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Virtues and Rules in War: Military Ethics and Technologies of Radical Risk-Reduction

Andrew P. Rebera[1,2] · **Nathan Gabriel Wood**[3]

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Abstract
On a contentious but still widely held view of the ethics of war, belligerents' mutual imposition of risk licenses the harm they attempt to inflict upon each other. When this reciprocity of risk imposition is lost—when combatants of one side are able to inflict harm without exposing themselves to it—the moral balance is disrupted. Technologies that radically reduce risk, such as UAVs (drones) or autonomous weapon systems, are particularly challenging in this respect. Scholars have suggested that these technologies of radical risk reduction are so morally disruptive that the ethics of war should fundamentally shift from virtue-based towards rule-based approaches. According to this view, since the traditional martial virtues (such as courage and mercy) are of little practical relevance to certain forms of modern warfare, drone pilots and other soldiers who dole out violence from great distances would be better served by clear moral rules. We argue, however, that this view is mistaken. That technologies of radical risk reduction bring some disruption to the martial virtues is undeniable, but the disruption is far less severe than has been suggested. We present an alternative account of the moral disruption caused by technologies of radical risk-reduction, highlighting how the changing nature of warfare is informing changes in what morality and virtue demand in war. Martial virtues continue to play a crucial role in ethical decision-making, as the moral performance of drone pilots in Ukraine has clearly demonstrated. We continue to have, therefore, strong reasons to educate and entrench a conception of the 'virtuous warrior' in today's soldiers.

Keywords Autonomous weapon system (AWS) · Military ethics · Risk · Drone (UAV) · Virtue ethics · War

✉ Andrew P. Rebera
rebera.andrew@gmail.com

Nathan Gabriel Wood
nathan.wood@tuhh.de

[1] Department of Behavioural Sciences, Royal Military Academy: Ecole Royale Militaire, Brussels, Belgium

[2] Institute of Philosophy, KU Leuven, Leuven, Belgium

[3] Hamburg University of Technology, Institute for Air Transportation Systems (TUHH - ILT), Hamburg, Germany

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1 Introduction: War, Risk and Technology

Risk is foundational to war. Each side seeks to impose risk (and ultimately harm) on the other, while minimising their own exposure to the greatest extent possible. On a contentious but widely held view, risk is foundational to the ethics of war too, for it is, according to some, belligerents' mutual imposition of risk—and consequent need of self-defence—that licenses the harm they attempt to inflict upon each other.[1] When this reciprocity of risk is lost—when combatants of one side are capable of inflicting harm without exposing themselves to risk at all—that logic of self-defence is argued to break down. The weaker side cannot inflict harm in self-defence, for they cannot inflict harm at all, and the stronger side cannot inflict harm in self-defence either, for they fight from a position of such tremendous advantage that there is no risk of harm against which they can realistically be said to defend. This may seem paradoxical. On this view, the moral legitimacy of a belligerent's resort to war and violence is grounded in their exposure to risk and necessity of self-defence; yet the point of preparing for or conducting war is, on some level and to some extent, for belligerents to bring about conditions under which their exposure to risk is eliminated and self-defence rendered unnecessary. If that is so, the point of fighting is to bring about conditions that delegitimise fighting: war pursues conditions that undermine its moral legitimacy (Ignatieff 2001; Kahn 2002). Kahn (2002) calls this 'the paradox of riskless warfare'.[2]

Military technologies aim at enhancing risk-asymmetry, and though there are good grounds for rejecting Kahn's strong claims above (Zajac 2022a), pp. 287–300), we may take for granted that emerging technologies pose an inherent threat of moral disruption, since risk asymmetries will alter, temper, or shift our moral considerations, and may, at the extreme, seem to undermine the very legitimacy of violence in war. Many military technologies aim, directly or indirectly, at *reducing* risk to the (personnel of the) side that uses them. These include 'defensive' technologies, which reduce risk by better protecting soldiers from harm (armour, camouflage, stealth materials, etc.), as well as 'offensive' technologies (weapons) which reduce risk by either making soldiers more potent in attack or by enabling them to attack with less exposure to risk.[3] The latter include 'distancing' technologies, i.e., weapons that can be operated or launched from positions out of range of enemy forces. These include high-altitude bombers, long-range artillery, missiles, unpiloted aerial vehicles (UAVs), and (semi-)autonomous weapon systems (AWS). We will refer to military technologies designed to reduce risk (to those who use them) as 'technologies of risk-reduction' and to technologies which *radically* reduce risk, such as UAVs and AWS, as 'technologies of *radical* risk-reduction'.

This article concerns the moral disruption that is threatened by military technologies of radical risk-reduction. Scholars have challenged the legitimacy of at least some uses of these technologies (Enemark 2014; Galliott 2012; Killmister 2008; Renic 2020; Whetham 2013). But the question of moral disruption persists even if, as will be the case here, we

[1] This is by no means the only view on what licenses harm infliction in war. For other views, focusing on how, e.g., liability, retribution, or rights may ground the use of lethal force, see Frowe 2014a, b; McMahan (2009); Tadros (2014); Walzer (2015); Hedahl (2023).

[2] See Steinhoff (2013) for a different set of concerns related to riskless warfare.

[3] Technologies aimed at *repairing* harm, such as rapid casualty evacuation, emergency field medical units, or advanced medical technologies, may also be considered as defensive technologies. On the moral relevance of such technologies for the discussion here, see, e.g., Strawser (2010).

limit attention to uses of technology that do not cross the supposed boundary of 'acceptable' risk-reduction. Just as objects approaching the event horizon of a black hole are warped and stretched beyond recognition, so, as we approach the limits of acceptable risk-reduction, norms around soldiers' conduct, decision-making, and training—what we will collectively call 'military ethical thinking'—may be analogously distorted.[4] What is permissible or proportionate for a soldier in the thick of battle may be impermissible or disproportionate for, say, a remote pilot thousands of miles away operating a UAV. But even when their violence is permissible, it may be necessary for remote UAV pilots—or any soldiers operating under conditions of radically reduced risk—to approach ethical challenges in quite different ways, informed by quite different ethical considerations. And indeed, throughout history, as technologies have developed and become increasingly incorporated and entrenched into military organizations, the norms of war and the virtues of warfighters evolved to accommodate the changes. As an example, take the case of the crossbow; Pope Urban II sought to ban its use in 1096, and the Second Lateran Council of 1139, convened by Pope Innocent II, stated that "We prohibit under anathema that murderous art of crossbowmen and archers, which is hateful to God."[5] Yet the ranged weaponry of the middle ages did not eliminate the need for military virtues or, ultimately, undermine the capacity for soldiers to act with courage, honour, loyalty, mercy, etc., nor did the advent of rifles, artillery, aircraft, or any of the other technologies which have come in the past thousand years. Instead, as Renic (2020) discusses at length, the warrior ethos itself has adapted (we discuss this further in Sect. 3.2). Indeed, this can be seen in ongoing conflicts today, especially in the highly dynamic battlefields of Ukraine, where shifting risks alter how combatants (may) interact with one another.

Technologies of radical risk-reduction have been thought to be morally disruptive for two reasons. First, the 'martial virtues'—those moral virtues specifically relevant to soldiers at war—are considered less relevant to soldiers who fight without risk. Some UAV pilots, for instance, may be at no risk of physical harm (Lee 2018) and so are argued by some to have no need of physical courage (Enemark 2014; Olsthoorn 2021; Renic 2018, 2020; Schulzke 2016; Sparrow 2013, 2015).[6] Second, soldiers who are free from the chaos of the battlefield are physically, emotionally, and cognitively better placed to be able to engage in complex moral deliberation. Their decision-making could, therefore, arguably be held to higher standards (Schulzke 2016).[7] Accordingly, moral disruption due to technologies of radical risk-reduction has been thought to take one or both of two forms (Olsthoorn 2021). First, if the virtues do and should continue to play an important role in military ethical thinking, then either: (i) our conception of them should be revised (e.g., by reconceiving what it means to act courageously in war); or (ii) the traditional martial virtues should be phased out and/or more relevant virtues phased in (e.g., by focusing more on virtues involving restraint and

[4] Note that we use 'soldier' as shorthand for members of all branches of the military.

[5] https://www.papalencyclicals.net/councils/ecum10.htm, accessed Apr. 4, 2025.

[6] Importantly, this is only true for *some* UAV pilots: others are at grave physical risk. For example, in the U.S.-led mission in Afghanistan, drone units piloting from forward bases could come under mortar fire while on mission; and for Ukrainian UAV pilots, their proximity to the front lines puts them at near constant risk of lethal harm.

[7] A clarification is needed and should be borne in mind throughout this paper. All soldiers, no matter in what conditions they operate, are in one sense held to *the same* moral standard: they should act for the best (whatever that means). Soldiers who operate in risk-free conditions ought to get complex decisions right more often, and are plausibly culpable for errors, omissions, and oversights for which battlefield soldiers might be excused.

compassion) (Renic 2020; Sparrow 2013). The extent of this kind of disruption depends on the extent of revision undertaken; nonetheless the thesis can be summarised as follows:

Reconception As military technologies of radical risk-reduction proliferate, it is necessary to revise our conception of the traditional martial virtues and how they are exemplified in action; it may also be necessary to develop and put greater emphasis on new or different martial virtues.

The second form of disruption is more severe. It holds that while a virtue-based approach to military ethical thinking may be appropriate for 'battlefield soldiers' (i.e., those whose fighting experience involves exposure to significant risk of physical harm), soldiers operating in conditions of radically reduced risk will be better served by an ethical approach based mainly on rules (Renic 2018, 2020; Schulzke 2016). This is typically characterised as involving a shift away from *virtue-ethics* and towards a *rules-based* approach. Summarising:

Rebalancing As military technologies of radical risk-reduction proliferate, it is necessary to rebalance the respective weights of virtue ethics and rules-based accounts, such that rules become the dominant influence on military ethical thinking.

Reconception and Rebalancing have found significant support in the literature; yet neither is fully convincing. We therefore offer an alternative, deflationary account. That there is *some* disruption to the virtues is undeniable—and so in a sense we endorse a weak version of *Reconception*—but the disruption is far less severe than has typically been suggested. The martial virtues continue to play a crucial role in ethical decision-making in war, and we therefore have strong reason to educate and entrench a conception of the 'virtuous warrior' in today's soldiers.

In Sect. 2, we explain why virtue-based approaches are well-suited to battlefield soldiers. In Sect. 3, we present the arguments that seem to favour *Reconception* and *Rebalancing*, before defusing them in Sect. 4. In Sect. 5, we offer our deflationary account of the moral disruption caused by technologies of radical risk-reduction, highlighting how the changing nature of warfare is informing attendant changes in what morality and virtue demand in war. Section 6 concludes.

2 Virtues for the Battlefield

It is sometimes objected that virtue ethics is a poor guide to action, since it is seen as being focussed more on what sort of person one should *be*, rather than what one ought to *do*.[8] Yet it is precisely the connection between *being* and *doing* good that makes virtue ethics attractive to militaries. Many professional military ethics education programmes feature virtue ethics prominently (Robinson 2008, p. 5), enticed by the prospect of moulding raw recruits into professional soldiers who "will act virtuously because they *are* virtuous" (ibid.; see also

[8] On the objection that virtue ethics fails as a guide to right action see, e.g., Louden (1984, p. 229). For convincing responses see, e.g., Hursthouse (2010) and Russell (2009).

Olsthoorn 2010, p. 4, 2021, pp. 115–116; Robinson et al. 2008; Schulzke 2016, p. 190).[9] Virtue ethics also places a high value on judgment or practical wisdom, skills which serve to underpin not just the virtues as such, but also the fulfilment of other consequentialist and deontological requirements in war.[10] Finally, virtue ethics fits the military self-image: as an institution and profession, the military prides itself on a conception of the soldier as a person of honour and integrity, an upstanding member of the moral and national community. This may be viewed as virtue's "ideological role in sustaining support for the military" (Sparrow 2013, p. 85).

On a virtue ethical approach, soldiers learn to be virtuous and act virtuously by repeatedly emulating those who are and already do so. Role models model what a good soldier should *be*, but they also "show what virtue looks like in action" (Schulzke 2016, p. 191). However, emulation of role models only goes so far. Soldiers are expected to act independently and so must learn to figure out by themselves what to do in novel situations. Here, the *flexibility* and *permissiveness* of virtue ethics—that it tends not to rule out, a priori, particular types of action and is highly contextually responsive, i.e. what is impermissible in one context may be permissible in another (Schulzke 2016, pp. 189–90; Olsthoorn 2021, pp. 115–16)—make it particularly well-suited to the unique and highly pressurised moral challenges that soldiers can expect to face on the battlefield.

The downside of flexibility and permissiveness is that moral deliberation, which can be challenging in any event, is made more so when potential courses of action are left relatively unconstrained. It is no simple matter to decide not only *what* to do, but also "to do this to the right person, to the right extent, at the right time, with the right aim, and in the right way" (Aristotle 2009, *NE* II.9, 1109a 24–9). To deliberate well—to reliably identify the right person, extent, time, and so forth—soldiers must have the intellectual virtue of 'practical wisdom'.

In the contemporary literature, practical wisdom is argued to have any or all of a wide range of functions, including enabling agents to perceive morally relevant features of a situation, identifying the mean between excess and deficiency in relation to a moral virtue, recommending the appropriate means of pursuing the ends of the virtues, resolving tensions among conflicting recommended courses of action, and more (Miller 2023, 190–2). For present purposes, we may think of practical wisdom as simply the ability to recognise and weigh the morally salient features of situations and, in light of these, to deliberate well about how best to act.[11] As such, it is unsurprising that practical wisdom has long been recognized as a critical virtue which informs soldiers what the other martial virtues demand, given the realities of fighting conditions and the tools and opportunities at their disposal. Like other virtues, practical wisdom is to be developed through emulation of role models and habituation through repetition. It is also important to note that practical wisdom is distinguished from other intellectual virtues—e.g., theoretical wisdom, technical expertise or skill, or cleverness in achieving one's ends—by its being directed toward only *good* ends. There is thus a sense in which militaries' attempts at character development betray some confusion

[9] Officers are typically trained in a range of normative moral theories, as well as in moral decision-making processes that rely on 'hybrid' approaches combining, for example, consequentialist, deontological, and virtue-based considerations. See Baker et al. (2024) for discussion. For an argument for the central grounding role of virtue-based approaches in professional military ethics education, see Rebera (2025).

[10] For further discussion of military ethics education, virtue, and practical wisdom, see Sects. 5 and 6 below.

[11] For fuller accounts of practical wisdom, see Darnell et al. (2019, pp. 12–15) and Russell (2009).

of 'virtues' with 'values' (Robinson 2008, p. 5).[12] Values, let us say, are the ends to which virtues, directed by practical wisdom, aim. So practical wisdom is, in part, a capacity to deliberate on how to honour the values to which virtues are directed.

While virtues are central in much military ethical thinking, it would be a mistake to deny the importance of rules. Militaries are suffused with rules, chains of command, and cultures of compliance. Yet the practical difficulties that attend rules-based approaches to action-guidance serve as indirect support for virtue-based alternatives. Rules are never merely *applied* but require *interpretation* to be applied appropriately (Bonadonna 1994; Olsthoorn 2021; Schulzke 2016; Sparrow 2013). Amid the chaos of the battlefield, it is unrealistic (not to mention unfair) to expect soldiers to perform the interpretive processes flawlessly (Schulzke 2016, p. 188). Thus virtues, good character, and practical wisdom must support interpretation. Moreover, while rules have their place, rule-following for rule-following's sake can "impede the ability to see the moral aspect of what one is doing" (Olsthoorn 2021, p. 115). Rules must admit of exceptions, but how can one tell when the exceptions apply? Good character and sound judgement grounded in practical wisdom recommend themselves once more as a means of aligning decisions with the values that the rules are taken to embody (Sparrow 2013, p. 85). In short, practical wisdom is necessary for the interpretation of the rules that military life cannot do without.

3 The Demise of Virtue, the Rise of Rules

Virtue-based approaches to military ethical thinking suit battlefield soldiers well. But what disruptions occur as we shift attention to soldiers operating in conditions of radically reduced risk (e.g., remote UAV pilots)?

3.1 Sparrow on the Martial Virtues

Sparrow (2013) makes a forceful case for the growing irrelevance of traditional martial virtues. *Courage* is often seen as overcoming fear, yet remote UAV pilots, operating thousands of kilometres from danger, have nothing to fear and therefore no need of courage (ibid., p. 93). *Loyalty* "involves a willingness to bear risks and make sacrifices for the sake of that to which one is loyal" (ibid., p. 90), yet UAV pilots bear no risk and sacrifice nothing. Further, UAV pilots "train and work alongside others, but they do not *fight* alongside them" (ibid., p. 96).[13] As such, they cannot show loyalty *to* their comrades and, being at no risk, have no need of loyalty *from* their comrades (ibid.). *Honour* is a virtue that motivates ethical conduct, "encouraging warfighters to abide by the principles of *jus in bello*" (ibid., p. 91). However, there may seem to be "something inherently dishonourable" (ibid., pp. 98–9) about killing remotely at zero risk of retaliation (though Sparrow acknowledges (ibid., p. 99) this intuition is "remarkably hard to unpack"). Finally, *mercy*—refraining, out of compassion, from delivering justifiable harm (ibid., p. 92)—is undermined because, from a practical

[12] See note 28 below.

[13] As per footnote 6 above, it is critical to recall that Sparrow's arguments clearly do not map to *all* UAV pilots, as some—e.g., first-person-view drone pilots in Ukraine—very much are "on the fighting line" alongside other frontline combatants. However, Sparrow's point does hold relevance for any remote operators, which in advanced militaries, may form a large portion of UAV pilots.

perspective, remote UAV pilots often target and kill enemies 'by committee', as part of a team, and therefore the decision to refrain may not be available to them individually. More generally, mercy requires *compassion*, but remote UAV pilots are argued to not stand in the right kind of relations to their targets—who are reduced to pixels on a screen or an algorithmically compiled profile—to feel genuine compassion toward them (ibid., p. 101).

These factors suggest that the traditional martial virtues may be out of place for modern warfighters such as remote UAV pilots—they may even have *no place* for such combatants. If so, a significant reconception of military virtue is necessary. Perhaps some virtues can be reconceived while others should be abandoned altogether; but, on Sparrow's view, radical reconsideration of virtue in modern warfighting roles is needed. *Reconception*, on this view, is true.

3.2 Renic and Schulzke on Rules

If Sparrow's arguments point to the demise of virtue, as traditionally understood, Renic's and Schulzke's point to the rise of rules for military ethical thinking in conditions of radically reduced risk. This takes us beyond *Reconception* and toward the thesis of *Rebalancing*.

A willingness to expose oneself to physical danger has traditionally been seen as the "principal basis for [the warrior's] ethical right to kill" (Renic 2018, p. 189). The growing irrelevance of physical courage as a virtue therefore threatens to undermine the legitimacy with which warriors fight. Yet Renic (2020) argues that as the warrior ethos has evolved, responsive to the development of technologies and practices of increasingly radical risk-reduction (e.g., submarines, sniping, aerial bombing and, now, UAVs), it has come to focus on *combat responsibility*. This is understood as a soldier's "professionalism and adherence to the explicit rules and standards of war…, an expectation of restrained, humane, and professional conduct among fighters" (Renic 2020, pp. 59–60). In effect, what it means to be a good soldier has evolved from a virtue-driven account anchored in acceptance of physical risk to a more rules-based account grounded on compliance with the laws of armed conflict, rules of engagement, and so forth. In this way, soldiers fighting under conditions of radically reduced risk maintain their ethical status, as encapsulated in the warrior ethos, even though the relevance of the virtues that have traditionally been central to that ethos is increasingly waning (Renic 2018, pp. 193–195).

Schulzke's (2016) argument attends more directly to the relative merits of rules and virtues.[14] Suppose, for the sake of argument, that neither a virtue-based nor a rules-based approach to moral decision-making is preferable overall. Still, Schulzke effectively argues, rules-based approaches have at least one significant advantage: they promote transparency and uniformity of action (Schulzke 2016, p. 199). This is important for two reasons. First, rules reduce uncertainty regarding what to do in a given situation, because deriving the required action from a codified rule is simpler than deriving it from an unconstrained virtue (ibid.). This not only aids individual decision-making, but promotes consistency across the organisation which, in turn, aids planning and coordination. Second (ibid.), the transparency of rules—that it is easier to evaluate an action's conformity to a codified rule than to evaluate whether it was genuinely virtuous—simplifies oversight and evaluation of soldiers'

[14] Schulzke does not present his argument in the form in which we have reproduced it. The reproduction is, to the best of our understanding, faithful.

actions (since it does not require assessing character and motivation, which is far from straightforward).

If a rules-based approach is, other things equal, preferable to a virtue-based one, then it should be said that, for battlefield soldiers, other things are *not* equal. Amid the immense pressures of the battlefield, rules can be stiflingly rigid and difficult to interpret. However, remote UAV pilots operate in environments more conducive to making challenging decisions well, with far greater opportunity for rest and downtime (Schulzke 2016, pp. 198–200).[15] The costs to them of getting decisions wrong can often be far lower than the analogous costs to battlefield soldiers (ibid., pp. 198−99). On the battlefield, a delayed decision could result in death or injury; for a remote UAV operator, delaying the decision to (say) attack an unconfirmed target confers no risk of injury whatsoever.[16] So, while it may be challenging for remote UAV pilots to interpret the rules that apply to them, they are typically well-placed to meet those challenges; thus more, and more demanding, rules—the kind it would be unfair to impose on battlefield soldiers—can and should be imposed on them (ibid., pp. 199–200).[17] More broadly then, as military technologies of radical risk-reduction proliferate, it is necessary to rebalance the respective weights of virtue- and rules-based accounts such that the latter become the dominant influence on military ethical thinking. In other words, on these accounts, *Rebalancing* is true.

4 Defusing the Concerns

If the arguments above are sound, the proliferation of technologies of radical risk-reduction is disruptive in one or both of two senses. First, it renders the traditional martial virtues close to irrelevant. This inspires the thesis of *Reconception*. Second, it brings about fighting conditions—characterised by the absence of risk of physical harm—which best suit a rules-based approach to military ethical thinking. This inspires the thesis of *Rebalancing*. In this section, however, we defuse the concerns that appear to motivate *Reconception* and *Rebalancing*.

4.1 Defusing Reconception and the Irrelevance of the Martial Virtues

Sparrow argues that four martial virtues—courage, loyalty, honour, and mercy—are of limited or no relevance to UAV pilots. We briefly address each.

[15] Again, per footnote 6 above, not all UAV pilots will enjoy such relative safety.

[16] There is likely no risk of injury *to the drone operator*, but there may be risks to allied forces or civilians if the operator passes on a strike, especially if the strike is not expected to be possible later. This point merits further discussion which, unfortunately, is beyond our scope here.

[17] This is not to say that UAV pilots operating from safe(r) positions incur *more* legal or moral duties than frontline combatants do, but rather that frontline combatants' duties may be tempered by the realities and necessities of frontline fighting. All combatants are bound by the same rules, legal and moral, but the needs of basic survival will grant frontline combatants some leeway and permissiveness in dispensing with obligations of, for example, due care (on which see Woodruff (1982). Remote UAV pilots will not enjoy any of this permissiveness, however, creating a comparative difference in the number and strength of duties conferred on each. Thanks to Maciek Zajac for pressing us on this point.

4.1.1 Courage

Courage requires overcoming fear, which UAV pilots, according to Sparrow (2013, pp. 93–95), need not feel. But while remote UAV pilots may not need to overcome fear of *physical* harm, fear of other harms—of letting down one's comrades or oneself, of psychological harm, of acting unethically, of moral injury, etc.—may necessitate other forms of courage, such as *moral* courage (Kirkpatrick 2015a).

Sparrow (2013, pp. 93–94, 2015, pp. 224–225) counters that alternative forms of courage are not distinctively *martial*:

> The absence of physical risk matters. […] While drone operators may fight wars, they do not 'go to war', and while they may kill people, they do not engage in combat.[18] For this reason, the courage they display does not appear to be an especially 'martial' courage. (Sparrow 2015, p. 224)[19]

However, in focusing so narrowly on physical danger, Sparrow overlooks the fact that throughout history and for many combatants, "comradeship [is] stronger than fear of death" (Holmes 2003, p. 300), and showing courage often has more to do with the willingness to overcome *any* obstacles to helping one's comrades, rather than exclusively *physical* obstacles.[20] Indeed, the psychologist Norman Dixon, who served as a Lieutenant in World War II, noted that much of military training and codes of conduct are responsive to "the paradox that most men have more physical courage then they do moral courage, and regard the possibility of death or injury with less terror than they do the probability of disgrace" (ibid., p. 301, referencing Dixon 1976). Training aimed at developing courage is, therefore, arguably always also concerned with *moral courage*, with the ability to overcome vicious or disgraceful impulses and do what one knows to be right. The courage we teach soldiers is the courage to overcome *whatever it is*—physical or otherwise—that may be preventing them from going over the top, making the jump, or pulling the trigger when their comrades need them to. Physical courage is a part of courage, but only a part.

4.1.2 Loyalty and Honour

Recall that, for Sparrow, since risk-free killing is incompatible with the norms of combat, such killing is *not* combat, and thus martial virtues such as loyalty and honour are not relevant to it. Sparrow says, for instance, that it is dishonourable to kill those whom "one is observing on a video screen from thousands of kilometers away and who have no opportunity to return fire" (ibid., pp. 98–9).

In response, it is helpful to consider scenarios where an enemy is routing. If enemy units have broken, their soldiers, fleeing pell-mell, may have no opportunity to return fire *in that moment*; but they will have such an opportunity once they have regrouped. This is why fleeing soldiers are legally (and, we would argue, ethically) targetable. One may find it

[18] We omit the citation Sparrow provides here.

[19] In response, Kirkpatrick (2015a, b) insists, in effect, that since UAV pilots' violence *is* combat, the courage they show *is* martial. The Sparrow-Kirkpatrick debate thus ends in deadlock.

[20] Insofar as this point touches on supporting one's comrades, it carries over to our responses to Sparrow on loyalty and honour below.

personally distasteful to 'shoot a man in the back', but there is simply no honour gained by allowing a broken enemy group to reform and counterattack. Soldiers may fight or surrender: if they have not surrendered, they are fair game. To deem firing upon such enemies dishonourable, simply because their backs are turned, would call into question whole swathes of warfare, modern or otherwise.

Similar points pertain to loyalty. UAV pilots' actions may very well still be protective of comrades-in-arms or other allies—just not ones an arm's-length away on a firing line. There is little moral or philosophical reason to limit loyalty to only proximate individuals. Indeed, a significant portion of basic military training and indoctrination aims at instilling loyalty to larger and more amorphous things like 'the regiment', 'the Army', 'the State', or 'the Constitution'. So long as warfighting, proximate or distanced, aims at protecting and preserving such entities, loyalty will be relevant to UAV operators.

4.1.3 Mercy

Mercy requires compassion but this, Sparrow claims, "is most fundamentally a response to the needs of the concrete other—to a particular person in a particular time and place" (Sparrow 2013, p. 101). It is unclear that the sensors, screens, and other devices by which UAVs are guided, are "capable of communicating the moral reality necessary to ground compassion" or of "transmitting enough of the humanity of their targets to allow genuine mercy" (ibid.).

This argument rests on claims about representation that would require lengthy defence which Sparrow—understandably—does not provide. As a first response then, we will simply state the opposing intuition. Many people live lives of immense suffering, ravaged by disease, war, destitution and the like. Is the fact that one cannot touch, see, hear, smell, name (etc.) these people any fundamental obstacle to feeling compassion toward them? Intuitively, it is not.

More concretely, there is recent evidence of remote warfighters showing compassion. In 2023, after being hunted up and down his trenchworks by Ukrainian drones, Russian draftee Ruslan Anitin came out, raised his hands, and pleaded to be spared. The Ukrainian drone pilots were suspicious, fearing a trick or trap, but they hesitated to strike, and after officers of Ukraine's 92nd Mechanized Brigade conferred briefly, they gave the order for Anitin to be taken prisoner. Shortly after, he was guided to Ukrainian positions and taken into custody. Most starkly though, the Ukrainian drone pilot who initially made contact with Anitin stated his own view clearly, "Despite that he is an enemy, even though he has killed our boys, I still felt sorry for him" (Kalin and Coles, 2023). UAV pilots may have different opportunities and capacities for mercy, but they still clearly have these, and the virtue of mercy remains relevant.[21]

We acknowledge that the evolution of fighting conditions necessitates some degree of reconceptualization of virtues such as courage, loyalty, honour and mercy. However, the extent of this reconception is far less severe than scholars such as Sparrow suggest. What is primarily needed are not wholesale reconceptions but identification of updated exemplars and narratives—more stories, like that of Anitin's surrender, that demonstrate how virtues are applicable to modern contexts.[22]

[21] See also Wallace et al. (2023) for discussion of surrender in increasingly technologically mediated warfare. Cf. Zajac (2022b) for a critical view on the risks of overvaluing mercy in modern warfare.

[22] The real-time lessons from the Russo-Ukrainian conflict may also have bearing on other aspects of modern warfighting such as cyber- and information-warfare and how virtues may be entrenched in these areas as

4.2 Defusing the Argument for Rules and Rebalancing

Renic's account of the evolution of the warrior ethos (which we do not dispute) suggests a greater role for rules due to the increasing prominence of combat responsibility. Yet it is not clear that, in this, it supports *Rebalancing* over *Reconception*. For one thing, Renic's account is in large part descriptive: it tells how the warrior ethos has developed, but not whether that development is for the best.[23] More fundamentally, Renic's account tells of the relative decline of virtues involving physical courage and the willingness to embrace risk, but it says little about the role of other virtues in the warrior ethos, nor of the relative weights of virtue- and rules-based components therein. It does not, therefore, support *Rebalancing*, because everything that Renic says about the evolution of the warrior ethos is compatible with virtue ethics retaining its dominant position in military ethical thinking.

Schulzke's pro-rules argument turns on the claim that, other things being equal, a rules-based approach is preferable to a virtue-based one. This is supported by the observation that rules reduce uncertainty, promote uniformity of action and, in turn, make it easier to oversee and evaluate UAV pilots' actions. But although rules *seem* more concrete than virtues, we must carefully consider the challenges inherent to interpreting rules. Here, the devil is in the details.

First, notice that, in simple moral decision-making, where rules require *little* interpretation (i.e., are relatively transparent), it is plausible that the recommendations of virtue will likewise be relatively concrete and straightforward (hence relatively transparent). While in difficult moral situations, where the recommendations of virtue are unclear (i.e., not transparent), it is plausible that applicable rules will likewise require complex interpretation (i.e., they are only superficially transparent). It is thus not clear, in such cases, that rules are more concrete or transparent than virtues.

Moreover, if in some moral decision-making scenario, the respective transparencies of the applicable rules and virtues were to differ significantly—for example, if the recommendations of virtue were very unclear but the recommendations of the rule were very clear—that would constitute good reason to suspect the rule of leading one astray. At the very least, it would be rash to follow such a rule without further reflection. Olsthoorn (2021) makes this point very clearly. Rules are not to be followed blindly: when, e.g., law and ethics prescribe different standards, the higher is to be followed. Accordingly, rules should "leave soldiers with some leeway in […] decision-making", and proper use of that leeway presupposes good character (Olsthoorn 2021, pp. 115–116).

Further, Schulzke appeals to a double-standard in insisting that evaluating whether an action was virtuous requires an assessment of the agent's character but that evaluating rule-compliance does not (2016, p. 199). Schulzke is right that, on virtue ethics, virtuous action flows from a virtuous character (and an action is not virtuous if it does not). But is he interested in the evaluation of action or motivation or both? If action, then rule- and virtue-compliance alike are simply a matter of the conformity of an agent's pattern of behaviour with the conduct prescribed by the rule or virtue. If motivation, then on deontological rules-based approaches we must ask: did the agent act out of (genuine) respect for the rule, or merely in conformity with it? And there is no reason that assessing an agent's motivations should be any less difficult on deontology than on virtue ethics. So, there is no advantage for rules here, and so no conclusive argument for *Rebalancing*.

well. Exploration of these is unfortunately beyond the scope of the current work. Thanks to an anonymous reviewer for bringing up these points.

[23] Renic's (2020) argument against certain forms of UAV violence turns on the relation between riskless warfare and just war theory (rather than the warrior ethos).

The proponent of *Rebalancing* may at this point shift tack, insisting that technologies of radical risk reduction, like UAVs and AWS, distinctively rely on the allocation of the different parts of a combat engagement to distinct moral agents, and that it is in the context of *this* compartmentalisation that the advantages of rules over virtues come to the fore. This is because multiple agents working in concert toward a single goal have greater need of consistency and transparency. For example, when, say, one drone team performs surveillance to determine that a target is a combatant, another team identifies civilians present, another team carries out proportionality calculations, and a fourth is tasked with the actual delivery of an agreed-upon weapons payload, it may be more important that each actor involved follows the same (or coordinated) rules, rather than each being similarly virtuous.

It should be noted, in response, that military planning has long relied on collaboration of this kind (for example, intelligence operatives gathering real-time information, analysts analysing it, planners exploiting it to develop missions, lawyers helping with weaponeering and legal analysis of intended strikes, and, ultimately, combatants carrying out those missions and strikes). And the list of combatants carrying out those missions will also often include pilots, artillerymen, infantry, etc., all of whom likewise have distinct roles to play. All along this chain though, individuals are expected to act with integrity, honour, courage, judgment, etc. And most of the discrete tasks which go into a particular mission, from the first piece of intel to the last bomb dropped, allow for the demonstration of these virtues. Moreover, each task given to an individual will have discrete choices which may not be straightforwardly amenable to a rules-based account, or which require an onerous (and equally opaque) interpretation of some rules. So, while the nature of remote warfighting might entail additional compartmentalization of some tasks and perhaps a reliance on different or additional rules, this will be, at most, a difference in degree, rather than of kind, in how military planning and execution is (and always has been) undertaken. As such, this does not provide substantive support to *Rebalancing*.[24]

5 A Deflationary Account of Moral Disruption Due To Military Technologies of Radical Risk-Reduction

Though the previous section defuses the arguments supporting *Reconception* and *Rebalancing*, we do not dispute that technologies of radical risk-reduction cause some kind of moral disruption. The challenge of this section is to identify the source of this disruption and to indicate measures to mitigate it.

What kind of disruption ought we expect? The arguments above derive the need to shift to a rules-based approach to military ethical thinking from the radical reduction of risk. This is to infer a change in *kind* (of ethical approach) from a change in *degree* (of risk). This, it seems to us, is telling. If risk were reduced so much that fighting became *illegitimate*, one could plausibly argue that since there had been a change from one *kind* of fighting (legitimate combat) to another (mere killing), a change in *kind* of ethical approach was called for (on which, see Kahn (2002). But then, when risk reduction is (merely) a matter of degree, we should predict that the associated moral disruption will also be (merely) a matter of degree.

We suggest that an account of the moral disruption in question should begin from the familiar observation that soldiers operating under conditions of radically reduced risk are subject to far fewer and less extensive cognitive constraints than battlefield soldiers. We agree with Schulzke

[24] Many thanks to an anonymous reviewer for pressing us to explore this objection.

(2016, pp. 198–200) that, on this basis, it is reasonable to hold the decision-making of these soldiers to a higher standard than that of battlefield soldiers.[25] [26] Yet where he draws support for *Rebalancing*, we draw only the conclusion that soldiers operating under conditions of radically reduced risk are better placed to engage in complex moral deliberation. This, on our view, is the *full* extent of the moral disruption caused by technologies of radical risk-reduction. There is no case for *Rebalancing*, no case for a strong version of *Reconception*. Insofar as some reconception is required, only minor revisions of soldiers' techniques of moral deliberation are required.

To make this case, we start by revisiting the supposed suitability of a virtue-based approach to moral deliberation for battlefield soldiers. Suppose that a battlefield soldier faces the decision whether to interrupt his attack on an enemy position to rescue a wounded comrade. On a rules-based approach, the soldier would have to identify the rule that best applied and conduct a delicate assessment of criteria pertaining to its application, before deciding whether (or how), on that basis, it applies. Given the exigencies of the situation, this would be unfeasibly difficult and time-consuming. By contrast, a virtue-based approach would have the soldier rapidly decide what to do based on his virtues, good character, and assessment of factors specific to the situation (the importance of capturing the enemy position, his obligations towards the wounded comrade, the implications of choosing one option over the other, and so forth). His right action would flow naturally, straightforwardly—almost instinctively—from his virtuous character. When people of good character recognise the right course of action—which, being virtuous, they often and reliably do—they are by character motivated to carry it out.

If this seems like a caricature, that is because it *is*. It assumes the virtuous soldier can just *see* (or at least rapidly figure out) the right thing to do. But on the assumption that the situation is amenable to such rapid resolution, it is mere prejudice to suppose that a similarly well-trained soldier would not be able to rapidly identify, interpret, and apply the applicable rule. We cannot base the case for virtue ethics only on *easy* cases, i.e., in which it is relatively obvious what one should do: we must also attend to *hard* cases, such as moral dilemmas. A hard case is, by definition, one in which a well-trained soldier's virtuous character is unlikely to rapidly reveal what to do. It is one in which only careful, artful deliberation can recommend the optimal course of action (and even then, will often get it wrong). There is no inherent reason why the virtues should be any better, faster, or more reliable a guide to action than rules in such scenarios.[27]

It may seem that virtue ethics has an ace up its sleeve in the shape of practical wisdom. In Sect. 2, we characterised practical wisdom as the ability to recognise and weigh morally salient features of situations and, considering these features, to deliberate well about how best to act. Defined like this, virtue ethics plainly has no monopoly on practical wisdom: the deontologist, consequentialist, or proponent of *any* viable normative theory must—and can—appeal to some capacity which moral agents have or can develop that enables them to deliberate well on what to do. Fisher (2011), for instance, is a consequentialist, yet he argues at length that military professionals should be trained in practical wisdom (which he defines as a habit of judgment that tends toward the promotion of welfare and reduction of suffer-

[25] See notes 7 and 17. The point is not that there is literally a higher standard, but that we should be more forgiving of mistakes, errors, failure of judgment and the like *on the battlefield* than in remote combat conditions.

[26] In line with Woodruff (1982), reduced risk may also allow for soldiers to discover genuine justifications for carrying out certain violent actions in war, rather than merely excuses. Thanks to an anonymous reviewer for suggesting this point.

[27] This is, in a certain sense, the inverse of the argument against rule-based approaches in Subsection 4.2.

ing). Practical wisdom, in this sense, is not exclusive to virtue ethics but can be accounted for in theory-neutral terms. Reflection on battlefield decision-making does not, therefore, provide support for virtue ethics in particular. It merely shows that the more practical wisdom—theory-neutrally defined—a soldier has, the better-equipped they will be to deliberate well about the moral challenges they encounter.[28]

Certain aspects of practical wisdom may become more important as risk is reduced. Battlefield soldiers must be proficient at sizing up salient factors quickly when under pressure, while soldiers operating under conditions of radically reduced risk may have more need of proficiency in such things as relatively detached proportionality calculations.[29] Soldiers may have to be skilled not only in assessing proportionality for themselves, but also at evaluating proportionality assessments made by AI-enabled or other systems. Here, intellectual virtues may be as important as moral ones. In remote combat operations, as elsewhere across military practice, the involvement of AI-enabled and/or autonomous systems gives rise to challenges that may call for specific intellectual virtues. Soldiers operating remotely must cultivate forms of *epistemic vigilance* (Sperber et al. 2010) with respect to the tools, systems, and algorithms on which they rely, maintaining critical awareness of technological limitations; they must cultivate *intellectual self-awareness*, and balance *intellectual humility* with *epistemic autonomy*, in order to correctly balance AI-enabled systems' superior capabilities in certain respects with appropriate scepticism about its contributions in areas where it is less competent (e.g. decisions involving moral understanding). There is, otherwise, a serious risk of *automation bias*, which Johnson (2022) identifies as particularly dangerous in high-stakes environments. Perhaps surprisingly, varieties of the virtue of *testimonial justice*, as developed initially by Fricker (2009), may assume increased importance as it becomes necessary to consciously compensate for a tendency to put too much trust in algorithmically generated data, or not enough trust in the testimony of one's comrades (especially subordinates).

Through all this, the importance of maintaining soldiers' specifically *moral* investment in the process is essential. As Renic (2024) notes, there is a genuine danger that the "growing technification of violence and war" (p. 250) will undermine what he calls the 'tragic imagination', sensitivity to the sometimes indiscriminate destructiveness of war, its unpredictability, and the inevitability of insoluble dilemmas. Thus, in adverting to the underexplored need to focus on military *epistemic* virtues, we in no way minimise the importance of military *moral* virtues. The two are entwined beneath the umbrella of practical wisdom and, as Vallor (2016) has urged, *technomoral wisdom*, i.e. "integrated moral expertise that expresses successfully—and in an intelligent, informed, and authentic way—each of the other virtues of character that we, individually and collectively, need in order to live well with emerging technologies" (p. 154). All of this is, of course, easier said than done.[30] We are here calling for further research, as opposed to proposing fixed solutions.

[28] The importance of developing soldiers' practical wisdom, as a means of ensuring that they can address moral challenges in ways that honour the military's core values has, we suggest, been erroneously conflated with the idea that professional military ethics education programmes should be primarily based around virtue ethics (Robinson et al. 2008). Arguably, this is not unconnected with the noted tendency of military ethics education programmes to inadequately distinguish virtues from values (cf. Robinson 2008, pp. 5–6).

[29] It is widely argued that UAV pilots—or those who deploy them—have greater need of virtues associated with restraint (Enemark 2014; Olsthoorn 2021; Renic 2020; Schulzke 2016). We agree that restraint is called for, but this falls under the umbrella of practical wisdom—plausibly as part of a capacity to judge proportionality.

[30] Robinson (2008, p. 8) is explicit that "military educators tend to be poor at instilling" practical wisdom, and the same presumably goes for other complex virtues.

6 Conclusion

We have argued that the centrality of practical wisdom to moral deliberation implies nothing, on its own, about the relative merits of virtue- and rule-based approaches to military ethical thinking. Soldiers operating under conditions of radically reduced risk typically have more time for deliberation, less environmental stress, less (perhaps zero) risk of physical harm, and fewer cognitive constraints. They are far better placed to engage in complex moral deliberation than battlefield soldiers: *this* is why we are justified in being more demanding of their moral decision-making. And this is, in outline, our account of the moral disruption caused by military technologies of radical risk-reduction.

It follows from our account that military ethics education programmes should focus on instilling practical wisdom, which is a core virtue. Since practical wisdom can be characterised in theory-neutral terms, it should be prioritised by military educators regardless of the normative approach they endorse. (It seems to follow from our account that communicating a specific normative approach is less important than focusing on core values and how, in practical terms, to achieve or honour them).

In closing, we acknowledge that technologies of radical risk-reduction are morally disruptive. Yet new military technologies have always been morally disruptive, and what counted as 'courageous' or 'honourable' has shifted through the centuries (Renic 2020). While there is a disruption when new radically risk-reducing technologies enter warfare, on our account the extent of the moral disruption is simply that they enable soldiers to operate in contexts more conducive to moral deliberation and that, therefore, these soldiers' moral performance should be held to more demanding standards than that of battlefield soldiers. Less deflationary accounts, such as *Rebalancing* and *Reconception* (at least in its stronger versions), are thus unmotivated—or so we have argued.

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