**Drones, Risk, and Moral Injury**

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**Abstract**

This article assesses the ethical significance of drone violence by focusing on the experience of drone operators as moral agents. In recent debates over the use of armed drones, ethical judgments have tended to be informed by the Just War principles that traditionally govern the conduct of war. However, Just War thinking is not the only way to think morally about the killing that drone operators do. Drone violence could also be assessed by reference to the notion that killing a human being can cause ‘moral injury’ to the killer because it betrays his or her personal standards of right conduct. Killing that is deemed permissible by others (by reference to Just War principles) can be judged further and differently by killers themselves, and a drone operator can make this judgement in the unprecedented circumstance of remote killing witnessed in real-time via a powerful video-camera mounted on the aircraft. Although it is sometimes claimed that physically-distant drone operators are as morally disengaged and as immune to risk as the players of violent video-games, evidence to the contrary is emerging. Accordingly, the purpose of this article is to illuminate the situation of drone operators who might actually be highly-engaged morally and to explore reasons why they might experience moral injury. If the risk of moral injury is real, it undermines the risk-avoidance rationale for sending drones rather than troops to dangerous places, and it could serve as an additional ethical basis for restraining drone violence.

**Key words:** drones, ethics, killing, moral injury, risk, war

I really have no fear. It’s more like I’ve had a soul-crushing experience. An experience that I thought I’d never have. I was never prepared to take a life.

Brandon Bryant, retired US Air Force drone sensor operator (Power 2013)

**Introduction**

Why might it feel wrong to use a remote-controlled aircraft to observe and then kill a person in a faraway place? Since late 2001 the US Government’s use of uninhabited aerial vehicles (UAVs or ‘drones’) armed with missiles has resulted in thousands of deaths (Serle and Purkiss 2017). This novel mode of killing continues to excite public attention, and scholars’ ethical concerns about drone violence tend to focus upon victimhood that arises at the receiving-end of a drone strike. These concerns include, for example, whether the foreign countries in which drone strikes occur are the objects of unjust aggression, and whether the degree of associated harm to civilians is unjustly excessive (e.g. Killmister 2008; Strawser 2010; Brunstetter and Braun 2011; Sauer and Schörnig 2012; Kaag and Kreps 2014; Schulzke 2017). There has been relatively little consideration of drone violence as an ethical challenge, arising at the delivery-end of a strike, from the perspective of those individuals who directly perpetrate it. This article therefore sets out to illuminate the situation of drone operators who, despite experiencing no physical risk in the course of killing, are potential victims of their own remote-control violence. That victimhood could include the ‘moral injury’ caused by a drone operator’s judgment that he or she has betrayed a deep-seated belief about how a good person should behave. The idea of moral injury is ethically interesting because it presents an alternative to the Just War thinking that many scholars have hitherto applied when assessing drone violence. From a policy perspective, moreover, the potential for moral injury to occur is significant because it goes to the heart of why the use of armed drones is often preferred over other forms of violence: to spare national personnel from exposure to risk.

Just War theory—developed over centuries by theologians, philosopher and lawyers—is today the dominant mode of thinking morally about political violence (Walzer 2006; Corey and Charles 2012). It poses important questions about the justice of resorting to force (*jus ad bellum*) and of its actual application (*jus in bello*). However, for the individual who personally and directly wields political violence, traditional notions of a Just War do not exclude the possibility of judging violence in another way. In practice, instances of killing that are *deemed* permissible by others (by reference to *jus in bello* principles, for example) can be judged further by killers themselves in terms of whether killing *feels* morally right. Drone operators in particular are able to make this judgement in the unprecedented circumstance of remote killing witnessed in real-time via a powerful video-camera mounted on the aircraft. From as far away as the other side of the world, drone operators can immediately see the life-extinguishing effects of their own violence. This means that, while physically remote, a drone operator is nevertheless visually aware of the circumstances surrounding a missile strike. Although it is sometimes claimed that long distance makes the operators of armed drones as morally disengaged and as immune to risk as the players of violent video-games, evidence to the contrary is emerging. Accordingly, this article explores reasons why drone operators who are actually highly-engaged morally might experience the non-physical risk of moral injury. The aim is to highlight (rather than measure) this risk and to suggest that it could serve as an additional ethical rationale for restraining drone violence in the future.

At present, armed drones continue to be valued and desired by some governments as an effective platform for the use of force. The idea of remote-control, risk-free engagement in violence continues to be highly attractive to political leaders who are mindful of their citizens’ aversion to casualties among national personnel deployed to dangerous places (see Schmitt 2017). In the United States especially, the practice of carrying out drone strikes for counterterrorism purposes attracts high levels of public support (Pew 2015). This support creates political space for this practice to grow in scale and intensity, subject to the operational condition that a drone-using government is able to maintain air superiority in a given territory. The number of US military drones has been projected to increase by more than a third over the period 2010-2020 (CBO 2011, vii), and other countries are getting ready to become (more) involved in remote-control killing (Ackerman 2016; Cole 2016). As more governments seek to establish or expand their ability to conduct lethal drone operations for military or counterterrorism purposes, the demand for drone aircraft is increasing, and so too is the demand for drone operators. However, an unwillingness to become or remain a drone operator limits the amount of drone violence that a government can bring to bear. Already, in the United States, a degree of unwillingness is being attributed to the stress and fatigue associated with working long shifts (Bumiller 2011; Schogol 2015), resulting in a chronic shortage of personnel to operate armed drones (Majumdar 2015). Another possible factor contributing to this, I argue, is the unattractiveness of killing under peculiar circumstances that expose drone operators to the risk of moral injury.

In exploring this proposition, a useful starting point is to consider why the use of armed drones may be justified or condemned from a *jus in bello* perspective. Moving beyond Just War thinking, this article then discusses the meaning and causes of moral injury as it potentially arises among soldiers in traditional military contexts. Finally, the article suggests three reasons why drone operators in particular could feel reluctant to kill and become victims of moral injury if they do kill. These reasons relate to the absence of physical risk to drone operators, their constant and rapid transition between worlds of violence and peace, and the potential for a drone aircraft’s powerful video-camera to restore a targeted individual’s humanity.

**The just conduct of drone violence**

The US Government has used missile-armed drones, controlled from bases inside the United States, to target enemies in Afghanistan, Iraq, Libya, Pakistan, Somalia, Syria and Yemen. Broadly speaking, drone violence is used in two ways. In places where the United States engages openly in armed conflict, the US military employs armed drones to provide close air support for friendly troops conducting ground-based combat missions. In other places, away from what would traditionally be perceived as a conflict zone, the Central Intelligence Agency uses armed drones for the targeted killing of individuals identified as terrorists. The broad ethical question of *why* conflicts involving drones, or campaigns of drone strikes, should (not) be pursued in the first place is beyond the scope of this article. Instead, as we move to consider the morality of drone violence from a drone operator’s perspective, the focus is on *how* that violence is conducted. Accordingly, the Just War tradition’s *jus in bello* principles of discrimination and proportionality offer a suitable starting point. These principles establish the moral requirements that violence used in war should, respectively: discriminate between combatants and civilians; and be anticipated to generate a degree of harm that is proportional to the expected value of achieving a legitimate military objective. As a matter of *jus in bello*, then, if a given drone strike results in one or more civilian deaths, this does not by itself mean it is unjust. Rather, the ethical issue according to Just War thinking is whether drone operators deliberately target civilians and/or cause a disproportionate (excessive) degree of harm when conducting drone violence.

For present purposes, the term ‘drone operator’ refers either to the sensor operator who controls the powerful video-camera mounted on a drone’s fuselage, or to the pilot (seated adjacent) who controls the flight of the aircraft. When carrying out a drone strike, the sensor operator focuses the camera and aims the targeting laser, the pilot pulls the trigger that releases a missile from the aircraft, and the sensor operator then maintains aim as the missile descends. To date, no evidence has emerged of wilful targeting of civilians (in violation of the principle of discrimination) by US drone operators, although armed drones have reportedly been used indiscriminately by Islamic State fighters in Iraq (Warrick 2017). Regarding the US Government’s use of armed drones, one perspective is that such violence is conducted justly in the sense that drone technology enables a high degree of adherence to *jus in bello* principles. Arguably, drones afford a moral advantage associated with their ability to hover undetected over an area for long periods of time while relaying video imagery, via satellite, back to base. In this way, and in the context of deciding when or whether to release a missile, drone operators can obtain a clear picture of what is happening in that area. If the situation suddenly changes (for example, a young child wanders into the scene), a planned strike can quickly be aborted, delayed or redirected. This arrangement appears thus to provide a strong basis for applying force in a discriminate manner to persons readily identifiable as either combatants (who may be targeted) or civilians (who may not). The apparent ethical benefit is that a drone operator with more opportunity for observation ought generally to be better able to wield violence discriminately than is the on-board pilot of a fast-moving aircraft.

Corresponding to this view of the justness of drone violence is the image of a drone operator who makes ‘measured, calm, well-reasoned decisions’, and who takes great care ‘choosing their moment to attack in order to minimize collateral damage’ (Williams 2015, 97). It is an image of clarity and control that stands in contrast to one of fog and confusion on traditional battlefields. There, many atrocities have historically been committed when soldiers’ minds are ‘clouded with fear, anger or vengefulness’ (Royakkers and van Est 2010, 289). Thus, as Marcus Schulzke (2016, 93) has argued, there may be an advantage in freeing remote drone operators from the need to act in self-defence: ‘they can be safely subjected to far more demanding rules of engagement’ than can on-the-ground soldiers who might ‘mistakenly attack imagined threats or attack real threats in ways that endanger civilians’. The supposition here is that physical distancing and video-informed decision-making are factors that bring about an ethically superior mode of warfare. An alternative perspective, though, is that these very conditions might actually facilitate violence that is less discriminate and proportionate than violence wielded by an at-risk soldier. That is, because drone operators are physically disengaged and therefore also morally disengaged from the killing process, they are less likely to act carefully and humanely. Experiencing only ‘virtual’ war (Holmqvist 2013, 541), and seized by ‘a playstation mentality to killing’ (Alston 2010, 25), drone operators are instead regarded as conditioned to conduct drone violence recklessly. The concern here seems to be that drone operators, whose wielding and witnessing of violence is mediated through a computer screen, might come to think they are merely playing a video-game. In seeing on-screen humanoid silhouettes (rather than human beings in the flesh), drone operators might lose their sense of the moral seriousness of killing. And, without a proper appreciation of the actuality and value of another human life, drone operators might be less capable of acting justly when placed in a position to extinguish that life.

This ‘video-game problem’ thesis, as advanced by various authors, is essentially one that connects physical distancing in war—and the screen-mediated perception of war—to a deficit of ethical restraint on the part of warriors (e.g. Royakkers and van Est 2010; Sluka 2013, 94; Calhoun 2015). Distance is thought to produce moral disengagement, whereby the perpetrators of remote violence become desensitised, the victims become dehumanized, and killing thus becomes too easy and too frequent. One claim, for example, is that ‘cubicle warriors’ are potentially ‘too relaxed, too unaffected by killing’, and that this might make them ‘do things that they would never do if they were there in person on the battlefield’ (Royakkers and van Est 2010, 292). Another claim is that drones are ‘the epitome of numbed technological violence’ (Lifton 2013, 15). And yet such claims tend not to accord with drone operators’ own accounts of drone violence. Although very few accounts have appeared on the public record, the message that emerges from these is that drone operators generally reject any suggestion that their activities are akin to video-gaming (see: Bumiller 2012; Mazzetti 2012; Linebaugh 2013). Moreover, some operators who have publicly reflected on their experience appear to have been highly engaged in and deeply affected by the drone violence they perpetrated. For example, Scott Swanson, who was the first person to carry out an intercontinental airstrike using an armed drone, published an account of this 13 years afterwards. In October 2001, when remote-controlling an armed drone flying over Afghanistan, he pulled the trigger to release a missile (Swanson 2014):

the screen was filled by a bright white bloom of light. As the bloom dissipated, we saw an object move quickly across the screen, flailing like a ragdoll tossed in the air. It was a body, twisting and contorting and glowing from the heat of the blast. Nearly a decade-and-a-half [later] …, that fleeting image remains burned into my memory. Targeting and taking out an enemy that night felt nothing like a video game.

Assuming that such a sight has the potential to be both highly memorable and emotionally upsetting, the US military has since responded by inquiring into rates of psychological stress among its drone operators. In so doing, it has framed this problem in strictly medical terms, and the clinical interest of US military scientists has focused upon mental health and Post Traumatic Stress Disorder (PTSD). Published research findings have thus far not indicated that the operators of armed drones are particularly vulnerable in this regard. For example, according to one study by the US Armed Forces Health Surveillance Branch covering the period 2003-2011, drone operators experienced psychological problems at about the same rate as pilots of inhabited aircraft who were deployed to Iraq or Afghanistan (Otto and Webber 2013). A second study, involving 1084 US Air Force (USAF) drone operators, found that they experienced a lower rate of PTSD symptoms (4.3%) than did military personnel returning from employment (10 – 18%) (Chappelle et al. 2014a). These studies do not reveal the sources of mental health problems. However, some of the researchers have speculated that drone operators might ‘perceive the deployment of weapons and exposure to live video feed of combat … as highly stressful events’ (Chappelle et al. 2014b, 67). Accordingly, they have recommended that ‘military mental health providers’ should monitor ‘the impact of virtual exposure to combat operations and the impact on the emotional well-being of [drone] operators’ (Chappelle et al. 2014b, 67).

Medical monitoring is worthwhile to the extent that it helps to identify and treat mental illness symptoms. Nevertheless, the possible downside to this approach is that drone operators who express unease or regret about drone violence will only ever be ‘facilely diagnosed with PTSD’ (Calhoun 2015, 193). That is, the mere medicalisation of a person’s reaction to killing could obscure whatever deeper moral problem might be at the root of a PTSD diagnosis. As Jesse Kirkpatrick (2015, 212) has suggested, the underlying problem might be that wielding drone violence exposes drone operators to ‘the risk of moral injury’. It is a suggestion made also by Brandon Bryant who, from 2007 to 2011, worked as a sensor operator for US armed drones controlled from Nellis Air Force base in Nevada. He was one of the first US drone operators to speak publicly about his experience of conducting drone strikes against individuals overseas. In a 2013 interview, when asked if he suffered from PTSD, Bryant replied (Democracy Now 2013):

my deal is more moral injury, … I did the job. I did it as best as I could, ... And … I paid a spiritual and mental price for that. And I think that’s something that people really discount, because I didn’t take any physical injury through it.

Bryant in this way resisted the prevalent notion that drone violence is ‘riskless’ from a US point of view, arguing that such violence carries a non-physical (moral) risk that is real and serious. By contrast, a common refrain of advocates and critics of armed drones is to focus on the removal of drone operators from the physical risk associated with proximity to violence. Dennis Blair has described drone strikes as ‘politically advantageous’ because there are ‘no U.S. casualties’ (Becker and Shane 2012). Michael Walzer (2013) has described armed drones as ‘dangerously tempting’ because enemies can be targeted ‘without any risk to our own soldiers’. And Daniel Byman (2013, 32) has observed that ‘drones have done their job remarkably well’ and ‘at no risk to U.S. forces’. However, if moral injury among drone operators is real, it cannot be claimed that drone violence is entirely riskless. And, if drone operators were then counted among the potential victims of that violence, the avoidance of moral injury could be added to *jus in bello* as an ethical basis for requiring restraint.

**Moral injury in war**

Before exploring reasons why drone operators in particular might be at risk of moral injury, it is important to establish what moral injury is and why, in the context of war, it can arise. To begin, it is worth noting that there are two approaches to military ethics when it comes to the killing that warriors (soldiers, sailors and airmen) do. The dominant ‘sword approach’ to military ethics is to ensure that warriors use violence justly, and it emphasises adherence to *jus in bello* principles (discrimination and proportionality) for the sake of non-combatants and enemy combatants involved in a conflict. By contrast, the ‘shield approach’ to military ethics aims to protect the humanity and moral wellbeing of warriors themselves as against the killing that they see or do (Toner 2006). The two approaches are not mutually exclusive; an instance of *jus in bello* failure could be judged as harmful both to a civilian who was unjustly killed and to a conscientious warrior who saw it happen. For present purposes, though, the shield approach is of greatest relevance because it takes seriously the idea that warriors can be indirect victims of the violence they wield against others. Of particular concern is the notion that the act of killing in war can sometimes impose a heavy, debilitating and possibly unbearable burden upon a warrior’s conscience. During World War One, Bertrand Russell (2007, 48) warned that

the use of force to coerce another man’s will, even in those rare cases in which it is justifiable, produces a brutal and tyrannous state of mind, and is more destructive of inward peace than any misfortune that can be inflicted from without.

More recently, some military ethicists have also advanced the idea that unjust or unrestrained violence can be deleterious to warriors’ moral wellbeing. Stephen Coleman (2013, 272), for example, has argued that the purpose of ‘codes that limit the behaviour of military professionals’ includes ensuring that they ‘not only live through the battle, but can also live with themselves afterwards’. And Shannon French (2005, 173) has argued that the best reason for warriors to accept restraint is to avoid the risk of internal moral damage if they fail to do so: ‘Warriors need the restraint of a warrior’s code to keep them from losing their humanity and their ability to enjoy a life worth living outside the realm of combat’.

The peaceful life of a civilian is what all warriors came from and expect to return to. However, if a warrior has killed another human being during a temporary life of violence, this act can be difficult to reconcile afterwards with the notion that killing is ordinarily bad. In a peaceful society, children are raised and adults are socialised to think this, but the notion sometimes needs to be suppressed when a government calls for violence to be used in service to that society. This can be difficult because most humans have a deep resistance to killing other humans, so military training typically involves addressing prospective warriors’ fear of causing death as well as their fear of being killed. Such training is temporarily useful in serving a political purpose, but it does not forever ‘unmake’ the morality of people who are partly the product of their society’s ideals (see Marshall 1961, 78). For this reason, as Karl Marlantes (2011, 51) has observed, ‘warriors of good conscience’ have struggled for centuries to reconcile ‘the moral conduct we are taught as children with the brutal actions of war’. Actions that are brutal can nonetheless be actions that adhere to *jus in bello* principles, and this is probably a comfort to some warriors who periodically contemplate whether they are doing the right thing. But for other warriors, mere *jus in bello* adherence is not enough, and external assurances as to the justness of their conduct in war might not assuage feelings of guilt (Sherman 2011, 121). For example, if a soldier unintentionally kills a civilian, that soldier might not feel morally exculpated by a reminder that only an *intentional* killing qualifies as a *jus in bello* violation (see Kudo 2015). Rather, his or her judgment might be that taking a human life is itself a moral problem, and such judgment would be made on a personal level. At this point, ethical reasoning about violence will have gone beyond Just War thinking. Adverse self-judgment will have become instead a matter of conscience, and here in this private moral space is where the risk of moral injury arises.

The term ‘moral injury’ originates in Jonathan Shay’s book *Achilles in Vietnam* (Shay 1994). It has since been used mainly by psychiatrists when ‘trauma’ or other terms in the psychology lexicon do not suffice to capture the source of a person’s emotional problem (Jinkerson 2014). Moral injury is not, however, a clinical diagnosis. Psychiatrists and non-psychiatrists alike tend to regard it as an essentially ethical or spiritual (rather than medical) phenomenon. Rita Nakashima-Brock and Gabriella Lettini (2013, 51) have argued, for example, that ‘[v]eterans with moral injury have souls in anguish, not a psychological disorder’. According to Shay (2012, 58), the moral injury of a person begins with the ‘betrayal of what’s right’, and it is ‘the soul wound inflicted by doing something that violates one's own ethics, ideals, or attachments’. Similarly, Brett Litz and colleagues (2009, 698) have described moral injury as involving ‘an act of transgression that creates dissonance and conflict because it violates assumptions and beliefs about right and wrong and personal goodness’. William Nash and colleagues (2010, 1676) refer also to the perpetrating of acts that ‘transgress deeply held, communally shared moral beliefs’. And Kent Drescher and colleagues (2011, 9) have observed that moral injury is brought about by ‘perpetration of immoral acts, in particular actions that are inhumane, cruel, depraved, or violent, bringing about pain, suffering, or death of others’. Such actions can include rape and torture (Bernstein 2015), and in military contexts the risk of moral injury tends to be associated with adverse self-judgment about killing.

For the purposes of the present discussion, it is important to emphasise that moral injury is different from PTSD. Whereas PTSD refers to the lasting psychological ramifications of experiencing a moment of mortal terror (fear for one’s life), moral injury is rooted in the feelings (shame and guilt) one has about harm one has done to others (Litz et al. 2009, 699). As such, even though reported rates of PTSD are low among US drone operators (who are not physically endangered), it does not necessarily follow that the risk of moral injury is also low. At the same time, it must also be acknowledged that there have been and will be many instances in which a person who kills does not afterwards experience moral injury. This might be because the permissibility of a particular killing in *jus in bello* terms suffices to prevent adverse self-judgment. Or, in cases where a killing is manifestly impermissible, certain mechanisms of moral disengagement might enable otherwise conscientious people to kill without experiencing reluctance, distress and guilt. For example, through the mechanism of ‘dehumanization’, self-censure for harmful conduct can be blunted by divesting targeted people of human qualities (Bandura 2016). With these caveats in place, it remains now to consider reasons why the killing done by drone operators in particular might expose them to the risk of moral injury.

**The victimhood of drone operators**

If operating an armed drone does not feel like video-gaming, and if drone operators are thus morally engaged in the killing they do, there is potential for them to be morally affected and perhaps injured by this experience. This could occur despite assurances that a given drone strike was a discriminate and proportionate use of violence. The question that then arises is: irrespective of *jus in bello*, why might it feel like a ‘betrayal of what’s right’ (Shay 2012, 58) to use a drone (equipped with a camera and missiles) to observe and then kill a person in a faraway place? There is currently little information available on whether or why the perpetrators of drone violence actually judge themselves harshly. This is largely a result of the high degree of secrecy that tends to surround military drone use. However, in approaching this issue at the conceptual level, I argue that there are three reasons why drone operators risk moral injury when they kill remotely. The first reason relates to the traditional notion that warriors’ assumption of physical risk is what affords them moral permission to harm others. The second reason relates to drone operators’ constant and rapid transition between worlds of violence and peace, and between military and civilian identities. The third reason relates to the potential for a drone’s powerful video-camera to restore a targeted individual’s humanity and thus increase the moral weight of perpetrating drone violence relative to other forms of killing-at-a-distance.

***Physical risk and moral permission***

In the peaceful context of civilian society, the killing of other human beings is normally prohibited, and most people have a deeply-held belief that it is wrong. Sometimes, though, killing done on behalf of that society (in order to defend its interests in world affairs) is encouraged, and warriors who wage war are often admired by their fellow citizens. This admiration stems not only from the fact that killing a threatening enemy is a defensive service to one’s society but also because warriors often put themselves at physical risk in the process. And by putting oneself at risk, one is arguably better able to justify endangering other human beings. In this way, traditionally, war as a risky enterprise has been an exceptional moral circumstance that affords individual at-risk warriors moral permission to kill. According to Martin Cook (2004, 123), volunteer military personnel ‘live in a unique moral world’ and enter into a special kind of service contract with the state. Part of this contract is acceptance of ‘the obligation to put their lives and bodies at grave risk’ and it also ‘requires them to kill other human beings’ (Cook 2004, 123-24). Critically, as between warriors on either side of a conflict, an attribute they have in common is potential victimhood resulting from having a bodily stake in the same contest. That mutual physical risk is, in turn, what ‘buys’ permission for violence: a preparedness to die is given in exchange for a license to kill.

It follows that, if a putative combatant is not a potential victim of some physical harm, he or she might feel on a personal level that the traditional justification for killing in war is unavailable. Absent *mutual* victimhood, that is, violence could come to resemble slaughter rather than war (*qua* war-as-contest). In a variety of contexts, and relevant to the idea that war ought to be distinct from mere butchery, some practitioners of war have expressed distaste for killing that entails little or no risk to the killer. For example, in his 1937 memoir *The Men I Killed*, former sniper Frank Percy Crozier described how he eventually baulked at the bloodthirstiness of targeting humans: ‘The game was dirty. I had to give it up. The cool, calculated murder of defenceless men was diabolical’ (quoted in Bourke 1999, 66). Crozier admitted to ‘that sense of guilt, that conscious-stricken feeling of killing a man who at the moment was not menacing you and who was brought almost within hand-shaking distance by the telescopic sights’ (quoted in Bourke 1999, 66-67). During the Gulf War, in late February 1991, there were repeated airstrikes on Iraqi soldiers and civilians retreating north from Kuwait City towards Basra along a road that became known as the Highway of Death. One US pilot described flying sorties against these fleeing Iraqis as like ‘shooting fish in a barrel’ (Shurtleff 2002, 107), and others pilots expressed misgivings about ‘shooting up Iraqi troops who were powerless to defend themselves’ (Coker 2002, 68).

In such examples of extremely asymmetric violence, killers face little or no immediate risk from enemy violence, but a degree of physical danger has to be endured nonetheless. A sniper might sustain an accidental injury while operating behind enemy lines and be unable to return to base. A pilot sitting in an aircraft cockpit is at risk from mechanical failure or loss of consciousness leading to a crash. And, for a submariner involved in the surprise launch of a ballistic missile, it is inherently dangerous to be aboard a submerged vessel. By contrast, none of these things endangers the remote, ground-based operator of an armed drone. Being less obviously protected by the ‘shield’ of moral permissibility that risk-taking traditionally bestows upon violence in war, an individual drone operator might regard killing under seemingly non-warlike conditions to be ‘a betrayal of what’s right’ (Shay 2012, 58). And even if that killing were deemed by others to have adhered to *jus in bello* principles, the absence of mutual risk in a violent situation could lead to adverse self-judgment and possibly to moral injury. On this point, however, it is worth distinguishing between the two main ways in which armed drones are used. A drone strike can occur in an established conflict zone to support friendly troops (close air support), or it can be directed against someone who is far away from an ongoing conflict and therefore not immediately threatening to anyone (targeted killing). Arguably, the latter form of drone violence carries the greater risk of moral injury for two reasons. First, as will be discussed later, a targeted killing is often preceded by prolonged observation (via a video-camera) of the individual to be killed in a drone strike. Second, a drone operator who kills in order to save others who face immediate danger may find it easier to justify this as a permissible instance of essentially *defensive* violence.

Some drone operators have indeed ‘prioritized the protecting of allied troops on the ground above the killing of the enemy’ (Lee 2012, 16), and others reportedly ‘love’ the feeling that ‘they’re protecting our people’ (Bumiller 2011). Physical risk, although not experienced by the operator of a drone, is nevertheless an immediate reality for his or her military colleagues beneath it. Thus, drone violence used for close air support could plausibly be justified to oneself according to a ‘life-saver’ ethos. When it comes to targeted killings, however, it might be harder for a drone operator to characterize such violence as essentially defensive because it has no immediate life-saving value. Rather, targeted killings using armed drones are a deliberate exercise in prevention (of terrorist violence) from afar and far in advance. No *mutual* physical risk is experienced at both ends of such a drone strike, and so a drone operator might regard this as a betrayal of the traditional expectation that one’s license to kill is conditional upon one’s preparedness to die. For only a killing that is *warlike* is supposed therefore to be morally better than mere slaughter. Such concern features in Brandon Bryant’s recollection of the fourth drone strike in which he participated (from a base in the United States). While tracking a group of five men travelling through Afghanistan carrying explosives, Bryant and his colleagues waited until the men descended into a valley and had set up camp for the night. He recalled that ‘[w]e waited for those men to settle down in their beds and then we killed them in their sleep’, and he described his own action as ‘cowardly murder’ (Pilkington 2015). This adverse self-judgment is arguably connected to Bryant’s declaration that he afterwards suffered from ‘moral injury’ (Democracy Now 2013).

***Worlds and selves of violence and peace***

A second factor relevant to the risk of moral injury among drone operators is the peculiar circumstance of repeatedly experiencing worlds of violence and peace in the course of a single day. An operator working at Creech Air Force Base in Nevada, for example, may travel daily from and to his or her family home in suburban Las Vegas. One part of the day would involve witnessing or perpetrating violent acts, and another part would involve the peaceful activities of a civilian life. Arguably, the different expectations regarding the permissibility of killing within each situation could, if constantly thrown into contrast, become more difficult for a drone operator to reconcile over time. Litz and colleagues (2009, 705) have described moral injury as ‘the inability to contextualize or justify personal actions … and the unsuccessful accommodation of these … into pre-existing moral schemas’. This, they argue, can lead a person to ‘experience guilt, shame, and anxiety’ (Litz et al. 2009, 698), and for present purposes the relevant ‘moral [schema]’ (705) is the general prohibition against killing in civilian society. It has been observed that, among combat veterans especially, transitioning from military to civilian life can produce the distressing experience of identity ‘fragmentation’. Here, a soldier’s self is broken by an inability to regard their military identity and violent actions as morally reconcilable with a civilian identity and with social expectations of non-violence (see Kudo 2013). In other words, some combat veterans find it ‘extremely difficult to integrate their professional and personal moral selves after they return from deployment’ (Berghaus and Cartagena 2013, 290). A man who has killed in war, who identifies himself as a ‘good soldier’ but at the same time struggles to see himself as a ‘good man’, has a fragmented moral self (Berghaus and Cartagena 2013, 291). The extraordinary challenge for him then is to find ‘a moral self capacious enough for both civilian and warrior sensibilities’ (Sherman 2011, 4).

When the operator of an armed drone kills, he or she does something that has no place in civilian life, and yet the moral expectations that go along with that life are being constantly reinforced by the operator’s daily return to it. In this circumstance, it could become harder to justify killing to oneself when one is *frequently* being reminded that killing is *ordinarily* prohibited. Critically, a drone operator’s situation differs from that of a soldier who, deployed abroad for a long period of time, has a settled sensation of living (and killing) in a world apart. The drone operator, who stays behind, instead experiences what Shane Riza has called the ‘two-worlds phenomenon’ (Riza 2014, 264), involving ‘the constant yo-yo of emotion between gearing up for the business of death and winding down so as not to bring it home’ (Riza 2013, 96). For at home, most certainly, killing would be ‘a betrayal of what’s right’ (Shay 2012, 58). Deployed soldiers do not, by contrast, return regularly to the bosom of family and to peacetime morality. They are not in a situation of being called upon to do something (kill) that is acceptable in a world of violence and then having to eschew that same thing, immediately afterwards, as impermissible in a world of peace.

Moreover, unlike a drone operator, a deployed soldier’s killing might sometimes be easier to rationalize because it occurs in a context of prolonged and intense military comradeship. As Robert Sparrow (2009, 175) has observed, the fact of being physically present in a theatre of operations provides scope for a combatant to prepare for combat ‘through a process of anticipation that makes reference to local circumstances’, and ‘conversation and interaction with others who may have shared similar experiences’ is available as a post-combat coping mechanism. By contrast, on either side of an eight-hour shift, a drone operator working at a base inside the United States moves quickly out of and back into a civilian-like existence. Consequently, there may be insufficient time for debriefing and to reflect (perhaps with other drone operators) on violent acts committed, and less opportunity to readjust to the exquisite peacefulness of family life at home. A drone operator’s killing is not done in a separate ‘world of violence’ where external reassurance is constantly available regarding the justness of killing. Rather, it is done ‘in the midst of a daily routine that involves the sights and sounds of a normal American life’ (Gibbons-Neff 2013). This routine has the capacity to serve as a constant reminder that killing is ordinarily wrong, which could in turn make it increasingly more difficult for some drone operators to judge their deadly violence and themselves favourably.

***Prosaic humanity and distant-intimate killing***

The idea of ‘normal life’ (which is morally remote from a life of war) is relevant also to the third factor contributing to the risk of moral injury among drone operators. That is, the beholding of a normal life being lived by a targeted individual could carry great moral weight in the eyes of a drone operator who might eventually kill that individual. Thanks to the power of the video-camera mounted on an armed drone, the drone’s operator is able to acquire intimate knowledge of an individual being watched from above as well as a detailed view of the grisly consequences of a missile strike. Considered in *jus in bello* terms only, the camera can be seen to afford a moral advantage because it better enables a legitimately targetable individual to be accurately identified and distinguished from civilians. However, the camera’s very capacity to facilitate discriminate use of violence is also that which makes that individual’s humanity starkly obvious to a drone operator. Such humanity—so familiar and so richly perceived—might then be harder to extinguish because it is harder to deny. Killing another human being under these circumstances is arguably more likely to feel like betrayal, so in this way too drone violence could carry a risk of moral injury.

In contrast to other forms of killing-at-a-distance, drone violence perpetrated against a remote victim does not, I argue, have a high capacity to reduce a killer’s ordinary resistance to killing. Drone operators find themselves engaging in an unprecedented process of ‘distant-intimate’ killing (see: Gregory 2011, 193; Williams 2015, 98), and the moral significance of this is only beginning to be understood. In his book *On Killing*, Dave Grossman (2009, 97) referred to a spectrum of ‘distance and ease of aggression’ to illustrate the ‘direct relationship between the empathic and physical proximity of the victim, and the resultant difficulty and trauma of the kill’. At the extreme (worst) end of this spectrum, Grossman argued (2003, 203), is the cold-blooded, close-range, execution-style killing of someone ‘who represents no significant or immediate military or personal threat to the killer’. Such a kill is intensely traumatic for the killer, who ‘has limited internal motivation to kill the victim’, and the ‘close range of the kill severely hampers the killer in his attempts to deny the humanity of the victim and … [his] personal responsibility for the kill’ (Grossman 2009, 203). This differs greatly from the situation of bomber aircraft crews (at the other end of Grossman’s spectrum) who, during World War Two, were able to bring themselves to kill civilians (by droppings bombs from high altitude) ‘primarily through application of the mental leverage provided to them by the [vertical] distance factor’ (Grossman 2009, 101-102). Although the crews understood at an intellectual level the horror of what they were doing, the distance factor ‘permitted them to deny it’ emotionally (Grossman 2009, 102).

Physical remoteness can, according to these findings, facilitate killing that would otherwise be difficult to stomach. But Grossman’s proposition appears to hold true only if remoteness is accompanied by reduced sensory perception, and this is not the case when it comes to drone violence. In his book *Military Robots*, Jai Galliott (2015, 138) adapted Grossman’s schema and introduced ‘Drone Range’ as a position further removed from the target than ‘Bomber/Artillery range’. Here, Galliott argued (2015, 140), resistance to killing is lowest: ‘at [this] maximum range … killing is made extremely easy’. Other authors have advanced similar claims, arguing that armed drones represent merely the latest step in a historical process of removing a warrior further away from the enemy for safety’s sake (Strawser 2010, 343; Royakkers and van Est 2010, 291). However, this emphasis on physical distancing obscures the achievement of greater, *virtual* proximity enabled by a drone’s transmission of real-time video imagery to its operator. That imagery probably lessens whatever ‘moral comfort’ is provided by distance (Whetham 2013, 24), and at the same time the drone operator is exposed to a risk (of moral injury) associated with the things that he or she sees. Prior to engaging in distant-intimate killing, a drone operator may have witnessed at length the many prosaic acts that confirm a would-be victim’s humanity. And, immediately after the killing is carried out, a video-camera conveys to the drone operator a picture of the results. It seems implausible, therefore, to apply Grossman’s approach to drone violence. A drone operator in the United States, for example, is indeed distant (thousands of miles away) from a person being killed in Pakistan. Yet the grisly spectacle (transmitted via camera, satellite and screen) of a human body blown apart in a missile strike renders such killing a ‘close-up’ experience of sorts. Some first-hand accounts appear to confirm this. For example, USAF drone operator Chris Chambliss told the *Los Angeles Times* in 2010: ‘You see a lot of detail. We feel it, may be not to the same degree as if we were actually there, but it affects us. Part of the job is to try and identify body parts’ (Zucchino 2010). And in 2013, Brandon Bryant provided a similar and more graphic account, recalling his first shooting experience (in early 2007) when controlling an armed drone from Nellis Air Force Base. It involved firing a missile against three men, walking along a road in eastern Afghanistan, whose subsequent fatal injuries were made vivid in temperature-sensing, infra-red imagery (Power 2013):

The smoke clears, and there’s pieces of the two guys around the crater. And there’s this guy over here, and he’s missing his right leg above his knee. He’s holding it, and he’s rolling around, and the blood is squirting out of his leg, and it’s hitting the ground, and it’s hot. His blood is hot. But when it hits the ground, it starts to cool off; the pool cools fast. It took him a long time to die. I just watched him. I watched him become the same color as the ground he was lying on.

Here it is important to acknowledge that, when a drone operator’s release of a missile is an exercise in close air support, there is typically little time beforehand to observe an enemy individual. And indeed, as discussed earlier, the immediately threatening nature of that individual—armed, hostile and close to friendly ground troops—probably makes the killing easier for a drone operator to justify. By contrast, in the case of a targeted killing carried out far from a conflict zone, a drone operator may previously have been witnessing the ordinariness of the life being lived by the targeted individual for hours or days. This will have been done in the interests of accurately identifying a target and minimising casualties among any nearby civilians. Even so, as Mark Coeckelbergh argues (2013, 97), the ‘knowledge of the opponent’ that results from this has the effect of confirming ‘his humanity, personality, embodiment, and vulnerability’, and this in turn can make killing more difficult. Such a proposition resonates with Walzer’s view that, in war, an enemy ‘alienates himself from me when he tries to kill me, and from our common humanity’, but that this alienation is temporary (Walzer 2006, 142). For the enemy’s humanity is ‘imminent’, he argues, and can be ‘restored ... by ... prosaic acts’ (Walzer 2006, 142). To support this claim, Walzer has highlighted historical instances of soldiers who found it difficult to kill enemy soldiers whose simple humanity was conspicuous. In the case of one World War One sniper’s reluctance to shoot a German seen taking a bath, Walzer (2006, 140) offered the explanation: ‘A naked man… is not a soldier’. Here, the felt wrongness of killing appears to centre on an appreciation of the humanity that the killer and the would-be victim have in common, and this ‘naked soldier’ problem arguably has the potential to arise also in the course of drone violence. In published comments from US drone operators, a common theme is their witnessing of a prospective target’s ordinary, familiar and peaceful acts: drinking tea and shopping for cigarettes (Tucker 2015), doing laundry and having sex (Abé 2012), and—most prosaic of all—defecating (Hurwitz 2013). According to USAF medical officer Hernando Ortega, witnessing these ‘regular old life things’ can be distressing for drone operators: ‘At some point, some of the stuff [you watch] might remind you of stuff you did yourself. You might gain a level of familiarity that makes it a little difficult to pull the trigger’ (Bumiller 2012). To kill anyway, then, is more likely to feel wrong, and in this feeling lies the potential for moral injury.

**Conclusion**

In the near future, when more armed drones are acquired by more governments worldwide, more personnel will be required to operate them. If the amount of drone violence going on in the world increases too, it will remain important to assess its morality and restrain its use accordingly. To date, ethical arguments about drone violence have tended to focus on what happens at the receiving-end of a drone strike, but normative attention can and should also be directed to the delivery-end. Drone violence is potentially harmful to drone operators themselves. In killing from a distance, the risk they experience is moral not physical, and this disrupts the prevailing notion that perpetrating drone violence is akin to playing a video-game. When we look beyond high politics and military strategy, at the level of drone operators’ personal experience, the picture that begins to emerge is that this sort of violence is not that easy to perpetrate. There are at least some drone operators who do not think they are merely playing a game, and for this reason they are capable of becoming morally troubled by the real harm they cause. It might not be enough, however, for them to think morally about drone violence by reference to *jus in bello* principles alone. Historically, in war, killers of all kinds have sometimes struggled to live with taking a human life, despite others’ assurances that this was morally permissible. Beyond Just War thinking, military personnel are able to judge themselves further by reference to deeply-held beliefs about right and wrong. The recognised betrayal of such beliefs by individual soldiers has, at times, caused them moral injury, and it is reasonable to expect that a drone operator who kills reluctantly might also face this risk.

The moral implications of the peculiar *way* in which a drone operator kills—while physically remote from but visually proximate to a victim—are far from fully understood, and the self-judgment of military personnel is an inherently hard-to-discern phenomenon. Accordingly, at the conceptual level, this article has highlighted factors that seem likely to expose drone operators to the risk of moral injury: the absence of physical risk; constant and rapid transition between worlds of violence and peace; and the potential for a drone’s video-camera to restore a targeted individual’s humanity. If the reality of this risk were recognised by governments, policies and practices aimed at avoiding moral injury could become an additional mode of restraining drone violence. Moving beyond allegations that drone use results in too many civilian deaths, restraint could also be justified according to a rationale that goes to the heart of why armed drones are used at all: to avoid the exposure to risk of national personnel. In turn, acting to protect the moral integrity of drone operators, by restricting the range of circumstances in which a drone strike may occur, could mitigate the experience of would-be victims facing the risk of death. If, for example, drone operators were prohibited from killing when there is no immediate need to defend friendly ground forces, the result could be an overall reduction of human harm caused in territories over which armed drones fly.

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