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And Next Please? The Future of the NLW Debate

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AND NEXT PLEASE? THE FUTURE OF THE NLW DEBATE

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Given the current face of emerging technologies in the media, and given the lack of prominence of stories and discourse about non-lethal weapons except in relation to domestic policing issues, one might wonder what direction the debate over non-lethal weapons as an emerging technology will take. This piece is designed to move along the conversation and think creatively and proactively about where the conversation needs to go. While non-lethal weapons have their own unique features, it is useful to frame the issues in terms of the questions and ethical problems that these emerging technologies raise, especially targeting, discrimination, and risk. Many of the same ethical issues also apply to other emerging technologies, framing a larger discourse about the future direction of war and the evolving ethical implications.

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I. INTRODUCTION

When reviewing the recent discourse on emerging technologies and warfare in the popular press, several things immediately come to the fore. First, there is the debate about the use of drones (Unmanned

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Aerial Vehicles or UAVs) in the Global War on Terror, particularly in relation to the targeted killing of Anwar al-Awlaki and others in Pakistan and Yemen.[2] While targeted killing can be, and has been, conducted without drones,[3] the use of UAV technology has sharply galvanized debate on the practice.[4] Part of the reason for this sharpening may well be that such technology raises questions about the increasing automation of warfare, and the extent to which humans seem increasingly removed and remote in warfare. This physical and psychological removal of combatants from the battlefield increases the possibly of moving armed conflict toward full automation, raising serious implications for the morality and laws of war, not to mention the very nature of war itself.

Second, there are increasing concerns about cyberwarfare, especially with regard to serious hacking threats from China[5] and Iran,[6] in addition to threats from non-State actors.[7] In his discussion of asymmetric warfare, Rod Thornton notes that China has been quite explicit about its intention to use informational warfare, disrupting important infrastructure and informational systems, to cripple the U.S. military.[8] Indeed, these threats are serious because it does not take a large threat in order to create a great effect.[9] Technology is absolutely integral to both the American Way of War and the American Way of Life. The dependency of both the U.S.

2. Jonathan Masters, *Targeted Killings,* COUNCIL ON FOR. REL. (May 23, 2013), http://www.cfr.org/counterterrorism/targeted-killings/p9627.

3. *See id.*

4. *See generally*, Ben Lerner, *UAVs and Force: Current Debates and Future Trends in Technology, Policy, and the Law*, CTR. FOR SEC. POL'Y (Oct. 23, 2013), http:// www. centerforsecuritypolicy. org/ 2013/ 10/21/lerner_uavs-and-force/.

5. *See* WILLIAM HAGESTAD II, 21ST CENTURY CHINESE WARFARE 9–21 (2012) (summarizing the cyberwar threat from official entities of the Chinese government).

6. *See generally, Iranian Cyber Threat to the U.S. Homeland: Joint Hearing Before the Subcomm. On Counterterrorism and Intelligence and the Subcomm. On Cybersecurity, Infrastructure Prot., and Sec. Techs. of the Comm. On Homeland Sec. H.R.*, 112th Cong. (2012) (addressing the concerns of Congress related to potential digital attacks from Iran or allied non-state groups such as Hezbollah).

7. *See, e.g.*, *McCaul Op-Ed: Hardening Our Defenses Against Cyberwarfare*, COMM. ON HOMELAND SEC. (Mar. 6, 2013), http:// homeland.house.gov/news/mccaul-op-ed-hardening-our-defenses-against-cyberwarfare-wall-street-journal.

8. ROD THORNTON, ASYMMETRIC WARFARE: THREAT AND RESPONSE IN THE TWENTY-FIRST CENTURY 62–63 (2007).

9. *Id.* at 63.

military and civilian infrastructure on technology highlights the vulnerability that such threats expose.

Third, there are various groups—Hamas, Islamic State (IS), and al-Qaeda to name but a few—making extensive and effective use of social media for recruiting purposes, to get their message out, and to influence the actions of both state and non-state actors.[10] Twitter, You Tube, Facebook, and other social media are the preferred platforms, and were used by both Israel and Hamas during the recent Gaza conflict,[11] as well as by IS, al-Qaeda, and their affiliates to broadcast events like the execution of journalist James Foley.[12] Minority groups in Syria, Iraq, and various parts of Africa (such as Sudan, Congo, and Nigeria) have also used social media to bring attention to human rights abuses, such as potential or current ethnic cleansing and genocide, to influence public opinion, debate, and ultimately policy decisions at very high levels.[13]

Given that this is the current face of emerging technologies in the media, and given the lack of prominence of stories and discourse about non-lethal weapons (NLW) except in relation to domestic policing issues, one might wonder what direction the debate over NLW as an emerging technology will take. This piece is designed to move along the conversation and think creatively and proactively about where the conversation needs to go. While NLW have their own unique features, it is useful to frame the issues in terms of the questions and ethical problems that these emerging technologies raise, especially targeting, discrimination, and risk. Many of the same ethical issues also apply to other emerging technologies, framing a larger discourse about the future direction of war and the evolving ethical implications.

II. NON-LETHAL WEAPONS AS AN EMERGING TECHNOLOGY

A core element of the debate surrounding NLW as an emerging technology is whether NLW still qualify as an emerging technology or

10. *See, e.g.* Jillian Kay Melchior, *ISIS Tactics Illustrate Social Media's New Place In Modern War*, TECH CRUNCH (Oct. 18, 2014), http://www.msn.com/en-us/news/technology/isis-tactics-illustrate-social-media%E2%80%99s-new-place-in-modern-war/ar-BB9gH4R.

11. *See, e.g.* Jodi Rudorin*, In Gaza, Epithets Are Fired and Euphemisms Give Shelter*, N.Y. TIMES (July 20, 2014), http:// www. nytimes. com/2014/07/21/world/middleeast/in-a-clash-between-israel-and-gaza-both-sides-use-social-media-to-fire-epithets-and-hide-behind-euphemisms.html.

12. *See* Melchior, *supra* note 9.

13. *See Global Agenda Councils: Emerging Technologies*, WORLD ECON. FORUM, http:// reports. weforum.org/ global-agenda-council-2012/ councils/emerging-technologies/ (last accessed Mar. 23, 2015).

if they have passed into the realm of existing technologies. According to the Institute for Ethics and Emerging Technologies, "Emerging Technologies are ones that: arise from new knowledge of the innovative application of existing knowledge; lead to the rapid development of new capabilities; are projected to have systemic and long lasting economic, social and political impacts; create new opportunities for and challenges to addressing global issues and have the potential to disrupt or create entire industries."[14] While this definition is not perfect, it addresses an essential point that there is something transformative and potentially radical about the technology relative to other technologies that are already present and in use.

NLW have been used in various combat contexts since at least the 1990s. Beginning with Somalia[15] and the former Yugoslavia,[16] commanders requested NLW to address asymmetric armed conflict situations that presented significant risks to civilian populations, such as peacekeeping, humanitarian interventions, counterinsurgencies. Commanders also requested NLW for use in conflicts where political limits on combat action made having multiple levels and kinds of force available essential to a successful mission, such as in Iraq in the mid-2000s.[17] The question of what exactly constitutes a NLW is complicated, but, generally, NLWs are not intended to kill, permanently injure, or maim; rather, any effects are intended to be temporary, minor, and reversible.[18] While some kinds of NLW have been in existence for quite some time, the current generation of NLW was first tactically employed by U.S. Marines in Somalia in the 1990s.[19] The U.S. Directorate on Non-Lethal Weapons was established in 1996 to head up efforts by the Department of Defense to develop, evaluate, and employ NLW in U.S. military operations.[20] At the present time, NLW include low-impact bullets, foams, nets, lights, noise, and gas grenades. Currently in development and testing are a variety of other kinds of weapons, including: directed energy systems;

14. Mike Treder, *The Definition of Emerging Technologies*, INST. FOR ETHICS & EMERGING TECHS. (Dec. 6, 2010), http:// ieet.org/ index.php/Ieet/more/treder20101206.

15. Pauline Kaurin, *With Fear and Trembling: An Ethical Framework for Non-Lethal Weapons*, J. MIL. ETHICS 100, 102 (2010).

16. *See* Linda D. Kozaryn, *U.S. Troops in Bosnia Get Nonlethal Weapons*, U.S. DEF. DEP'T (Sept. 5, 1997), http:// www. defense. gov/ news/ newsarticle.aspx?id=41128.

17. PAULINE KAURIN, THE WARRIOR, MILITARY ETHICS AND CONTEMPORARY WARFARE: ACHILLES GOES ASYMMETRIC (2014).

18. *See* Kaurin, *With Fear and Trembling*, *supra* note 14, at 102.

19. *Id.*

20. *Id.*

lasers; electromagnetic power to degrade equipment; light weapons; sticky foams; pheromones; and vinyl nets deployed by mines capable of stopping vehicles.[21] There is also progress on systems that can disable or neutralize vehicles, optical distracters, focused acoustics, Active Denial Technology (ADT), and laser induced plasmas.[22]

The aim of all of these weapons is to provide increased flexibility and response time on the part of military personnel, and to find ways to neutralize a battlefield threat without having to resort to lethal or less-than-lethal force. Advocates of NLW highlight their benefits in environments like Iraq, which presented the following kinds of situations: military units operating in urban or mixed areas where it was not clear which individuals were combatants and which were non-combatants; at vehicle checkpoints where it was advisable to be able to assess the intent of individuals and vehicles from a safe distance, given the prevalence of IED and suicide bombing tactics; and in areas where one wanted to lessen the impact of war on non-combatants to help "win hearts and minds" so as to facilitate the restoration of peace and foster long-term stability in the region.[23]

Given the history and relatively slow development of NLW, with limited funds and more limited political visibility than other technologies, it seems that there are other technologies that better qualify as emerging. This is especially true of long-lasting impacts and new opportunities for impact on global issues if we think about how these three technologies have driven public debate and policy concerns over the last couple years. In the 1990s, NLWs were clearly emerging in the sense of the definition above and were recognized as having, potentially, a fairly radical effect on non-traditional military contexts (peacekeeping, humanitarian intervention, and counter-insurgency). During this period, the debates on NLW were significant and publicly visible, with a few even raising the specter of the NLW as a substitute for lethal force, constituting a possible revolution in military affairs.[24] However, the Department of Defense policy that emerged in the late 1990s clearly set strict parameters on their use and made clear they were an augment to, and not a substitute for, lethal force, thus maintaining the lethal force combat paradigm with an emphasis on benefits for force protection.[25]

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21. *Id.*at 102–03.

22. *Id.* at 103.

23. *Id.*

24. Steven Metz, *Non-Lethal Weapons, A Progress Report*, JOINT FORCE Q., Spring/Summer 2001, at 18, 19.

25. *See* LT. COL. TIMOTHY J. LAMB (USA), EMERGING NON-LETHAL WEAPONS TECHNOLOGY AND STRATEGIC POLICY IMPLICATIONS FOR 21ST CENTURY WARFARE 7 (1996).

What is emerging about NLW, however, is the way in which they have shaped the discourse around ethics and war in ways that also apply strongly to other emerging technologies. First, NLW highlight the risk averse and zero-casualty nature of contemporary, warfare, especially asymmetric warfare. Second, they raise many of the same issues found with other emerging combat technologies, especially in terms of targeting and discrimination of non-combatants. Third, NLW are emerging technologies in the sense that they can challenge and change the standard military doctrine, lethal-combat-oriented force as the dominant mode of war, requiring a rethinking role of lethality in war.

III. Ethical Ramifications of the Use of Non-Lethal Weapons on the Battlefield

In order to grapple with NLW as an emerging technology, it is necessary to examine the following issues,: targeting the legitimate object of war; discrimination between combatants and non-combatants; the level of risk necessary for war to be ethical, especially on the part of combatants; the impact of these weapons on both combatants and non-combatants; and the long term collateral damage and impact of these technologies, aside from the considerations of proportionality in the previous issue. These particular issues need to be addressed because the principal arguments leveled by proponents of NLW is that they do less harm, and that any harm they do cause is more likely to be temporary and reversible, especially relative to non-combatants, than the lethality paradigm. However, this line of argument about mitigating and reducing harm, like those about UAVs and targeted killing, is based primarily on utilitarian considerations of effect and impact, which mask more critical issues like targeting and risk. These two considerations, and the shifts in ethical thinking they represent, do intersect with the issues raised by targeted killing, UAVs, and the use of social media in war because they circumvent the traditional combatant-oriented, physical force/combat-based notion of war as circumscribed by *jus in bello* and international law.

A. Targeting

The question of whom to target is a central factor regarding NLW as an emerging technology. Some arguments suggest that because NLW are non-lethal, then a force using NLW ought to be able to target non-combatants since the harm is much less than that from lethal weapons, and may be reversible. Unfortunately, this argument confuses the issues of effect and discrimination, as Chris Mayer and other have rightly indicated..[26] When one targets non-combatants,

26. See Kaurin, *With Fear and Trembling*, *supra* note 14, at 105.

one: violates their rights; treats them as objects of war, to which they have not consented; and violates the requirements under the law of armed conflict for discrimination (discussed *infra*) and non-combatant immunity. Therefore, the intentional targeting of non-combatants, regardless of how minor the resulting harm might be, is radically problematic to any ethical and humane conception of war. Being treated as an object of war is itself a very serious harm.

It may also be problematic to target combatants with weaponry against which they would not have a reasonable chance of making a response or mounting a defense. In particular, certain chemical and other non-ballistic weapons are designed to blind the victim, effect the victim's nervous system, or alter the victim's consciousness to compromise the victim's ability to function and defend themselves.[27] This is not to say that symmetry of weaponry is required, but the rules of war and international law have, for good reason, placed restrictions on what kinds of weapons and tactics can be used; in particular, they bar anything that causes unnecessary suffering or compromises human dignity.[28] A combatant is still a human being and ethical warfare requires recognition of this fact.

Noting these points, targeting objects and infrastructure with NLW that would otherwise be legitimate targets of lethal force seems much less problematic. Indeed, targeting with NLW might be more desirable, as it would render these objects unusable only in the short term, while avoiding the kind of long-term destruction that makes the restoration of peace and *jus post bellum* considerations so difficult. This kind of approach truly can challenge the destruction–as-lethality paradigm of warfare (if one can think about destroying a bridge as killing it), transforming the nature of warfare and strongly impacting global issues.

B. Discrimination

The questions about targeting return us to the question on how forces are supposed to discriminate and between combatants and non-combatants. This question is especially problematic in fluid situations and where distance is an issue, as NLW (like UAV) are designed to increase distance between combatants and those they are encountering. As noted earlier, those arguments in favor of NLW by insisting that NLW render discrimination moot are morally problematic. Discrimination must be maintained regardless of how minor the harm or impact is.

27. *See Current Non-Lethal Weapons*, JOINT NON-LETHAL WEAPONS PROGRAM, http://jnlwp.defense.gov/CurrentNonLethalWeapons.aspx (last visited Mar. 25, 2015).

28. *See* Kaurin, *supra* note 14, at 102, 106.

If discrimination is to remain as an element of the use of NLW, then the analysis of discrimination must focus on the basis upon which it is to occur. Recently, Jeff McMahan and other revisionists have made arguments undermining the basis of the Moral Equality of Combatants argument. They argue that not all combatants are ethically equal; rather, that some combatants are *unjust* and therefore are subject to force, whereas *just* combatants are not.[29] This argument has thus far been applied only to combatants, but it seems that it also has rippling implications for non-combatants and, in particular, the protections of non-combatant immunity. Under this theory, there may be unjust non-combatants that one might argue ought to be targeted in virtue of their "unjust" cause. Just as with the arguments against the moral equality of combatants, such arguments face serious epistemological hurdles and involve shifting the basis of discrimination to guilt and innocence relative to the cause of the war, as opposed to consent, threat, or membership in a protected category.[30] To say that such a move is problematic and controversial is to dramatically understate the case.

Implementing discrimination on the ground still has its practical problems, even after clarifying the basis of the discrimination. Much like drones, NLW increase the size of the battlefield, making discrimination determinations more difficult and complicated than those determinations made in conventional combat. Therefore, these emerging technologies actually make discrimination more important and complicated, not less, and users of NLW must carefully address the discrimination concerns going forward.

C. Risk

Underlying the concerns regarding targeting and discrimination is the critical question of risk distribution, relative to both force protection for combatants and to risk imposed upon non-combatants While risk is omnipresent in armed conflict, what is less clear is whether there is a minimum level of risk that combatants have a moral obligation to bear in war, and what the moral status of conflict activities is in non-war situations.

While reasonable force protection is a legitimate concern, forces encounter a serious moral problem that speaks directly to the nature of war when the impetus to force protection is motivated by a zero casualty mentality and pressure for the *bloodless war*. War is different from massacre and the crime of murder in important ways having to

29. *See* Jeff McMahan, *On the Moral Equality of Combatants*, 14 J. POL. PHIL. 377, 379 (2006).

30. *See id.* at 383–84 (detailing the debate between implied consent due to the circumstance of war and the actual consent by just or unjust combatants to be engaged in war).

do with the risk the combatants take, the danger that they are expected to endure in return for wielding lethal force (largely without sanction provided it is within certain parameters), and the protections afforded non-combatants who are not subject to the same risks and do not have the same tools to defend themselves.[31]

There is a moral argument to be made for keeping death and injury to the absolute minimum necessary for the military objective (which accords with the Proportionality of Means principle in the Just War Tradition), but—and this is a large caveat—if this is achieved by transferring or increasing the risk to non-combatants, the moral claim cannot be justified. Once again, non-combatants have not consented to be objects of war. To put non-combatants at increased risk is to treat them as objects of war, which ultimately erodes non-combatant immunity. Combatants, on the other hand, are objects of war and have consented to (or at least acknowledge) that they are under lethal threat and can, and will, be targeted, which is why they have weapons and the right to return this lethal force. This risk comes with combatancy and war.

D. Impact

The impact of NLW in armed conflict is the final and most visible element of the NLW analysis, and must occur after addressing the earlier issues of targeting, discrimination, and risk. Much of the discussion and debate surrounding NLW focuses on the impact of non-combatants and the potential that NLW have to be less harmful, in particular to reduce collateral damage by giving the military more options than lethal force and ways to de-escalate situations so as not to lead to lethal force. While NLW clearly can do some harm, if they do less net harm than conventional weaponry, it seems that the discourse around collateral damage and the Doctrine of Double Effect[32] would support their use because it would reduce the amount and impact of any unintentional harm to non-combatants. That said, there are serious questions about how to measure and assess the impacts of NLW. Testing on humans is problematic, and individuals with distinct characteristics of health, age, gender, and body type seem to react differently to the same agent or weapon, which makes assessing the potential harm resulting from NLW use more difficult than with lethal force.

The impact of NLW on combatants remains a serious issue, especially to consider whether NLW are more humane and cause less, or more, reversible kinds of harm than conventional lethal weapons. If

31. Kaurin, *supra* note 14, at 108.

32. Alison McIntyre, *Doctrine of Double Effect*, STAN. ENCYC. PHIL'Y (Winter 2014), http:// plato. stanford. edu/ archives/ win2014/ entries/double-effect/.

there are weapons that actually cause more harm (especially in terms of proportionality of means[33]), this is seriously problematic. This is to some degree analogous to the debate about the use of UAV possibly putting ground troops at more risk, or generating more resistance from the adversary on the ground, because of how these weapons impact the perception adversaries have of their opponents' courage and willingness to sacrifice for their cause.[34] Even if these technologies seems to save lives in the short term, they may be problematic in other, more long-term and big-picture, ways that change how to think about the impact of these weapons.

E. Long-Term Collateral Damage

Finally, it is critical to think through the long-term, unintended consequences for the use of these weapons that fall outside the calculations related to above-mentioned collateral damage, especially in terms of *jus post bellum* considerations. What are the long-term impacts for *jus post bellum* if all sides make use of these weapons, as often happens since emerging technologies rarely remain the domain of only one party for long? How does the use of these technologies inform the perception that non-combatants have of the involved parties, and what is the impact on the restoration of peace after the combat concludes? There are clear parallels between the UAV and targeting killing debates and the consideration of winning hearts and minds, in terms of perceptions of the nation using UAV, risk aversion, and also providing recruitment and resistance for the adversary., That adversary can make the argument that a state using UAV is cowardly, will not fight, and only needs to endure a conflict long enough to be victorious.[35] Even if NLWs cause less harm and seem more humane in the short term, long-term and *jus post bellum* considerations may ultimately suggest such emerging technologies are not the best, most ethical choice.

IV. CONCLUSION

From the discussion of these issues, NLWs are an emerging technology, not so much in the sense of the technology itself, but more in the nature of the ethical challenges and the power of how society answers or addresses those challenges to have the kinds of transformative and disruptive impacts alluded to in the definition of

33. Kaurin, *supra*, note 14 at 101.

34. Christian Enemark, *The End of Courage? How Drones Are Undermining Military Virtue*, AUSTL. BROAD. CORP. (Apr. 24, 2013), http://www.abc.net.au/religion/articles/2013/04/24/3744693.htm.

35. *Id.*

NLW *supra.*[36] While the focus on targeting and discrimination does not really change or disrupt the lethality paradigm, or the moral requirements presumed to go with it, the discussions of risk, short-term impact, and long term impact have the potential to challenge that paradigm, at least to the degree that states think of lethality being the ultimate determiner of victory in warfare.

Like UAVs, cyberwar, and social media, NLWs raise questions about how close to the battlefield one has to be in order to be engaged in the conflict, as well as how society is to think about the categories of combatant and non-combatant. All these technologies also give the individual, as opposed to a conventional military unit, more ability to escalate, de-escalate, and manage situations that can lead to conflict, undermining the idea that war and success in war are necessarily tied to physical combat and battle. To the degree that NLWs and other emerging technologies raise issues that challenge this picture of the nature of war and how it is fought, they have tremendous potential to impact and challenge how society addresses global issues of conflict, disrupt the defense industry with its focus on combat and lethal force, and cause rethinking of the role of warfare as a means of political action. But this conversation has only begun, and there is much left to be said.

36. *See* Treder, *supra* note 13.