

Killer drones: The 'silver bullet' of democratic warfare?

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Abstract

This article sets out to probe the peculiar nexus between democracy and the military use of unmanned systems. To this end, it draws on a critical, 'antinomic' reading of democratic peace theory. Tying into the theoretical scope of research conducted within the democratic distinctiveness programme that emerged out of the democratic peace debate, this entails fathoming out the ways in which democracies are distinct from other regime types. It includes acknowledging that democracies deal with conflicts aggressively too, rather than naïvely taking their supposed general peacefulness at face value. We demonstrate that the same distinctly democratic set of interests and norms that is conventionally taken to be pivotal for democratic peacefulness yields both peaceful *and* belligerent behavior. That same democracy-specific set of interests and norms is also constitutive of the special appeal unmanned systems hold for democracies. While armed and eventually autonomous systems may thus seem like a 'silver bullet' for democratic decisionmakers today, we argue that, by relying on these systems in an attempt to satisfy the said interests and norms, democracies may end up thwarting them in the long run and render themselves only more war-prone.

Keywords

drones, robots, surveillance, democratic peace theory, democracy

Introduction

Unmanned aerial vehicles (UAVs), commonly known as 'drones', and unmanned systems in general represent perhaps the most important contemporary development in conventional military armaments.¹ These systems offer numerous advantages to the military, especially in relation to dirty, dull, or dangerous tasks (US Department of Defense, 2007: 19). Machines can operate in hazardous environments; they require no minimum hygienic standards; they do not need training; and they can be sent from the factory straight to the frontline, sometimes even with the memory of

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a destroyed predecessor. Given sufficient power supply, they do not tire. And, lastly, the use of unmanned systems in dangerous situations such as forward reconnaissance, bomb disposal, or the suppression of enemy air defenses means that human soldiers can be given the best possible force protection – namely, not being exposed to the enemy in the first place. From a military perspective, it thus seems obvious why the demand for unmanned systems rose tremendously over the last decade – and looks set to continue to do so.²

Today, it is commonly believed that 40 or more countries are developing military unmanned systems (Singer, 2009: 241). Much of the data behind such a claim is hearsay and quite tough to verify. However, the most recent edition of *Military Balance*, published annually by the International Institute for Strategic Studies, can serve as a guidepost and a first handle on numbers. Here, 34 countries are listed as holding either medium- or heavy-sized UAVs (IISS, 2011: 24–6). The list of UAV holders reveals a peculiarity: two-thirds of these countries are democratic states.

While the ‘drone hype’ is commonly said to be driven mainly by the United States and Israel, it seems that democracies in general have been the first to jump on the unmanned bandwagon. Democracy indices – such as Polity IV, on which we draw here – need to be taken with an appropriate grain of salt, yet they can be helpful in systemizing and corroborating this first impression. With Polity IV ranging from 10 (strongly democratic) to –10 (strongly autocratic), 24 of those 34 countries listed in *Military Balance* turn out to have a polity score of 6 or higher – in other words, they can safely be called democratic. So, why are democracies in the driving seat of this development?

Some might point to a fairly obvious answer: because they can be. The financial and technological resources required for pursuing drone warfare are most readily available to wealthy states, the majority of which are democracies. Adhering to the ‘technological imperative’ (for a concise summary, see Reppy, 1990: 102–3), so this theoretical argument goes, they employ these superior resources to build the best technology and arm their militaries with it, simply because it is possible for them to do so. Yet, no country’s defense budget, not even that of the USA, is limitless. Consequently, political decisions about how to allocate resources have to be made, all while maintaining the technological edge. So, for instance, why did the US Army abandon its ‘Comanche’ advanced helicopter project in 2004, thereby swapping a fast and stealthy hi-tech helicopter for what were then technologically inferior, slow, and non-stealthy drones (Fulghum and Wall, 2004)? The simplistic argument according to which technology is the sole driver, while commonplace and not entirely implausible, obviously carries only so far.

We are not the first scholars to raise the question of why democracies are so intrigued by unmanned weapon systems and particularly drones at the moment, but a review of the burgeoning literature on military use of unmanned systems shows that the issue has hitherto only been dealt with cursorily and in passing. There is currently no general, systematic, and theory-driven study seeking to probe the peculiar nexus of democracy and the use of unmanned systems.³ We thus aim to address this lacuna by providing a critical exploration of the reasons why it is democracies that are spearheading the development of military unmanned systems, as well as the consequences of this situation. In this regard, we will not deal with specific procurement and employment practices by specific democratic states in specific cases, but rather try to paint a picture with somewhat broader brush strokes. This is the first goal we are aiming for with this article. In addition, we wish to contribute to the growing body of theoretical literature that takes a skeptical stance towards what is known as ‘democratic peace theory’. The reasoning behind our adoption of the theoretical framework of the democratic peace only to critically question it is that, if we are to understand the peculiar nexus between democracy and unmanned systems, a perspective that retains ‘democracy’ at the center of the analysis is required. By fleshing out the ‘antinomies’ of democratic peace theory

(Müller, 2004), we contribute an intrinsic, first-order critique, one that will be more substantiated than an outright rejection of the entire concept up front.

Our antinomic reading of democratic peace theory ties in with the recent critical turn of the so-called democratic distinctiveness programme that emerged from the democratic peace debate (Geis and Wagner, 2011).⁴ Instead of naïvely taking a supposed democratic peacefulness at face value, this entails further questioning the precise ways in which democracies are distinct from other regime types, as we discuss in detail in this article's second section. Such a theoretical framework enables us to systematically account for the 'dark side' of democratic distinctiveness by identifying the specific *inherent ambivalences* in democracies that are responsible for their *aggressive behavior* – behavior that is out of tune with what the conventional, positive bias of classical democratic peace theory gives reason to expect. More precisely, we argue in the third section that the *same* specific interests and norms that are conventionally taken to be pivotal for democratic peacefulness – the need to reduce costs, the short-term satisfaction of particular 'risk-transfer rules' for avoiding casualties, and the upkeep of a specific set of normative values – constitute the special appeal of unmanned systems to democracies. In turn, we demonstrate in the fourth section that by relying on these systems to satisfy said interests and norms, democracies will end up *thwarting* the latter in the long run – *inter alia* by rendering themselves only *more* war-prone. However, despite its skeptical stance, the article ends on an optimistic note. As we subscribe to the idea that free speech and deliberation are constitutive features of democracies, we believe that critically self-reflecting the mid- and long-term effects of robotic warfare could lead to more responsible behavior in the future.

From democratic peace to the liberal study of international conflict

Until the early 1980s, conventional wisdom in political science held that democracies were not different from states with other regime types when dealing with matters of peace and war. Then, Michael Doyle (1983) found 'proof' that democracies – in contrast to any other group of states, however defined – had virtually not fought each other since at least 1815,⁵ thus starting what has since been termed a "democratic turn" in peace and conflict research' (Geis and Wagner, 2011: 1556). Doyle's 'separate peace' was deemed so robust in regard to different definitions of war and democracy, as well as the various statistical methods applied, that Jack Levy (1988: 662) called it 'as close as anything we have to an empirical law in international relations'.

Much 'democratic peace' research, especially in the theory's early years, has been criticized for its trivial optimism, one that takes democratization to be a panacea for world peace. Equipped with notions of linear causality and an alleged seal of approval from established science, the theory's supposed practical relevance found fertile ground among political elites from the 1990s onwards, beginning with Bill Clinton's doctrine of democratic enlargement and subsequently peaking in the neoconservative verve to spread democracy by force during the George W. Bush administration (as criticized, for example, in Russett, 2005). Yet, more skeptical scholars had long been objecting that the self-congratulatory picture of democracy should be thoroughly questioned and that even the pivotal analytic concept of 'democracy' itself is both value-laden and historically contingent (see, for example, Oren, 1995; Hobson, 2009).

So, while some scholars settled with the empirical finding without giving the theoretical basis much further thought (see the critique by Ray, 1998: 39), others felt inspired to dig deeper. As Anna Geis and Wolfgang Wagner (2011: 1555; see also Hasenclever and Wagner, 2004: 465) point out, 'many of these studies are inspired by Immanuel Kant's famous essay on "Perpetual Peace"', and

they have by now led to a more critical and broader ‘liberal study of international conflict’. Instead of focusing on the interdemocratic peace as such, this ‘democratic distinctiveness programme’ brings together research on such diverse issues as specific democratic compliance with international law (Morrow, 2007; Slaughter, 1995), the special interest and capability of democracies in establishing and maintaining international institutions (Hasenclever and Weiffen, 2006), why democracies tend to win the wars they fight (Reiter and Stam, 2002), and how they fight these wars (Mandel, 2004; Shaw, 2005; Watts, 2008).

One concrete tie-in into this strand of research is the concept of ‘antinomies’ of the democratic peace (Müller, 2004). This approach highlights the ambivalence of democratic behavior, particularly in relation to the empirical observation that democracies tend to keep the peace among themselves while at the same time behaving in a strikingly *belligerent* fashion towards non-democracies.⁶ Focusing on democratic aggressiveness, scholars coined the notion of ‘democratic wars’ (Geis et al., 2006) – that is, wars that are typical for democracies and consistent with specific norms, such as a ‘humanitarian intervention’ in a non-democracy to end human suffering (see also Freedman, 2006/7). In this line of thought, the gap between the ambivalent empirical findings of the democratic peace theory is closed (Geis et al., 2012), yet liberalism’s plain progressivism towards general peacefulness is fundamentally questioned in turn (Rengger, 2006: 133). The antinomy concept helps to expose how classic democratic peace theory systematically turns a blind eye to some unwelcome conclusions deriving from most basic assumptions and empirical observations. More precisely, since, as proposed by Harald Müller (2004: 516n6), an antinomy ‘is understood as a law-like proposition from which a secondary proposition and its very opposite can be deduced’ (see also Müller and Evangelista, 2008: 2), democratic *peace* theory can be said to suffer from an optimistic bias when deducing democratic behavior only *one* way. After all, this simply ignores the potentially wider variety of behavior derivable from the *same* assumptions, in particular the belligerent behavior democracies display towards non-democracies. Consequently, the antinomic approach acknowledges that democracies are distinct but harbor *inherent tendencies* for both non-violent *and* violent behavior, *both* democracy-specific.

From specific institutions and norms to democratic distinctiveness

Why is it plausible to assume that democracies are distinct? With the first preliminary article of his famous tractate *Perpetual Peace*, Immanuel Kant ([1795] 1957: 12–13) provided an essential starting point for research on democratic distinctiveness in the 1980s. Here, he argued that when those who decide about war or peace are obliged to fight and bear the costs,

they would be very cautious in commencing such a poor game, decreeing for themselves all the calamities of war. Among the latter would be: having to fight, having to pay the costs of war from their own resources, having painfully to repair the devastation war leaves behind, and, to fill up the measure of evils, load themselves with a heavy national debt that would embitter peace itself and that can never be liquidated on account of constant wars in the future.

Kant refers to the weighing of both material and immaterial costs. Some scholars focus on the monetary side, arguing that democracies limit military expenditure in peacetime in favor of non-military investments (Müller and Becker, 2008: 105). The fortune of democratic state leaders is said to hinge on the production of enough public good to ensure their re-election, which is why

military spending is less useful to them, creating, in this line of thought, a specifically democratic incentive to limit respective costs during peacetime (Fordham and Walker, 2005: 144). In addition, excessive waste of taxpayers' money is also said to be distinctively constrained by institutional checks such as parliaments, free media, or bureaucracies auditing and evaluating procurement processes (Fordham and Walker, 2005: 142–5). Systematic quantitative studies corroborate the notion that higher degrees of democracy result in lowered defense spending during times of peace (see, for example, Fordham and Walker, 2005; Yildirim and Sezgin, 2005). Now, some nevertheless deem all these theoretically derived and statistically tested claims at best counterintuitive in the light of, to cite the prime example, the history of defense spending in the USA. Yet, our argument here does not require us to definitively establish that democracies *really* engage in less military spending during peacetime. In fact, for the sake of the argument we can assume this for the remainder of the article, because our aim is to question not the validity of this distinctive feature but rather that of an ensuing short-circuited interpretation, the conclusion that has customarily been drawn from it in the democratic peace literature. This warrants some elaboration.

An article by Julide Yildirim and Selami Sezgin (2005: 99) is cited as an example of how statistical results about the effect of democratization on military spending yield dubious conclusions when interpreted solely and uncritically through the prism of a taken-for-granted democratic peace paradigm, culminating as it does in the generalizing conjecture that 'worldwide attempts trying to increase the level of democracy may result in a more peaceful world, reducing military expenditures and hence wars'. A second example article by Benjamin Fordham and Thomas Walker (2005: 141, 154–5) also provides strong empirical support for the 'demilitarizing effect of democracy' in an analysis of 'a wide range of states since 1816', but in their conclusion Fordham and Walker reflect more critically on caveats such as a state's possible turn to an imperialistic foreign policy. To systematically follow this trail further is precisely what our reading of democratic peace theory is about. Antinomically scrutinizing the distinctive democratic inclination to save costs means picking up on Fordham and Walker's merely tentative qualms by arguing systematically that – all things being equal – the *opposite* of Yildirim and Sezgin's conclusion might very well be the case: namely, more aggressive behavior of democracies towards non-democracies. We will elaborate on this further in the third and fourth sections of this article.

We now turn to the second relevant category of costs of war, the non-monetary ones, especially having to fight and risk one's own life and limb. The conventional reading of Kant by authors such as Ernst-Otto Czempiel has been to suggest that the citizen's decision is practically predetermined owing to the potential costs of war being perceived as prohibitively high on all accounts. War would in fact vanish *if only* 'the consent of the citizens is required to decide whether or not war should be declared' (Czempiel, 1995: 9).

However, a careful reading of Kant's statement ('they would be very cautious') suggests nothing but an actual – indeterminate – weighing of pros and cons. Given a genuine choice, it seems the possibility of democracies engaging in wars of aggression is not entirely ruled out – as long as the costs are considered acceptable (Schweller, 1992: 241; Fearon, 1995: 386).

In this regard, Martin Shaw (2005) reveals the importance of the successful application of 'risk-transfer rules' – with minimization of casualties to troops in democracies being the most important of these. In democracies, the possibility of satisfying this rule under both national and international public scrutiny heavily influences the decision for or against a military engagement. Shaw's reasoning fits well with the US example, in which casualty avoidance among military forces has become a mission goal in itself, pointing to the possibility of democracies waging wars of aggression if a 'zero casualty doctrine' can be implemented (see also the case of Israel in Levy, 2011: 79).

One might say that *every* military is interested in low casualty rates in order to ensure that it remains able to fight another day. However, it is plausible to assume that democracies are indeed distinct owing to a particularly low tolerance for casualties for two reasons, one utilitarian and one normative.

The utilitarian argument suggests that decisionmakers in democracies fear losses among their own more than authoritarian leaders because rising numbers of casualties in a conflict will have adverse effects on public support for the military mission (Mueller, 1973; Gartner and Segura, 1998). More precisely, pertinent research suggests that the relevance of casualties for public opinion differs according to the type of conflict and is inversely related to the national interest understood to be at stake. In ‘wars of necessity’ (Freedman, 2006/7) for self-defense and national survival, any democratic population is willing to tolerate high casualties among its own troops. Yet, the tolerance for casualties is comparably lower in so-called wars of choice (Freedman, 2006/7), such as humanitarian missions (Larson, 1996). Democratic publics are thus casualty-phobic insofar as additional casualties create more disapproval if the public perceives them as being unnecessary or in vain (Gelpi et al., 2006). This is of crucial relevance with regard to unmanned systems and the types of wars democracies fight, as we will argue in the third section of this article.

The normative argument relates to the ‘externalization hypothesis’ (Risse-Kappen, 1995: 499–500) of democratic peace theory, which states that shared liberal norms and principles make democracies appreciate one another and keep the peace among themselves. Figuring as the normative foundation of most modern democracies, the founding idea of liberal thinking is that every individual human being is the bearer of innate, inalienable *rights* – for example, the rights to equality before the law, physical integrity, personal freedom, and so on (see, for example, Owen, 1994). This is an ideal-type sketch, but research does in fact support the notion that such shared norms reduce conflict initiations (Peterson and Graham, 2011) and that democratic institutions – or, more precisely, specific democratic features such as party competition – reduce human rights abuses (Bueno de Mesquita et al., 2005). This suggests that, in addition to the utilitarian argument, democracies should by and large be more casualty-averse because they distinctively value the life of human individuals.

But, democratic distinctiveness regarding norms goes beyond casualty aversion. Conventional wisdom holds that the rule of law is an essential feature of modern-type democracies (Helmke and Rosenbluth, 2009). Domestically, democracies generally regard the rule of law and its limits on the use of force as paramount. Violence is regarded as a means of last resort and subject to the test of appropriateness and judicial oversight. Democracies also tend to stay wedded to these accustomed principles in the realm of foreign policymaking (see, for example, Dixon, 1994; Weart, 1998; Slaughter, 1995). They are, for instance, more eager to implement international law by incorporating pertinent rules into their military handbooks (Simmons, 1998: 84). Of course, exceptions to the rule exist. And ‘creating’ the ‘legal’ conditions for waterboarding quickly comes to mind as an example of antinomically engendered processes. But, to not get ahead of ourselves, the important point to hang on to is that research suggests that democracies demonstrate higher levels of compliance with the laws of war once they have committed themselves by treaty ratification (see, for example, Morrow, 2007).

Now, understanding human rights to be universal, democracies by and large respect them in relation to their own military personnel, enemy soldiers, and the adversary’s civilian population. They distinctively subscribe to three crucial notions of the law of armed conflict: discrimination between military and civilian targets, proportionality of violent means applied, and attributable responsibility for actions in war. Again, pointing to examples of heinous misconduct by democracies such as

occurred, for instance, during the Vietnam War seems the quick way to dismiss all this lock, stock, and barrel. However, Stephen Watts (2008) argues that even in Vietnam the USA acted significantly more carefully in relation to the civilian population than the Soviet Union did in Afghanistan under similar conditions. To qualify this: democratic restraint only holds as long as winning and minimizing one's own casualties is assured (Downes, 2006). This normative hierarchy, placing the lives of one's own soldiers over those of the adversary's civilian population, is consistent with findings by other scholars (Mandel, 2004; Shaw, 2005; Geis et al., 2010) and corroborated by insights regarding compliance: when confronted with severe violations of the rules of war by an opponent, democracies tend to succumb to temptation and react in a tit-for-tat fashion (Morrow, 2007). Most importantly, antinomically speaking the desire to enforce and export universal human rights or to militarily uphold international law might even be a distinctively democratic reason to engage in wars of choice with non-democracies in the first place. So, all in all, during conflicts with non-democracies liberal norms remain present – but they can then engender behaviors and actions that are unexpected from the vantage point of classic democratic peace theory, thus pointing to the antinomic character of democratic distinctiveness.

To sum up our argument so far, assuming democracies to be distinctively set up in terms of institutions and their subscription to specific liberal norms and values seems generally valid. Yet, this does *not* necessarily render them immune to aggressive behavior – and unmanned systems play a very problematic role in this regard.

From liberal weapon of choice to silver bullet

The types of wars fought by democracies have changed over the last decades. In contemporary asymmetric conflicts and wars of choice, clear criteria for progress or 'victory' are hard to establish and mission objectives may change significantly over time. Accordingly, decisionmakers face the possibility of a sudden shift in the public's mood when casualties rise without palpable progress. This might even lead into a 'casualty trap' (Schörnig, 2009) – a stalemate situation where military operations are ceased to avoid additional casualties, thereby forestalling mission accomplishment.

Bearing the arguments set out in this article's second section in mind, we can discern three risk-transfer paths that are currently followed by democratic decisionmakers in response to the looming casualty trap. Relying on private military companies (PMCs) rather than regular service personnel to circumvent public scrutiny is one (Avant and Sigelman, 2010: 259; see also Schooner, 2008), while relying on a combination of air power and locals to limit the exposure of one's own troops is another way of dealing with democracy-specific casualty-sensitivity. However, both have produced mixed results; the preferred solution is the third one – namely, the replacement of 'labor' (soldiers) by 'capital' (technology). Advanced cruise missiles and potent conventional warheads might do (Sapolsky and Shapiro, 1996). Yet, those come into conflict with liberal norms and the law of armed conflict. Excessive firepower is actually a disservice. In order to minimize civilian casualties, *less* firepower has to be applied, but in a precise fashion, thereby affecting the militarily relevant target only (Shaw, 2005: 87–8) and 'influencing', not annihilating, the opponent (Mandel, 2004: 71).

Clearly, then, the liberal weapon of choice should make it possible to minimize civilian casualties and heed the laws of armed conflict while avoiding friendly casualties by substituting capital for labor. Yet, this seems irreconcilable with limiting expenditures. It now begins to become clear why unmanned-systems technology seems so attractive.

First, unmanned systems are considered cheaper than their inhabited counterparts. Hence, they cater to the distinct democratic interest in limiting military expenditure during peacetime. Numerous reasons are usually pointed out for this, all seemingly valid at first sight. Obviously, there is no need for expensive life-support systems. Also, training a drone pilot is cheaper than training a fighter jock.⁷ Their salaries are lower, too. In addition, maintenance of unmanned systems is also said to be cheaper, as their airframes are not as complex as those of manned planes.

Second, and most importantly, unmanned systems offer themselves in the light of democracies' distinct casualty aversion because they are said to protect troops not merely by distancing but by removing them from the battlefield.⁸ With 'friendlies' at less or no risk at all, decisionmakers have less to fear in terms of a public-opinion backlash. 'Reaper' drones, for example, can simply loiter over a potential target without risking the life of a human pilot. They can also risk a closer approach for better situational awareness in the event of doubt. Explosive-ordnance-disposal systems render the issue even more obvious – no wonder their use has risen exponentially over the last few years and that they are being 'fetishized' as 'life-savers' (Roderick, 2010).

Third, at first glance unmanned systems seemingly also allow for heeding the norms and laws of war. In combination with its precision-guided munitions, the real-time intelligence, surveillance and reconnaissance (ISR) from the Reaper's unblinking eyes – supposedly – allows for striking with enough precision to minimize or even avoid civilian casualties and unnecessary damage. By replacing firepower with precision and the capability to wait hours for the optimal moment to engage, so the argument goes, the least force necessary in accordance with the law of armed conflict's norms of discrimination and proportionality can be applied. Not having to worry about a pilot's life is an advantage again: during the air war over former Yugoslavia, NATO fighters had to maintain a minimum height to avoid Serbian anti-aircraft fire, thereby reducing the accuracy of bombings. As drones can take bigger risks, flying lower will increase accuracy.

Unmanned systems seem a perfect fit for democratic warfare through their appeal to the utilitarian and normative characteristics of democracies. Because they are ascribed the unique capability of satisfying the rule of 'risk-transfer war', respecting the laws of armed conflict *and* limiting expenditure at the same time, they are even more than the weapon of choice: they seemingly provide a 'silver bullet' for democratic decisionmakers. Yet, with current killer drones as only a first stepping stone in what Robert Mandel (2004) has termed 'the quest for bloodless war', democracies currently fuel two trends.

The first of these is weaponization. UAVs, for example, started out as single-purpose observation drones, but have since become both communication relays and multi-sensor ISR and weapon platforms. Since the sensor (formerly the UAV) and the shooter (formerly a manned airplane, an artillery unit, etc.) no longer have to be coordinated but are now two-in-one, unmanned combat air vehicles (UCAVs) reduce the sensor-to-shooter gap from hours to minutes or seconds, increasing efficiency and thus providing an extremely valuable capability from a military point of view. Only a limited number of countries currently operate weaponized systems. However, the trend is already well underway, and there is little to no opposition to it. New, small-yield missiles will make weaponized UAVs appear even more suitable for 'precision warfare' in the future.

The second trend is autonomy – that is, 'the capacity to operate in the real-world environment without any form of external control', including, eventually, independent intelligent decisionmaking (Lin et al., 2008: 105; see also Sparrow, 2007: 65–6). Starting out as mere remote-controlled devices, modern UAVs are capable of performing a number of tasks on their own for extended periods of time. Following a preprogrammed route is routine. Even complex tasks like take-off, landing, or responding to emergencies like damage or even partial wing loss are safely handled.

Consequently, UAV operators are changing their role from ‘pilots’ in-the-loop to mere supervisors on-the-loop, splitting their attention between several airborne drones. And, even though current unmanned systems lack strong artificial intelligence, there is an unfaltering trend towards greater autonomy. Some fully autonomous weapon systems already exist, such as automatic close-in weapon systems for terminal defense against missiles or artillery shells (like the US ‘Phalanx’) and fixed border sentries in South Korea and Israel (Lin et al., 2008: 13–14, 18–19; Marchant et al., 2011: 276–7). More are likely to follow, as we will argue below.

To sum up our argument so far, killer drones seemingly lend themselves as the silver bullet of democratic warfare, explaining the distinct democratic eagerness to employ them. Yet, we are going to claim that many of the characteristics ascribed to drones are not holding up under closer scrutiny. More importantly, in the long run democracies may be disregarding numerous problematic normative consequences while striving for more, weaponized, and eventually autonomous systems.

From silver bullet to boomerang

In general, proponents of unmanned systems and robots expect them to reduce human suffering and death in war in the short run. As Singer (2009: 431) points out, some might even hope that robots will ‘finally end our species’ bent toward war’ in the long run, although Singer himself is sceptical of this claim. Indeed, critics deem this long-term hope utopian and point to a history of similar, dashed hopes following the invention of machine guns, dynamite or nuclear weapons. Critics are also more cautious regarding the short-term benefits and suspect them to be Janus-faced at best and possibly outweighed later on. The rapidly growing body of literature on the ethical, legal, political, and military problems of unmanned systems reflects this general divide.⁹

Rather than repeating the already long list of issues under debate or merely adding more bits and pieces to it, this article contributes a substantiated and systematic critical perspective. By drawing on the existing literature with the two trends of weaponization and autonomization in mind, we critically examine unmanned systems in the light of their long-term compatibility with the utilitarian and normative democracy-specific reasons we established above as being crucial for using them in the first place. These entail cost reduction, casualty avoidance, and the heeding of legal norms and liberal values. As it turns out, the silver bullet harbors the danger of coming back as a boomerang.

Costs

In terms of material costs, the first problem to consider is proliferating technology. Like many modern military applications today, unmanned systems have been made possible through the ‘spin in’ of civilian technology into military hardware (Sparrow, 2009: 28; see also Oudes and Zwijnenburg, 2011: 20–1). For example, basic drone technology – that is, airframes, propulsion, telemetry, control software, in short everything but sophisticated military components such as sensors, weaponry, etc. – can be borrowed from the civilian sphere. The downside, of course, is that drone technology is comparably easy to obtain and widespread (accordingly, even non-state entities such as Hamas supposedly use drones, as do a number of PMCs; see Krishnan, 2011: 62; Singer, 2011: 79). In addition to their distinctive interest in unmanned systems, democratic states possess a comparative advantage in terms of research and development (R&D), since they can rely on competitive civilian markets to bring up innovative solutions, generating a broader range of

technological choice for both consumers and the military (Müller and Becker, 2008: 103). However, it is easier for authoritarian states to channel massive resources into refining specific systems once the basic designs have been re-engineered, as the Cold War experience suggests (see, for example, Evangelista, 1988: 22–49). China, for instance, based its first handful of UAV concepts on copies of existing designs, and shortly afterwards, as of 2010, could already display around 25 different UAV models, including weaponized ones, at arms shows (Minnick, 2010). So, democratic states spearhead innovation by investing significant resources in R&D, but ‘in both technology and war ... there is no such thing as a permanent first mover advantage’ (Singer, 2011: 79). In trying to quickly reap the alleged benefits of using drones and in order to enhance force protection for currently deployed troops, NATO states have fielded equipment that – by former standards – was not sufficiently mature. As a result, many systems have been lost owing to malfunction (the US drone that crashed in Iran in 2011 is a case in point), increasing the risk of unrecovered wrecks fueling a technological transfer and drone technology being sold on the international black market. So, while innovators bear significantly higher costs, followers can adopt a pick-and-choose approach, invest in (copies of) proven concepts, rely on technology transfer, or substitute individual features with cheaper civilian technology. The problem of proliferation is hence exacerbated by the fact that the comparably *costly* efforts by democracies to ‘keep the edge’ are paving the way for aspirants who can simply trail the development with indirect help (Von Kospoth, 2009).

So far, the assessment suggests that democratic efforts to reduce the monetary costs are doomed to failure owing to the dynamic interaction of innovation and replication. Irony is added by the fact that while drones are favored by democracies because they are commonly considered cheaper for a number of seemingly plausible reasons that we laid out earlier, the verdict on this promise is not actually in yet. For example, most US Air Force operating costs, including those related to drones, are either unknown or misreported (Wheeler, 2011), and a ‘single Predator or Reaper requires as many as 170 personnel to launch, command, recover and repair, plus handle the imagery it gathers’, as David Axe (2011) notes. According to Axe, the Pentagon learned that, counterintuitively, “unmanned” aircraft actually require lots of manpower’, and manpower is, after all, a major driver of costs.

Casualties

Unmanned systems are understood to minimize casualties among one’s own troops. According to their proponents, this is particularly helpful in asymmetric conflicts between states and non-state actors. However, the use of unmanned systems, particularly weaponized ones, may also aggravate the downside of such conflict settings. Operating them abroad may invite guerilla warfare or even terrorist attacks as a response to their overwhelming conventional superiority. Paul W. Kahn (2002: 6) concludes that ‘the asymmetrical capacities of Western – and particularly U.S. forces – themselves create the conditions for increasing use of terrorism’. Given that democratic states tend to value the lives of their civilians even more highly than those of their soldiers (Mandel, 2004: 11), attempts to reduce casualties on the battlefield abroad might backfire. We will return to this train of thought in the next subsection.

Proponents of precision drone strikes also hope that the constant threat of ‘bolt from the blue’ attacks will frustrate opponents into surrender, with the civilian population remaining unharmed at the same time. Yet, the drone strikes in the Afghan–Pakistan border region are not corroborating such a view. Estimates of the numbers of civilian casualties, even while differing wildly (Rogers, 2010: 13–15; see also Ahmad, 2011; Woods, 2011), suggest that the hastily fielded technology is

less discriminate and proportionate than was hoped. Against this background, some critics ask whether relying on technological supremacy and drone attacks is helpful in these asymmetric engagements. It might prove counterproductive by creating a 'siege mentality', with 'public anger' ultimately solidifying the power of the extremists, thus protracting the conflict rather than bringing it to a swifter and less bloody end (Kilcullen and McDonald Exum, 2009: 19–20; see also Sullins, 2011: 164–5; Oudes and Zwijnenburg, 2011).¹⁰

A more general argument in the debate over the rise of drones and military robotics is that their sheer existence lowers the threshold for military engagement for democracies. As argued above, the political risk of casualties provides a major restraint to democratic leaders in their decision to commit troops for so-called wars of choice. But, the more technology allows for removing soldiers from the battlefield, lifting the Clausewitzian 'fog of war' and creating a general asymmetric advantage, the less likely losses among one's own troops become and the lower the threshold to engage with military means. This already applies to unarmed UAVs, as they provide troops with instant and risk-free high-quality intelligence, surveillance, and reconnaissance. Now, to avoid a misunderstanding: States are of course obliged to provide their troops with the best protection available. However, implementing this option also leads to the antinomic effect of political decisionmakers supporting military missions they would not have supported under different, more costly circumstances. The growing numbers of weaponized drones and robots only make this slope more slippery. The Obama administration's argument for not having to ask the Congress to authorize the Libya campaign under the War Powers Act is a case in point. White House legal counsels argued that the military engagement was limited, conducted without the involvement of US ground forces, and thus free of any risk of friendly casualties (Savage and Landler, 2011; Saletan, 2011).¹¹

Finally, and recalling the problem of proliferation, if both major and regional powers continue to build up capacities, global and regional robot arms races seem a likely consequence. A whole body of arms control literature raises the serious conjecture that accelerating arms races will have a destabilizing effect on state relations and increase the risk of military conflict – with, again, more rather than fewer casualties looming.

Laws and norms

As argued in the second section of this article, democracies by and large have a special inclination towards heeding the norms and laws of armed conflict. Now, according to Paul Kahn, a soldier's right to kill his or her opponents depends on the condition of mutual risk. In this line of thought, the quest for bloodless war presents a 'deep challenge' to the *morality* of warfare as such (Kahn, 2002: 3). Snipers during World Wars I and II, for example, tended to be executed on the spot for violating this condition of mutual risk. Snipers in a war zone risk getting caught. Soldiers piloting weaponized drones from the other side of the globe do not. This riskless setup is not only in stark contrast to military notions of honor and valor (the US Air Force, for instance, wonders what a drone pilot could possibly be awarded a medal for). Rather, one might even conclude that answering this development with improvised explosive devices and suicide bombings – both sometimes regarded as cowardly ways of fighting – is only a consequent reaction to the sheer impossibility of a 'fair' fight.

Weaponized drones raise tricky *legal* issues as well, for example with respect to limiting the use of force to distinct combat zones in which – and *only* in which – the law of armed conflict would permit the killing of enemies (O'Connell, 2010). And, to hark back to the flip side – namely, the aforementioned aspect of inviting attacks against the 'homeland': Is the off-duty drone pilot (in civilian clothing) on route to her house a legitimate target?

More generally speaking, what are the consequences of the ‘drone stare’ distancing soldiers from the battlefield physically and emotionally, thus quite literally ‘dehumanizing’ the conduct of combat (Wall and Monahan, 2011; see also Oudes and Zwijnenburg, 2011: 21–3)?

Kahn (2002: 4) concludes that riskless warfare should not even be regarded as war but rather as ‘police enforcement’ – with much stricter rules and regulations than the law of armed conflict applying. Yet, it is unclear whether proponents of armed unmanned systems are prepared to accept this or whether they would rather stick to targeted killings executed by drones and cubicle warriors (for a critical discussion, see United Nations, 2010: 24–5).

Considering in more detail, lastly, the ongoing trend towards greater autonomy in mobile weaponized systems, it becomes clear that autonomy begets autonomy. Processes and decisions in automated war will become so swift that residual human interference means an unacceptable military disadvantage. With humans moving from in-the-loop to on-the-loop today and owing to the ever-increasing pace of the decisionmaking process out-of-the-loop, the incentive to procure and field more and more autonomous armed systems will be overwhelming, making it only a matter of time before autonomous weapon systems – armed robots – arrive on the battlefield. Their key characteristic is that they will be making decisions about life and death as they autonomously decide on what or whom to engage. This raises a whole new set of ethical and legal questions, in particular regarding fundamental rules of discrimination, proportionality, and responsibility.

For one thing, computer and artificial intelligence experts disagree over whether robots could ever discriminate sufficiently between combatants and non-combatants. Proponents argue that autonomous robots in the not-so-distant future, implanted with an ‘ethical governor’, might even be able to act in a more ‘humane’ fashion than human soldiers in specific battlefield scenarios (Arkin, 2009; Canning, 2009; Marchant et al., 2011: 280; for a critical perspective, see Wallach and Allen, 2009). ‘Literally selfless robots who do not prioritize their own continued existence over obeying their ethical programming’ (Lin et al., 2008: 52), with a capability for speedy judgment unimpaired by stress, fatigue, or limited cognitive abilities, would enhance compliance with the law of armed conflict, thereby reducing or eliminating the likelihood of massacres and atrocities. Critics reply that law is by definition subject to debate and controversy, and therefore virtually impossible to put into hard software code (Sharkey, 2008). Defining a ‘civilian’ is already a huge task, especially in the context of irregular warfare. Reliably distinguishing a civilian in the haste of battle is an even bigger challenge (Marchant et al., 2011: 282–3). Acquiring the required tacit knowledge, let alone a gut feeling, is something currently imaginable robots will simply not be capable of.

Similar questions arise for the rule of proportionality. Human soldiers are in a constant gray area when weighing military ends and means and endangering civilians or civilian infrastructure to comply with international law. It seems impossible to put this fuzziness into binary code (Sharkey, 2009; 2011: 45–6; Sparrow, 2011: 99; Asaro, 2011: 116–7). Proponents of robotic warfare certainly have a point when arguing that in the course of history humans have made myriads of errors, misjudgments, or conscious decisions leading to senseless loss of innocent lives, and that robots, on the whole, should be judged in the light of that history rather than against theoretical standards (Arkin, 2009). This, however, raises the adjoining question of responsibility.

A human acting against the law of armed conflict can principally be held responsible for his or her actions, either by a court martial or by civilian authorities. Opponents of robot warfare therefore ask: ‘Who is to be held responsible for the lethal mishaps of a robot?’ (Sharkey, 2008: 88). Robert Sparrow (2007: 67) argues ‘that it is a fundamental condition of fighting a just war that someone may be held [morally and legally] responsible for the death of enemies killed in it’.

Since robots cannot fulfill this condition, fielding them in war is unethical, he concludes. Others (Lin et al., 2008: 64–6, 73–4) retort that a ‘slave morality’ programming circumvents this problem by reducing robots to mere instruments, with the commanding officer as the sole responsible authority. But, how can a military robot be autonomous and enslaved at the same time? As it is the very essence of autonomy to (learn and) make individual decisions in contrast to preprogrammed ones, a weaponized autonomous robot may act in ways unforeseeable to its designer or military commander. In fact, this superior ‘warfighting creativity’ is the idea behind constructing an autonomous military robot in the first place. The problem thus persists, because prosecuting either designer or officer would then be unjust, while penalizing the robot would be meaningless (Sparrow, 2007: 69–73) – leaving a fundamental challenge for international law.

Conclusion

In this article, we explored the peculiar nexus of democracy and the use of unmanned weapons systems in a systematic and theory-driven fashion. By critically refracting democratic peace theory through the prism of the democratic distinctiveness programme, we demonstrated that an anti-nomic reading of democratic peace is capable of yielding deeper insights into the procurement decisions of democratic states as well as the consequences of the currently ensuing drone hype.

Stating that democracies are characterized by a set of distinctive interests and norms, we argued that this setup causes killer drones and armed robots to appear as a silver bullet for political and military decisionmakers. These systems are seemingly cheaper and supposedly help states to heed the provisions of the law of armed conflict. They are considered especially suitable for the casualty-averse risk-transfer war that democracies prefer. However, we further argued that this supposed silver bullet might well come back as a boomerang. By fielding more weaponized and autonomous systems, in the long run democracies will not only be burdened with the mounting costs of an arms race but will also be rendered more war-prone (in relation to non-democracies), all while employing weapons that are at best dubious from the perspective of morality and the laws of armed conflict.

Unmanned systems are not a silver bullet. But, they are not *necessarily* a condemnable weapon of evil either. They *can* unarguably protect humans in various ways, they *might* eventually turn out to be cheaper in some respects, and they do not violate international law *per se*. Nevertheless, before democracies rush on, more deliberation on the problematic consequences pointed to in this article is needed. And here we believe democracies to be distinct as well. Even if democratic decisionmakers focus on the short-term benefits of robotic weapons, the political arena is open, and our article suggests that nothing is overdetermined. In the light of democracies’ dark side, it might thus be up to nongovernmental organizations and civil society to recognize the need for a broad, sober, and informed discussion on the pros and cons of unmanned systems – including debate on the option of arms control to curb detrimental effects on civilians and peace at large.¹² In short, it is high time for democracies to bite the (silver) bullet and face the implications of their obsession with killer drones.

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Notes

- 1 In the past, pilotless aircraft used for target practice were sometimes called 'drones'. Today, as in this article, the term 'drone' is used as shorthand for tele-operated 'unmanned aerial vehicles'. Some drones are already capable of executing certain tasks autonomously. Nevertheless, we follow Lin et al. (2008: 4, 100–5) in reserving the terms 'robot' or 'robotic (weapon) system' for *at least* semi- and especially fully-autonomous systems. More generally, we use the terms 'unmanned system' or 'unmanned weapon system'.
- 2 To give but one example, the current 'Aircraft Procurement Plan' of the US Department of Defense plans for a slight decrease of the total aviation force until 2021. Yet, the number of aircraft in the unmanned-system category 'will more than *triple*' in the same period (US Department of Defense, 2011: 14, emphasis added).
- 3 Schörnig (2010) contains elements of such an approach, albeit in an earlier and less systematic take on the issue.
- 4 The notion 'democratic distinctiveness programme' goes back to John Owen (2004).
- 5 Earlier work on the democratic peace by Babst (1972) had not been noted by most scholars. In addition, Small and Singer (1976) had found no statistical proof for Babst's claim.
- 6 There has been a 'monadic revival' in connection with this, however, arguing that democracies are more peaceful *on average* when compared with similar autocracies (Russett and Oneal, 2001; MacMillan, 2003).
- 7 We owe this point to an anonymous reviewer.
- 8 It is worth noting in this respect, however, that accidental killings of US forces by US drones in 'friendly fire' incidents are not unheard of.
- 9 For a short but comprehensive overview of issues, see Lin et al. (2008). Exemplarily see also the books by Arkin (2009) and Wallach and Allen (2009), as well as the contributions by Singer (2010), Lin (2010), Arkin (2010), Strawser (2010) and Sharkey (2010) in the special issue of the *Journal of Military Ethics* on ethics and emerging military technologies (Lucas, 2010). Most recently, see Lin et al. (2012), Marchant et al. (2011), and Oudes and Zwijnenburg (2011). For in-depth discussions, see the interviews in Dabringer (2011).
- 10 The military's general fondness for drones notwithstanding, this critique even left a mark in the Afghanistan war for a short time, when General Stanley McChrystal curbed the number of drone strikes to reduce civilian casualties – directives that were largely revoked by his successor General David Petraeus.
- 11 A possible 'upside' to a lower threshold to war comes to mind – namely, meeting the international community's 'responsibility to protect' via unarmed systems – though this is a discussion we cannot go into here. Suffice it to say that the option to wage war at less cost and without risk lends itself to more democratic aggression towards non-democracies in general.
- 12 See, for example, the website of the International Committee for Robot Arms Control (ICRAC) at <http://www.icrac.net/> (accessed 18 July 2012).

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