could seem that endorsing LWA seems to oblige one to condemn all attempts to reduce military casualties as abetting all-too-easy war. Without passing judgment on the relative value of this possible counter-claim, I will not utilize it for a simple reason. Strawser claims that another value – friendly combatants safety – should be weighed against the putatively negative outcomes of new weapons' adoption, and that in many cases it is weighty enough to justify such adoption. However, I am not interested in weighing LWA's significance against conflicting claims, I am only interested in assessing LWA's

[7] I thank an anonymous Reviewer for alerting me to this possibility.

inherent validity, soundness and argumentative weight. I make no broader claims about ethical permissibility of AWS use or the pros and cons of using them. As already stated, comparing the relative strength of different arguments is a further step in the overall analysis of the issue, a step possible only once specific arguments have been analyzed and assessed in their own right.

Other restraints on war and their relative importance

Restating the Likelier Wars Thesis: even if a subset of leaders completely lack empathy towards their own troops, fear of popular dissatisfaction with massive casualties provides a check on their war-making desires. Lowering prospective casualties below a certain threshold would, however, create a temptation even for otherwise empathetic decision-makers. While friendly casualties are not the only reason stopping states from launching/joining wars, this factor tips the balance in a significant enough number of cases that introduction of casualty-sparse warfare would cause increased incidence of war.

Notwithstanding, there are reasons to think that casualty aversion is not the most significant factor in the non-outbreak of most potential conflicts. If other restraining factors constitute sufficient restraints by themselves, then casualty aversion is in fact causally overdetermining and so causally inept, and its elimination may consequently be harmless. This is compatible with a belief that casualty aversion would be sufficient to prevent these conflicts if it was the only factor in play.

Imagine Brian learns his department director has just resigned his coveted post. Brian would love to become the director himself; however, the company rules state that three other employees will have to be offered the job before Brian. Consequently Brian getting the job is very unlikely: he reasons there is only one in a hundred chance of each person refusing, making all three refusing simultaneously a one chance in a million. Thus even when Joan, who is first to decide, surprisingly refuses the offer, Brian is not celebrating, even though his chances of getting the job have just increased a hundredfold. Josh and Jack both refusing the job is still exceedingly unlikely, at 1 in 10 000[8].

Analyzing this toy scenario, we may interpret the independent decision of each of Brian's three co-workers' as a separate restraint. Brian not getting the job is made exceedingly unlikely by their combination; this outcome is also resilient to any single restraint being removed, as with Joan's surprising refusal. Say Matilda would really hate Brian becoming director as she thinks he is incompetent–should she pressure her friend Joan to accept the job despite Joan's misgivings? After all, Joan's refusal increases Brian chances a hundredfold. Yet whether Matilda would be justified in pressuring Joan is entirely dependent on the strength of other restraining factors, that is, on the willingness of Josh and Jack to take the job. Matilda would not be a good friend if she pressured Joan to take the job only to remove a minuscule chance of Brian getting it, even if that outcome would be an unbridled catastrophe for their entire department. Similarly, the negative value of removing casualty aversion as a restraint on war depends on the strength of other restraints.

What other restraining factors could prove causally sufficient in case of armed conflicts? I focus on three basic factors, although there likely are more: values-driven restraints, unprofitability and the risk of defeat inherent in most conflicts.

Values-driven restraints

Societies genuinely espousing liberal-democratic values are less likely to go to war with each other, as showcased by the post-WWII transformation of Europe[9], and are also less likely to engage in the most destructive kind of conflicts, as measured by the severity of civilian casualties suffered by foreign-nationals (Gat 2008, 856). Present-day Germany would not attack modern France even if it had an unbeatable robotic army, simply because present-day Germany is not a type of polity that endows its leaders with powers to engage in such invasions or elevates into office persons who could react to such an idea with anything but revulsion.

As most countries are not mature liberal democracies, internalization of aggression-averse political values does not offer a universal restraint. Still, it eliminates the possibility of armed conflict for a significant number of potential adversary pairs. Importantly, many countries that have the economic and technological potential required for high-tech robotic warfare are subject to this constraint.

It is important to notice that this moral reluctance towards unjust warring is the only constraint that tracks moral reasons, and that consequently it is optimal, and perhaps even morally obligatory, for a state to self-restrain in this way regardless of the presence of other restraints.

[8] This shows that for the purposes of this paper probabilities and changes thereof are best expressed in absolute rather than relative terms.

[9] The so-called "democratic peace thesis" has been demonstrated not to obtain for pre-World War I republics and democracies (Gat 2008, 570−97). It is likely not the mechanism of popular elections itself, but a set of humanistic and liberal values that came to be dominant in long-established Western democracies and some other countries such as Japan that is instead responsible for the genuinely observable effect.

Inherent unprofitability

War is not profitable in the contemporary world, not economically and increasingly neither in the political or strategic sense. It is extremely costly not only in casualties, but also financially, in terms of scarce military equipment and other less frequently mentioned but nevertheless essential resources, such as decision-makers' time and attention or political capital. Consequently war has become an enterprise undertaken most frequently for ideological or religious reasons. Historically valued objects of conquest – land, natural resources, loot, skilled and unskilled labor, tax income and market access – either lost their allure, became diplomatically impossible to retain, or became much more cheaply obtainable by non-violent means (Gat 2013, pp. 153-4). Annexations, even under conditions of complete military domination of one state by another, became almost unheard of (Pinker, 2018, 156−66), with the Russian attempt at annexing parts of Ukraine constituting only a second such attempt since 1990 (Davies, Petterson & Öberg 2023, 699).

Regardless of how significant these trends actually are[10], they do not stop war from remaining attractive for specific actors and/or in specific circumstances, nor do they stop leaders from having ideological predilections strong enough to trump all restraints. What is more, military adventures disadvantageous for a nation as a whole may still benefit a leader, his political faction or another entity with which his loyalties truly lay, making a lack of actual benefits an unreliable restraint. In many cases, however, modern war's general unprofitability is enough, substantially limiting the number of potential conflicts.

Risk of military defeat

The third restraint – the risk of military defeat – is present for most potential conflicts. It is not logically tied to the risk of suffering casualties, as actors may be sure of achieving a military victory in a war that carries a very significant risk of sizeable casualties (1940 Winter War provides an example), and could also risk disastrous defeat in a casualty-free, fully-automated conflict (Kovic, 2018, 9–10). The cost of a lost war is not limited to damage resulting from loss of military capability or financial resources and directly affects the leaders of the losing side. Even if the damage remains limited and their country retains sufficient military forces to secure *status quo ex ante*, the political fallout is usually quite severe. The peace arrangements likely include some significant limitations on their power or a requirement that warmongering leaders step down. They may additionally be subjected to a crimes against peace prosecution, assuming the victor abides by the international law and *ius post bellum* – if not, the personal consequences may be much more tragic. As these negative incentives apply to all decision-makers, even those absolutely unscrupulous and completely unconcerned with the fate of their nation, they constitute a powerful restraint indeed, a theoretical conclusion supported by empirical research (Bas & Schub 2016).

Other restraints on war – primarily, but not only, risk of defeat, the wars unavoidable cost and deeply internalized values – usually suffice to prevent war between any given pair of state actors (also referred to as a dyad). Lowering friendly military casualties would not be enough to induce most dyads into war, even in cases where states are ideologically divergent or in a political conflict. Consequently it makes sense to ask what kind of actors would otherwise prefer to start or join armed conflicts but are currently too casualty averse to act on this preference.

First, most authoritarian actors would not be significantly emboldened by the effect of AWS adoption on casualties suffered given that such actors are usually not very casualty averse[11]. Second, a significant subset of genuinely casualty-averse actors, namely established liberal democracies, would likely remain restrained by their values, especially in case of obviously imperialistic or very destructive conflicts.

Conversely, our analysis places the spotlight on states that are simultaneously quite casualty averse but unconcerned about either the prospect of defeat, material cost and (some) moral values. Affluent, disproportionally stronger than their potential adversary, able to wage war abroad while remaining virtually untouchable at home, concerned about own casualties but virtually unconcerned about "enemy" civilians – such actors have existed historically. The Vietnam War era United States (Karnow 1983, 312–613; Hersh, 1970) and Gaullist France can be argued to meet this description, and it is no coincidence that some of the proponents of the LWA, such as Noel Sharkey, seem to directly reference these as examples (2012, 122). Present-day Israel (International Criminal Court, 2024, Lewis, 2024) or the US under the current Trump administration (Davies & Wendling, 2025; Jaffe, 2025; Parsons, 2025; Zafar, 2019) may also plausibly be included in this set. That said, most contemporary state actors do not meet this description, significantly limiting the scope of the postulated effect.

The increased likelihood of starting/joining an armed conflict will not only be limited mostly to a subset of states, but will also remain hard to quantify or model, especially

[10] For a skeptical view see Braumoeller (2019), for an overview of works presenting supporting evidence see Gat (2013).

[11] Russian invasion of Ukraine provides the newest case study (Mediazona, 2025), not only regarding low casualty aversion but also the plethora of methods for hiding the scope of casualties from the public or making these casualties more palatable (Ivshina, 2025). Low casualty aversion is hardly limited to Russia and characterized, among others, Nazi Germany, Maoist China, North Vietnam or the Islamic State of Iraq and Levant (ISIL).

a priori. The latter feature is exacerbated by the fact that the silent assumption I have been making so far is almost certainly not true – AWS adoption will affect other restraints on war, with the size and direction of impact also being extremely hard to predict. Let us briefly discuss how widespread adoption could either strengthen or relax each of the three primary restraints on war.

Regarding values-driven constraints, it is possible that the diminishing presence of human combatants on the frontlines will desensitize adopter societies to the horrors of war, making combatant testimony less frequent. It is also possible that the increased presence of robots on the frontlines will further increase the availability of combat footage to the point when both individual instances of combat and armed conflicts in their entirety will effectively become matters of public record and so transparent to public scrutiny. Both processes are indeed likely to transpire at the same time, partially cancelling each other's effects. Will adopter societies be shaken or emboldened by the mechanical efficiency of robotic combat, loosening or tightening existing moral restraints? Will every society respond in the same way, or will existing cultural differences or random chance drive their responses in different directions? Even if answering these questions is possible in principle, which can be doubted, it would require very substantial research the results of which the proponents of LWT cannot presently put forward.

Regarding warfare's cost and profitability, AWS adoption could either increase or decrease it substantially, and have opposite effects for different types of actors. It is conceivable that having removed demographic and training bottlenecks to a certain extent, adoption would allow armed forces to substantially expand and become limited only by the size of a belligerent's industrial potential. Yet it is also conceivable that it would greatly reduce the cost of waging war and allow for quick, decisive victories, especially against unprepared or under-industrialized opponents. Again, even if any decisive answers are to be had, so far they have not been forthcoming.

Finally, how would AWS adoption affect average predictability of armed conflict? Would it guarantee overwhelming victories of technologically advanced states? Or would it lead to an explosion of new means and methods of warfare, making each engagement essentially novel and radically unpredictable? Yet again, it is probably impossible to tell the direction of the overall impact, let alone to reliably quantify it.

Estimating the actual effect of diminishing casualty aversion on the probability of war is extremely complex. It is clear that other restraints on war are even more potent, and in most cases sufficient, making casualty aversion causally overdetermining and so inept as a factor. Only a very particular class of actors are sensitive to casualties but not to the moral odium carried by aggressive war. Even in their case predicting the size off the effect seems difficult if not impossible, especially as AWS adoption would affect other restraints in even more unpredictable manner.

However, just as there is a class of imperialist actors that would be made more likely to fight unjust wars if they adopted AWS, there is also a class of actors who are presently not sufficiently active in deterring aggression or responding to it once it happens.

Just and unjust wars

LWT is bound to be true for some potential adversary pairs, although the effect will be hard to quantify or even estimate a priori. Yet what about LWA's second premise that more wars actually occurring would be a bad outcome?

According to just war theory, every war is a moral tragedy, since at the root of every war there is an act of unjustified aggression (McMahan, 2005; Orend, 2013, 33–70; Walzer, 2006, 51–73). The nobler the cause of one side – say, humanitarian intervention against genocide – the worse the crime of the other. Moreover, many wars are unjust on both sides[12] (Bazargan, 2013, 961−62). It seems that the fewer wars break out, the less injustice and suffering there is. Thus lowering the threshold for war is never a good thing, no matter how and where it happens. If this proposition was true, the composition of the actor set empowered by AWS would not matter and more detailed, empirically-rooted analysis would be unnecessary.

Yet this proposition is not true. A casualty-averse actor, by definition, values its soldiers as human beings, not as military assets only[13]. Such an actor values their lives more than at least some relevant national security, economic and ideological considerations – and more than at least some personal and partisan goals. Casualty-averse actors being like this does not guarantee their peaceful behavior, but it does exclude from this set the worst type of regimes. Neither Hitler's Reich, Stalin's USSR, Saddam's Iraq nor North Korea were deterred by own military casualties as an isolated factor. Simultaneously it is exactly such warlike totalitarian states that one would least prefer to engage in war more frequently, since the wars started by these regimes are likely to be the most unjust and conducted in the least just manner.

More importantly, it matters morally how and why a political conflict gets resolved without a thousand or

[12] Or on every side, since a war may involve more than two actors fighting each other.

[13] Their value as military assets is already taken into account in estimating the risk of unacceptably harmful defeat.

more battlefield deaths occurring. Is it because the potential aggressor relinquished his unjust pretensions? Or is it because those in the right yielded to a threat of aggression? That aggression needs to be answered, repelled, and made right for the sake of both the present and the future is a basic tenet of just war theory, both in its Walzerian and revisionist currents (Orend, 2013, 33–70; Walzer, 2006, 51–73). Avoiding war at any cost is not a morally acceptable goal, let alone a morally worthy one. In the words of Allen Buchanan, "in general fidelity to peace promotes justice better than an absolute commitment to avoiding conflict in every instance. (…) The assumption that peace and justice are not compatible goals achieves what little credibility it enjoys by reducing peace to peace among states. But if what we should be fundamentally concerned with is preventing violations of human rights, then there is no reason to give an absolute priority to peace among states. Conflict between states sometimes may be an acceptable price to prevent massive violence within a state" (2004, 80–81).

This is best illustrated by the chilling fact that the majority of violent civilian deaths in the XX and XXI century *were not* battlefield deaths. The Holocaust, the Armenian Genocide, the Holodomor, Mao's Great Leap Forward, Khmer Rouge atrocities, the massacres of Halabja, Srebrenica, Rwanda, Darfur and many others happened outside the war zone for non-military purposes. That the coalition of the willing did not go to war against the genocidal Hutu regime is not a laudable outcome, yet one that happened over and over again in the last hundred years (Power, 2007). Against the background of recent history the assertion that "it is likely that obviously just wars do not need their barriers lowered" (Asaro, 2008, p. 9) is manifestly and tragically wrong.

Consequently, the threshold for participation in war being too high for human rights-compliant actors can be a morally bad state of affairs, just as war being too easy for states that have a predilection for aggression is a morally bad state of affairs. The former being presently too reluctant to engage in wars of collective defense or in humanitarian interventions is a major problem. This reluctance is, to a large extent, engendered by casualty aversion, towards which the human rights-compliant actors have a natural and understandable tendency. The Interwar Period in Europe offers a well-worn yet still perfect illustration of this phenomenon: the carnage of World War I shows the continent the extremely high cost of contemporary warfare; Britain and France refuse to bear it in Munich; the long-term costs are many times what they would have been had the war started a few years earlier. On the other hand, had WWII never broken out, had Poland been abandoned and the Holocaust allowed to proceed unopposed, the result would have most probably been even worse, though a lower number of interstate wars and orders of magnitude fewer battle deaths would have occurred. Instead the Jews, Roma and Slavs of Europe would perish and get subjugated silently, undefended and unrecognized in their suffering as persons worthy of protective action.

It may be objected that LWA proponents do not advocate moving the threshold for participation in war back to the post-WWI levels, just keeping it at its current level, with war already a relatively low-casualty affair, but still not casualty-free. Surely the casualties inherent in modern warfare between technologically advanced militaries are not severe enough to stop a country from engaging in obviously just and necessary wars? Two points need to be made in response. Firstly, while the absolute number of casualties, or ratio of casualties to population size would most probably be much lower today, given the smaller size of contemporary armies, the casualty rates of present-day combat units going against a peer adversary may be genuinely unbearable, as demonstrated throughout the Russian invasion of Ukraine. Few volunteers are eager to participate in missions threatening double digit casualties every single time, and few military leaders resign themselves to sending their subordinates into environments of such lethality. Hence the push towards the automatization and robotization of frontline combat (Krishnan, 2009, 122−23).

Secondly, while the casualty-to-population ratio is now much lower, so is casualty tolerance (Wilson, 2019). Such increased sensibility is generally a good thing. We would not like to desensitize our fellow citizens to a level where our polities would again be able to sustain hundreds of thousands of casualties on a yearly basis. The consequences of this newfound sensitivity can, however, be catastrophic on some occasions. Bill Clinton reportedly abandoned a flawed but sincerely motivated humanitarian intervention in Somalia after US forces sustained fewer than twenty deaths in the Battle of Mogadishu. He then refused to put boots on the ground in Rwanda and Bosnia based on his experience with the public's reaction to those twenty deaths (Power, 2007, 247–390). As actors usually have few self-interested motives for performing humanitarian interventions, even the prospect of very low casualties can induce catastrophic inaction. This repeated aversion to intervening on the side of genocide victims is a result that should trouble persons committed to universal human rights and humanitarian values.

Another type of war likely to be made significantly easier is collective defense. While collective defense is one of the best ways of keeping peace, especially of shielding smaller states from aggressive behemoths, protecting distant allies can be domestically unpopular, as currently witnessed in the context of the Russian invasion of Ukraine. Allies have incentives to free ride on the sacrifices of others, and it is hard to convince one's own public that the real yet abstract value of honoring an alliance and deterring aggression is

worth the sacrifice, a problem especially acute in democracies. What liberal democracies tend to be relatively generous with is money and resources. If resisting aggression meant contributing mostly the warbots and rear echelon specialists, democracies would be more eager to help allies in need – and defensive coalitions would become more effective in deterrence. Notice that the same logic does not work as well for aggression – collective conquest makes less sense overall.

The simple yardstick of "the fewer wars, the better" will not do for assessing whether the adoption of a given military technology contributes to creating a less (or more) peaceful world – not if we understand peace as genuine freedom from aggression and violence, not as mere absence of battlefield deaths in excess of a thousand. An international stage occupied by vicious, rights-abusing dictatorships alone would not change much if the risk of casualties gets raised or lowered, nor would one filled with human rights-abiding liberal democracies. Nonetheless, the real world is filled with actors decent or malevolent to a varying degree, all capable of inflicting violence and oppression on each other and on their own citizens. Unless imperialist and militaristic yet casualty-averse states outnumber liberal democracies willing to deter or fight oppression, yet not at an ultimate cost of sacrificing their own citizens, then it would seem AWS adoption would encourage just wars more than it would encourage unjust aggression. I am the first to acknowledge that such a prediction is essentially speculative and should be subject to through empirical analysis and treated with much reserve – but so should, at the very least, be the opposite claim.

I have examined LWT, demonstrating how doubtful the very existence of a sizeable enough effect is at this point; I have also shown LWA's normative premise to be flawed if not outright wrong. Following LWA proponents, I tried to asses a general claim about the average behavior of an average nation decades into the future. Yet this is not a task facing actual representatives of a national government who actually will be weighing their nation's interest in adopting AWS against, among other reasons, the LWA. Should LWA influence those who will decide the issue of AWS adoption?

The view from somewhere: perspective of an actual decision maker

So far I followed LWA proponents in adopting the perspective of a humanitarian-minded observer assessing the impact of AWS adoption on the frequency of war from the point of view of humanity as such. Yet even if AWS adoption would indeed be followed by increased frequency of armed conflict, and if this outcome would indeed be bad from the perspective of humanity, no political actor currently represents entire humanity. IGOs and NGOs may try to assume that role, but they will not ultimately decide the issue of AWS adoption – governments of sovereign nations will. And from the point of view of sovereign government representatives, the issue looks different indeed.

It may be in the interest of a particular nation to adopt AWS even if universal adoption would, on balance, cause more harm than good for an average nation. This divergence in interests is particularly likely to be true for nations such as South Korea, Taiwan or Ukraine, threatened by a far more populous and/or less casualty averse power. One may ask whether the governments of these nations should act in the interests of societies they represent, or in the collective interest of humanity as a whole. They would appear to be on the horns of an ethical dilemma.

This, however, is not the case. While the governments of all nations may have a duty to ensure their nation does not needlessly engage in warfare, they may discharge this duty by choosing any set of restraints on unjust warfare that lowers the possibility of this outcome to an acceptable level. Even if eschewing AWS adoption was an effective way to achieve this, they are other ways, some of which are both more effective and ethically superior. Countries electing to use alternative restraints on unjust war and effectively implementing them would not be harming anybody through AWS adoption.

Say X is a robust liberal democracy with strong institutional and socio-cultural restraints on war-making. Decisions to go to war are subject to a high-threshold parliamentary vote that requires consensus among most political parties. Awareness of the evils of unnecessary war is promoted by a competent system of public education and therefore widespread; a number of well-supported NGOs and media outlets provide additional scrutiny of such decisions and keep the public well-informed. It is therefore right to say X has already subjected itself to sufficient restraints against entering unjust wars[14].

It is not possible to argue X is ethically obliged to eschew AWS as adopting AWS would remove a powerful restraint on unjust warmaking, since the existing restraints, as posited, are already sufficient. Those insisting the government of X is still obliged to eschew AWS have to argue that this is because not doing so may directly or indirectly[15] cause other countries lacking sufficient alternative restraints against unjust warmaking to adopt AWS, and thus become more likely to enter unjust wars. But arguing so requires

[14] Another set of restraints may be added to those described to make it even more robust if one remains unconvinced those would suffice.

[15] Directly, because it may force them to do so to retain military parity; indirectly, because it refuses to participate in the creation of a global taboo.

making the government of X morally responsible for unjust actions of other governments. Moreover, it would require the government of X to prioritize this postulated responsibility over the security needs of its own citizens.

Doing so would ignore the fact that some types of restraints on unjust warmaking are morally better than others; indeed, if a nation makes it impossible for itself to go to unjust war, but with the wrong methods or for the wrong reasons, its political system is still morally deficient. Nations should refuse to enter unjust wars because they recognize that it is wrong to do so; their reasons should track moral reality. Unless this is the case, they remain susceptible to unjust warmaking.

Even if actions of other actors influence the removal of remaining restraints, they are not responsible for the moral failure of not installing the fundamental, optimal restraints in the first place. An alcoholic who does not drink because he is too poor to buy liquor or because there is no liquor store in their town should still seek help and strive to develop an internal motivation that tracks the right reasons not to drink in excess. Unless he does it, he is susceptible to lapse once these external restraints are removed. If this follows, the failure is his own. It is not the fault of the owner a newly opened liquor store that he starts to drink again. By the same token, a neighbor adopting AWS is not responsible for a badly constituted country's subsequent unjust warring with the use of AWS.

In short, there can be no moral duty to restrain one's country from warring unjustly by eschewing AWS; there can only be a moral duty to restrain one's country from warring unjustly by the morally best method available, and once this duty is fulfilled, accumulating other restraints cannot be required. Nor can a state be forced to adopt a suboptimal restraint just because its neighbor refuses to adopt optimal one.

One possible objection to this argument is that decisions such as AWS adoption simply should not be taken on a state-by-state basis, but instead left to a body representing, and caring for, the interests of the humanity as such, including future generations. Yet if such representatives were to be gathered, it would be bizarre to let them deliberate only on this single means of restraining aggressive war, rather than on all possible restraints. And if they were free to do the latter, it is preposterous to think they would choose this mechanism of retaining casualty aversion, rather than the more morally proper means of reconstituting international relations and global public awareness so that aggressive war may be avoided through deep commitment to proper moral principles.

Conclusion

The prospect of AWS adoption lowering the threshold for armed conflict is worth serious reflection. To be a basis for action, such as banning AWS, such effect would have to be non-trivial and reasonably well-established. As demonstrated, not only the size off this effect but even its direction – whether average propensity for aggressive warfare would increase or decrease – has not been established by its proponents, and cannot be established just through armchair philosophical reasoning. Casualty aversion that AWS adoption would diminish is only one of major restraints on aggressive warfare, rarely a decisive one. It affects actors most susceptible to aggressive warring – totalitarian and authoritarian regimes – the least. Conversely, the type of actor most clearly affected – industrially and technologically advanced liberal democracies – can be argued to be unduly restrained by casualty aversion, frequently leading to failures in deterring or resisting aggressive war. It is thus at best unclear how lowering casualty aversion for all international actors would affect average propensity for aggressive war. Even if a significant enough negative effect could be established with an appropriate certainty, actors who already restrain themselves from aggressive warring by alternative (and likely morally superior) means could not be required to retain that specific restraint by eschewing AWS.

While observing the effect of AWS adoption on the incidence of armed conflict (if the effect can be observed with appropriate rigor) is warranted, postulating a significant negative effect a priori is not. Such speculations ignore complex and interrelated nature of contemporary restraints on warfare and fail to engage with international landscape on a more granular level. They also have a tendency to ignore local moral complexity by advocating that diverse actors in diametrically different strategic, political, social and economic situations adopt the same sweeping solutions tailored to none of them. AWS skeptics would do better to focus on more plausible and pressing challenges, such as their possible impact on nuclear deterrence or proliferation to rogue actors.

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Data availability I do not analyze or generate any datasets, because my work proceeds within a theoretical approach.

Declarations

Conflict of interest The author declares no competing interests.

Ethical standards compliance Given its theoretical nature, this research did not involve any human or animal subjects.

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