

The Rise of the Humanitarian Drone: Giving Content to an Emerging Concept

Abstract

This article explores and attempts to define the emerging concept of the humanitarian drone by critically examining actual and anticipated transfers of unmanned aerial vehicles (UAVs), or drones, from the global battlespace to the humanitarian emergency zone. Focusing on the relationship between the diffusion of new technology and institutional power, we explore the humanitarian drone as a “war dividend” arising from the transfer of surveillance UAVs, cargo-carrying UAVs, and weaponised UAVs. We then reflect on the ways in which military practices and rationales guiding drone deployment may also shape humanitarian use, giving particular attention to the concept of surgical precision, the implications of targeting logic, and the ambiguous role of distance. Next, we consider the broader implications for humanitarian action, including the promise of global justice and improved aid delivery. Finally, we analyse the most difficult aspect of the humanitarian drone: namely, its political currency as a “humanitarian weapon” in conflict scenarios.

Keywords

Drones, UAV, humanitarianism, R2P, human rights, surveillance, technology

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In Japan and the Philippines, and in other missions the Global Hawk has flown in, such as the 2010 Haiti earthquake, [US Air Force Major] Simms has seen the quick response and long endurance of UAVs as a “force multiplier.” Being able to take off within 12 hours of notice, travel thousands of miles, and maintain constant surveillance for up to 30 hours, he sees these machines as revolutionizing the way nations respond to natural disasters and enhancing their response and aid capabilities.¹

In recent years, the humanitarian cost of the drone wars has become the focus of international attention.² Much less visibly, terms such as *humanitarian drones*, *drone humanitarianism*, *drones for human rights*, and *humanitarian missiles* have been migrating from the far corners of the blogosphere into mainstream discussions of humanitarian action and humanitarian policy. As the “humanitarian drone” gains currency as a political concept, it is important to disentangle the ideas from which that concept has emerged, and to think about the implications for humanitarian action. In this article, we do so by considering a range of actual and projected transfers of

¹ Will Houstoun, “Managing Natural Disasters, Protecting Endangered Species, And Enhancing Our Knowledge: Proof That Drones Can Do Good.” *tankthoughts.com*, Nov 19 2013.

² The issue has been taken up by Navi Pillay, the UN High Commissioner for Human Rights; Radhika Coomaraswamy, the UN Special Representative for Children and Armed Conflict; Philip Alston and Christof Heyns, consecutive UN Special Rapporteurs on extrajudicial, summary, or arbitrary executions; and Ben Emmerson, the UN Special Rapporteur on Counter-Terrorism and Human Rights. Three NGO reports have been enormously influential; see Stanford Law School Human Rights and Conflict Resolution Clinic and NYU School of Law Global Justice Clinic, “Living under Drones: Death, Injury, and Trauma to Civilians from US Drone Practices in Pakistan” (2012); Center for Civilians in Conflict and Columbia Law School Human Rights Clinic, “The Civilian Impact of Drones: Unexamined Costs, Unanswered Questions” (2012); Human Rights Watch and Harvard Law School Human Rights Clinic, “Loosing Humanity, The Case against Killer Robots” (2012).

unmanned aerial vehicles (UAVs, hereinafter also *drones*) from the global battlefield to the humanitarian emergency zone.

Under a well-established definition, the term *humanitarian assistance* refers to aid and action designed to save lives, alleviate suffering, and maintain and protect human dignity during and in the aftermath of emergencies.³ As an analytical starting point, the concept of the humanitarian drone can be understood as a set of contested representations of technology, and technological functions, intended to meet some of these assistance needs.

Over the past decade, the close relationship between military action and humanitarian aid during international engagements in Afghanistan, Iraq, Haiti, and Libya has led to debates about the nature and ends of the humanitarian enterprise.⁴ Although the geographies of war and humanitarian aid have always overlapped—at least since the battle of Solferino, in 1859, which ultimately led to the founding of the International Red Cross—what has changed are the ways in which armed conflict, humanitarian interventions, and humanitarian aid operations intersect as fields of global governance, spanning both war and disaster zones.

³ Development Initiatives. "Defining Humanitarian Assistance." In *Global Humanitarian Assistance - A Development Initiative*, 2014.

⁴ See, for example, Fiona Terry, *Condemned to Repeat? The Paradox of Humanitarian Action* (Ithaca and London: Cornell University Press, 2002); David Rieff, *A Bed for the Night, Humanitarianism in Crisis* (New York: Simon & Schuster, 2003); David Kennedy, *Dark Side of Virtue, Reassessing International Humanitarianism*, (Princeton University Press, 2004); Antonio Donini (ed), *The Golden Fleece, Manipulation and Independence in Humanitarian Action*, (Cambridge University Press, 2012).

The concept of the “global battlefield”,⁵ or the “global battlespace”, which originated in US military doctrine and refers to the multidimensional nature of modern warfare, is gaining increasing currency. As a conceptual and material project, war is now “everywhere”, woven into the matrix of contemporary social life.⁶ Within the global battlespace, Predators (General Atomics, United States), Herons (IAI, Israel), and Watchkeepers (Thales, France) provide intelligence for armed attacks or occupation, while MQ-9 Reapers (also General Atomics) and Hermes 450s (Elbit Systems, Israel) are deployed to eliminate individuals identified as insurgents or terrorists. The cargo drone Kaman K-Max (Lockheed Martin and Kaman Aerospace, US) supplies troops to remote outposts in Afghanistan. Interconnecting with the global battlespace is a humanitarian emergency zone, where a global system of international organizations, donor and troop-contributing nations, and nongovernmental organizations (NGOs) operate in parallel with and across domestic state structures to respond to and administer a permanent condition of crisis.⁷

Just as drones have rapidly become intrinsic to modern warfare, it appears that they will increasingly find their place as part of the humanitarian governance apparatus. What

opportunities do drones offer for humanitarian governance? [How will drones change humanitarian practices and by extension, the humanitarian profession?](#) [What is a humanitarian](#)

⁵ In a letter to President Obama, Human Rights Watch argues that “while the United States is a party to armed conflicts in Afghanistan and Iraq and could become a party to armed conflicts elsewhere, the notion that the entire world is automatically by extension a battleground in which the laws of war are applicable is contrary to international law. How does the administration define the ‘global battlefield’ and what is the legal basis for that definition? What, if any, limits exist on ordering targeted killings within it? Does it view the battlefield as global in a literal sense?” Human Rights Watch, “Letter to Obama on Targeted Killings and Drones,” (2010).

⁶ Derek Gregory, “The Everywhere War,” *The Geographical Journal* 177, no. 3 (2011).

⁷ James Ferguson, *Global Shadows: Africa in the Neoliberal World Order* (Durham, N.C.: Duke University Press, 2006). p. 41.

~~who uses drones, can actors who use drones be humanitarian and can drones make acts~~

~~humanitarian?~~ We consider the notion of the humanitarian drone as it has recently surfaced in two different types of discourse: (1) as a way of labelling technical and logistical humanitarian functions a drone might potentially fulfil, such as providing better data on unfolding crises or ongoing human rights violations, delivering aid to victims in hard-to-get locations, or supporting a responsibility-to-protect (R2P) mandate; and (2) as a way of describing ethically desirable uses to which drones might be put, such as enhancing the understanding of assistance needs, making aid more effective, and ending human rights violations.

Our goal is to analyse these two types of discourse and their broader implications for humanitarian action. Although we recognize the potent force of humanitarianism as a discourse in global governance,⁸ and as a popular “transnational concern to help persons in exceptional distress”,⁹ humanitarian action is here conceived broadly as material, political and military responses—by the humanitarian arms of the United Nations (UN), international NGOs, and states—to particular invocations of humanitarian suffering. Significantly, as used here, this form of “humanitarian reason” is claimed as the prerogative of liberal democracies. We situate our discussion of the rise of the humanitarian drone in the context of two observations regarding current thinking on technology and crisis, both of which we address critically in the course of the paper: (1) optimism about the possibility of using technology to improve humanitarian action

⁸ Michael N Barnett, "Humanitarian Governance," *Annual Review of Political Science* 16(2013); Didier Fassin, *Humanitarian Reason: A Moral History of the Present* (University of California Press, 2011).

⁹ D. P. Forsythe, "International Humanitarianism in the Contemporary World: Forms and Issues," in *Multilateralism under Challenge: Power, International Order, and Structural Change*, ed. E. Newman, R. Thakur, and J. Triman (Tokyo: UN University Press, 2006). p. 234.

(including mitigating the increasing insecurity of humanitarian workers),¹⁰ and (2) the idea that more precise weapons technology is “humanizing” warfare.

Many of the technological innovations in question are the outcomes of military-civilian transfer—thus, they are so-called dual-use technologies, which can be used for both peaceful and military aims. While there is a dearth of scholarly focus on the “turn to technology” in humanitarian action, the rich literature on technological transformations and politics can help bridge the gap.¹¹ Our argument is based on two assumptions about drones as a purported form of humanitarian technology: first, technology is not neutral; that is, instead of society passively adopting technology, technology and society engage in a mutually constitutive relationship.¹² Thus, the construction of technology is subject to political contestation, and to the realities of professionalism, finance, and politics;¹³ nevertheless, in keeping with Daniel R. McCarthy’s reflections on technological determinism, the diffusion of nonhuman objects “generates new political settlements”—which, in themselves, constitute a form of institutional power.¹⁴ As evidenced by the ongoing drone wars, UAV technology enables a specific set of political and

¹⁰ IFRC, “World Disasters Report 2013, Technology and Humanitarianism” (2013).

¹¹ Geoffrey L Herrera, “Technology and International Systems,” *Millennium-Journal of International Studies* 32, no. 3 (2003). pp.559-593; Stefan Fritsch, “Technology and Global Affairs,” *International Studies Perspectives* 12, no. 1 (2011). pp. 27-45; Daniel R McCarthy, “Technology and ‘the International’ or: How I Learned to Stop Worrying and Love Determinism,” *Millennium-Journal of International Studies* 41, no. 3 (2013); Wiebe Eco Bijker and John Law, *Shaping Technology/Building Society: Studies in Socio-Technical Change*(MIT press, 1992).

¹² D. MacKenzie and J. Wajcman, *The Social Shaping of Technology* (Open University Press, 1999).

¹³ Herrera, “Technology and International Systems.” 560; see also Bijker and Law, *Shaping Technology/Building Society: Studies in Socio-Technical Change*.

¹⁴ McCarthy, “Technology and ‘the International’ or: How I Learned to Stop Worrying and Love Determinism.” 471, 489.

military rationales and projects that must be examined—not for their oft-cited “newness”, but for the power they represent.

Our second assumption is as follows: although UAV technology may still be relatively primitive, it will evolve and proliferate as a technological paradigm.¹⁵ Consequently, we expect that the use of drones will permeate the humanitarian field, and that the drones will be operated not only by states or intergovernmental actors, but also by NGOs. So far, however, the implications of this proliferation and use for humanitarian action have barely begun to be recognized, and no critical attention has been given to how the humanitarian use of drones is framed and discussed—or by whom. To begin to bridge this gap, we focus our analysis on the rise of the humanitarian drone as a concept in political discourse, combining empirical analysis and the mapping of usages and speech acts with theoretical insights from international relations and critical war studies, broadly defined.¹⁶

The article proceeds in five parts. In the first part, we present our idea of the humanitarian drone as a “war dividend”, and argue that a strong commercial logic underpins the push to

¹⁵ Giovanni Dosi, "Technological Paradigms and Technological Trajectories: A Suggested Interpretation of the Determinants and Directions of Technical Change," *Research Policy* 11, no. 3 (1982); Herrera, "Technology and International Systems."; Everett M Rogers, *Diffusion of Innovations*(Simon and Schuster, 2010).

¹⁶ P. W. Singer, *Wired for War : The Robotics Revolution and Conflict in the Twenty-First Century*(New York: Penguin Press, 2009); James Der Derian, *Virtuous War : Mapping the Military-Industrial-Media-Entertainment Network*(New York: Routledge, 2009); Dave Grossman, *On Killing : The Psychological Cost of Learning to Kill in War and Society*(New York: Little, Brown and Co., 2009 [1995]); Tyler Wall and Torin Monahan, "Surveillance and Violence from Afar: The Politics of Drones and Liminal Security-Scapes," *Theoretical Criminology* 15(2011); Derek Gregory, "From a View to a Kill: Drones and Late Modern War," *Theory, Culture & Society* 28, no. 7-8 (2011); "The Everywhere War."; Caroline Holmqvist, "Undoing War: War Ontologies and the Materiality of Drone Warfare," *Millennium - Journal of International Studies* 41, no. 3 (2013).

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reconceptualise drones as “humanitarian”. In the second part, we detail three types of ongoing or projected transfers of UAV hardware from military to humanitarian use: surveillance UAVs, cargo-carrying UAVs, and weaponised UAVs.

The third part takes as its starting point the humanitarian drone as a product of military-civilian technology transfer. We argue that this process should be understood not merely as a mechanical transfer of hardware, but also as the transfer of social, cultural, and political practices. In our account of the humanitarian drone, the military and the humanitarian fields are enmeshed—politically, materially, and socially. Hence, any humanitarian use of drones must be read in the context of their origin as military technologies. To that end, we review a set of theoretical perspectives, drawn from the emerging literature on the use of drones in warfare, in order to consider how the humanitarian drone might operate.

The fourth part attempts to make sense of the ways in which the concept of the humanitarian drone can potentially shift the nature of discourse regarding drones, in addition to shaping debates on technology and decision making within the humanitarian enterprise. First, we consider some proposals presented by advocates of humanitarian drones for alleviating material needs in crises, and analyse the utopian visions of humanitarian aid that they embody. Next, we question the widespread assumption that the humanitarian drone can reshape the imagery of injustice and human suffering in ways that will correspondingly reshape political responses. In the final section, we explore the most difficult aspect of the humanitarian drone—namely, its political currency in the debate on international military interventions. Can an armed drone offer a “humanitarian technology” that will assist in the struggle to protect civilians? And what are the potential costs of making such an argument?

The Logic of Technology Transfers

Just as “peace dividends” flow from the reallocation of military spending to peacetime purposes, we propose that the humanitarian drone be understood, at least in part, as a “war dividend” flowing from military spending on the war on terror: “a decade of fighting in Iraq and Afghanistan has created many technology spinoff benefits for those who deliver foreign aid and peacekeeping to disaster areas.”¹⁷ Stephen Graham’s use of the Foucauldian concept of a “boomerang effect”—whereby European colonial apparatuses, institutions, and techniques of power were brought back to the West—is also helpful for delineating the notion of war dividends. Graham points to the similar ways in which military technologies—funded and perfected through the global “war on terror” that is the contemporary incarnation of the colonized frontier—are imported for use on civilian populations.¹⁸

Inevitably, dual-use technologies raise questions about costs, lobbying, and the framing of political agendas: interest groups such as the US Association of Unmanned Vehicle Systems International (AUVSI), as well as two British outfits, the Unmanned Aerial Vehicle Systems Association (UAVS) and ASTRAEA (Autonomous Systems Technology Related Airborne Evaluation & Assessment) are having considerable success in shaping the political and legislative debates about the integration of drones in civilian airspace,¹⁹ yet remain greatly frustrated by public resistance to such integration. Here, we make two empirical observations: first, drones are now being marketed directly to the humanitarian sector as having humanitarian uses; second, the

¹⁷ See "Uavs Hauling Cargo into the Future." StrategyPage, Oct 27 2012.

¹⁸ Stephen Graham, *Cities under Siege: The New Military Urbanism*(Verso Books, 2011). xvii. We are grateful to an anonymous reviewer for alerting us to this point.

¹⁹ Abigail R Hall and Christopher J Coyne, "The Political Economy of Drones," *Defence and Peace Economics*, no. ahead-of-print (2013).

UAV industry perceives the importance of presenting itself as humanitarian, as a means of gaining legitimacy.

Thus, the concept of the humanitarian drone plays an important role—first, as vendors struggle to expand the market for UAVs by identifying new avenues of “humanitarian use” for government customers; and second, in relation to the general public, where vendors feel increasingly targeted by activists and critical news coverage. While the use of drones for military purposes was previously the centre of attention at the AUVSI annual trade fair,²⁰ cuts in the US defence budget have led to a strong focus on potential civilian applications of UAV technologies and related systems,²¹ with disasters and emergencies frequently cited as potential areas of use.²² The industry has touted the humanitarian potential of UAVs for some time; among the claims made by “drone stakeholders” is that “drones don’t just end human life, they also save it”.²³

As the UAV industry tries to influence regulators and politicians, and build legitimacy in the eyes of increasingly concerned domestic (northern) audiences, it is not only promoting the UAV as a humanitarian technology useful for specific operations, but attempting to brand it as a humanitarian technology per se. In 2012, for example, the *Guardian* reported that the British

²⁰ W.J. Hennigan, "Drone Expo in Las Vegas Sets Sights on Civilian Market," *Los Angeles Times*, Aug 9 2012.. In an uncharitable view of this transfer, Jack C. Chow points to the brutal logic of economic expediency: in the wake of the US military exit from Iraq and Afghanistan, the military now has an “entire squadron of attack drones, already built and paid for” sitting idle in storage. See Jack C. Chow, "Predators for Peace," *Foreign Policy*, May 7 2012.

²¹ Richard Tekneci, "Defense Companies Need to Diversify to Weather Sequestration," *Forbes*, March 14 2013.

²² For example, the manufacturer Faun Trackway USA markets a portable landing mat for UAVs, which “can be used to build temporary airfields in less than 24 hours for military operations or delivering emergency aid in the aftermath of humanitarian disasters”. "Australia Buys Portable Uav Landing Mat," *UAV News*, Jan 13 2012.

²³ Matthew Harwood, "Drone Stakeholders Stress Robots' Humanitarian Upside," *Security Management*, 8 November 2011.

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lobbying group UAVS had recommended that “drones deployed in Britain should be shown to ‘benefit mankind in general’, be decorated with humanitarian-related advertisements, and be painted bright colours to distance them from those used in warzones”. The general secretary of UAVS is quoted as saying that

the industry was uncomfortable with the word “drones” and wanted to find new terminology. “If they're brightly coloured, and people know why they're there, it makes them a lot more comfortable,” he said. “We want to be associated with safe, civil applications [of UAVs] that have a humanitarian, ecological and environmental benefit.”²⁴

In 2012, in an effort to allay public concerns, AUVSI launched the not-so-subtly named website “Increasing Human Potential”, which states that “unmanned systems increase our human potential. They enable us to execute dangerous and difficult tasks safely and efficiently, saving time, saving money and, most importantly, saving lives”.²⁵ To the extent that the humanitarian enterprise operates, somewhat unreflectively, on the assumption that adding technology is both inevitable and generates progress, it risks becoming an important co-creator of the UAV industry’s moral-economy narrative.²⁶

²⁴ Ryan Gallagher, "Surveillance Drone Industry Plans Pr Effort to Counter Negative Image," *The Guardian*, February 2 2012.

²⁵ See <http://increasinghumanpotential.org>.

²⁶ Kristin Bergtora Sandvik, “The Risks of Technological Innovation”, in IFRC, *World Disasters Report 2013, Technology and Humanitarianism*, (2013).

Transferring Hardware: Surveillance, Carrying Cargo, and Targeting

Surveillance and reconnaissance (surveillance beyond friendly territory) are by far the most widespread uses of military drones today. The first use of drones for military surveillance and reconnaissance that could be characterized as humanitarian was the US deployment of the Gnat 750, a predecessor to the Predator, over Bosnia in 1994.²⁷ Since then, both the North Atlantic Treaty Organization (NATO) and the European Union (EU) have used surveillance drones in their peace support operations. For example, in 2006, the EU provided the UN Organization Mission in the Democratic Republic of the Congo with military capabilities, including four Belgian UAVs.²⁸ In 2008, EUFOR (the EU Force) and the UN Mission in the Central African Republic and Chad (MINURCAT) used drones for aerial surveillance.²⁹ And in 2013, the UN Security Council (UNSC) granted the UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) permission to acquire surveillance drones.³⁰ The use of surveillance drones for search and rescue (SAR) in natural disaster sites is becoming more prevalent: the US Air Force has reported using the Global Hawk in the 2007 California wildfires, the 2010 Haitian earthquake, the 2011 nuclear disaster in Japan and the 2013 typhoon in the Philippines.

²⁷ Technology Quarterly, "The Dronefather," *The Economist*, Dec 1 2012.

²⁸ Catherine Gegout, "EU Conflict Management in Africa: The Limits of an International Actor," *Ethnopolitics* 8, no. 3-4 (2009).

²⁹ Giovanna Bono, "The EU's Military Operation in Chad and the Central African Republic: An Operation to Save Lives?," *Journal of Intervention and Statebuilding* 5, no. 1 (2011).

³⁰ United Nations (2013) S/2013/44, 22. January 2013. See also John Karlsrud and Frederik Rosén, "In the Eye of the Beholder? UN and the Use of Drones to Protect Civilians," *Stability: International Journal of Security and Development* 2, no. 2 (2013).

All the scenarios listed so far involved larger surveillance drones developed by defence contractors. Meanwhile, a different group of actors—who might be seen as a new breed of “techie humanitarians”³¹—have entered the race. Their aim is to develop small drones to conduct SAR or to provide data about emergencies, as part of the growing field of crisis mapping.³²

Yet another source of the appeal of drones is their ability to undertake “dull, dirty, and dangerous” military jobs. In war, supplying troops is some of the dullest, dirtiest and most dangerous work; although surveillance and weaponised drones are already operational in warfare, the mass deployment of military cargo drones is some years away. During its operations in Afghanistan, NATO experienced serious logistical problems, including rising threats to pilots, and difficulties negotiating and operating ground routes for supply trucks. In response, beginning in 2011, the US military (and others) used unmanned Kaman K-Max helicopters (carrying sling loads) to transport cargo to remote outposts.³³ The United States is funding research on autonomous UAV cargo platforms, and governments and defence contractors elsewhere are following suit.³⁴

For its part, the manufacturer of the K-Max foresees the migration of unmanned helicopters into civilian use, explicitly including humanitarian relief.³⁵ The manufacturers of smaller cargo drones for civil airspace also emphasize their potential humanitarian use: AERMATICA, an Italian UAV manufacturer, has stated that as the functions of UAV

³¹ See <http://digitalhumanitarians.com/> and <http://crisismappers.net/> for examples.

³² Libby Clark, "Openrelief Launches Open Source Disaster Relief Drone," *The Linux Foundation*, June 7 2012.

³³ StrategyPage, "Uavs Hauling Cargo into the Future," *StrategyPage*, Oct 27 2012.

³⁴ Arie Egozi, "Elbit to Supply 'Flying Elephant' Cargo Uas " *FlightGlobal*, May 16 2011; James Holloway, "US Navy Developing App-Summoned Robotic Helicopters for Marines," *Gizmag*, Jan 12 2012.

³⁵ "Heli-Expo 2011: Unmanned K-Max Deploying to Afghanistan This Summer ", *AINonline*, March 7 2011.

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technologies evolve from relief-site monitoring to carrying cargo, enabling UAVs to participate more directly in field operations, “civil UAV technologies will be able to aid considerably in human relief operations”.³⁶ Matternet, one of a group of Silicon Valley UAV entrepreneurs, has described its plans for a network of UAVs that will create “the next paradigm for transportation” of goods and medicines to remote settlements.³⁷ Another start-up, ARIA (Autonomous Roadless Intelligent Arrays), wants to provide rural Africa with a skyway network made up of humanitarian drones, with the goal of launching “a new strategy of fighting poverty from the air”.³⁸

Although surveillance and reconnaissance are the most common military uses of drones, the most controversial use is in targeted killing operations. The deployment of weaponised drones for what was argued to be humanitarian purposes first became a reality in 2011. Citing UNSC Resolution 1973, on Libya, which was passed on February 6, 2011, President Obama approved the use of armed drones, justifying their use as tools of humanitarian assistance for the protection of civilians.³⁹ During the 2011 Libya-mission, US Predators armed with Hellfire missiles were also flown by British forces.⁴⁰ The use of combat drones for ostensibly humanitarian purposes represents a different kind of technology transfer than those described earlier: in this scenario, drones are not coming into the hands of new types of actors; instead, they are being used to support a “humanized” approach to waging war.

³⁶ See <http://www.aermatica.com/SURVEILLANCE.html>.

³⁷ See <http://matternet.us/>; Alexandra Gibb, "Drones in the Field," *OpenCanada.org*, Dec 10 2012.

³⁸ Chow, "Predators for Peace."

³⁹ CBSNEWS, "Obama Oks Use of Armed Drone Aircraft in Libya," April 24 2011.

⁴⁰ Alex Spillius, "Britain 'Flew Drones over Libya' " *The Telegraph*, July 26 2012.

Yet, we propose that the humanitarian drone is more than hardware transferred from military to humanitarian usage: thus, it is necessary to reflect on how the social and political practices underpinning this usage may travel, and how they may play out in the context of humanitarian action.

Transferring Practices: Surgical Strikes, Targeting Logic, and the Politics of Distance

The dominant politico-military rationale for the use of drones in war is that the “drone stare”—a video feed in near-real time—allows the operator to see and strike with “surgical precision,” not only minimizing civilian casualties but also completely abstracting the risk to one’s own soldiers. Such rationales for drone use in warfare are in keeping with what James Der Derian has referred to as “virtuous war”, which is founded on “the technical ability and ethical imperative to threaten and, if necessary, actualize violence from a distance—*with no or minimal casualties*”.⁴¹ We anticipate that a similar rhetoric of surgical precision—and analogous potential pitfalls—will accompany the use of humanitarian drones.

As Peter Singer has observed, technology can’t clean up combat.⁴² For example, the accuracy of drone strikes has been heavily contested.⁴³ Much can and does go wrong at various points in the “kill chain”,⁴⁴ “for reasons ranging from pilot error and bad weather to mechanical

⁴¹ Der Derian, *Virtuous War : Mapping the Military-Industrial-Media-Entertainment Network*. xxxi.

⁴² P. W. Singer, "Robot Ethics Won't Clean up Combat," *The Boston Globe.com*, 5 February 2012.

⁴³ Meg Braun, "Columbia Drone Report Misses the Target," *Foreign Policy*, December 18 2012.

⁴⁴ Gregory, "From a View to a Kill: Drones and Late Modern War." 7-8.

failure”.⁴⁵ Of the four peacekeeping drones deployed in the Democratic Republic of the Congo in 2006, one was shot down and one crashed, killing one person and injuring several others.⁴⁶

In military operations, the absence of good on-the-ground intelligence continues to be a rationale for drone warfare, but it is also an insurmountable obstacle to surgically precise attacks. A parallel can be drawn to the role of local knowledge and local presence as prerequisites for successful humanitarian action. Thus, a technology-driven view of humanitarian action, which assumes that “humanitarian targeting” would be surgically precise, needs critical scrutiny.

The targeting logic of drones is shaped by what Tyler Wall and Torin Monahan call “an actuarial form of surveillance”, which is predicated on pre-empting harm.⁴⁷ Independent of where and to what aims drones are deployed, they accumulate data that is used as the basis for risk calculations and population management (and, in the case of excessive risk, elimination of targeted individuals). But however accurate the technology may be, the surveillance systems, with their agents, *interpret* ambiguous data. As Lane DeNicola has observed, assumptions of manifest transparency and mechanical objectivity must be abandoned in favour of recognizing that the practice of airborne and satellite-imagery analysis is a “significantly interpretive one”.⁴⁸

⁴⁵ Nick Turse, "The Crash and Burn Future of Robot Warfare " *Huffington Post*, 16 January 2012.; AllGov, "U.S. Drone Killing Program Threatened by Disconnect between Contractors and Military," 2012.

⁴⁶ Karlsrud and Rosén, "In the Eye of the Beholder? Un and the Use of Drones to Protect Civilians."

⁴⁷ Wall and Monahan, "Surveillance and Violence from Afar: The Politics of Drones and Liminal Security-Scapes." 240.

⁴⁸ Lane DeNicola, "Credibility and the Use of Geospatial Media in Activism and Advocacy," *Proceedings of the American Society for Information Science and Technology* 45, no. 1 (2008). We are grateful to an anonymous reviewer for alerting us to this reference.

Derek Gregory describes the visibilities and invisibilities provided by drones as constitutive of “techno-culturally mediated ways of seeing”. Within these spaces of constructed (in)visibilities, Gregory asserts that civilians are construed to be devoid of agency, as it is virtually impossible for victims of attacks to be recognized as civilians before it is too late.⁴⁹ In military campaigns, human suffering is the direct result of targeting; knowledge of human suffering is a by-product of reconnaissance. In comparison, for the intended uses of the humanitarian drone outlined earlier, the objective is to protect and assist people in exceptional distress. Importantly, *generating knowledge about suffering is in itself humanitarian action*. We think it is necessary, however, to inquire whether and to what degree the humanitarian use of drones will replicate the seeing and un-seeing of human suffering that is characteristic of military campaigns. Is un-seeing human suffering one possible outcome of the humanitarian drone stare? And if so, will the focus of drone-assisted humanitarian endeavours be on technical challenges, rather than moral drama? Finally, if such un-seeing becomes part of a routinized technocratic practice, it may, over time, reshape our sense of humanitarian suffering, becoming part of the fabric of humanitarian governance.

Distance—both physical and psychological—plays a role in the processes of dehumanization that are required for killing, and is another aspect of military practice that has the potential for transfer to the humanitarian realm. Taking off from Caroline Holmqvist’s insight that robotic technologies produce a number of paradoxical consequences for how we think about the human in war,⁵⁰ we suggest that to understand decision making in the operation of combat drones, two contradictory perspectives can be used to think about the ways in which the

⁴⁹ Gregory, "From a View to a Kill: Drones and Late Modern War." 190-193.

⁵⁰ Holmqvist, "Undoing War: War Ontologies and the Materiality of Drone Warfare." 548.

humanitarian drone may reconstitute humanitarian action from above. On the one hand, the physical distance between combatants has never been greater than in contemporary drone warfare. Moreover, drone warfare is characterized by what Dave Grossman refers to as “mechanical distance”,⁵¹ whereby drone warfare comes to resemble video gaming. Instead of focusing on their human targets, drone operators focus on “the screen that separates the gamer from the game”⁵², killing “enemy fighters with a few computer keystrokes. Then, after their shift is over, they get to drive home and sleep in their own beds”.⁵³

On the other hand, critics of Grossman have recently identified important distinctions between video games and the video feeds from armed surveillance drones: first, according to Gregory, games are discontinuous, allowing resets and pauses, whereas the drone video feeds are a continuous, immersive experience. Moreover, for the players of video games, it is self-evident who the “enemies” and “terrorists” are; this is not the case for drone operators. Finally, video games are distinguished from UAV video feeds by the legal and moral implications of collateral damage. Gregory suggests that whereas the video game analogy evokes a sense of physical and psychological distance, drone operators are instead confronted with new visibilities, which “produce a special kind of intimacy that consistently privileges the view of the hunter-killer,”—and has “far more deadly” implications.⁵⁴

⁵¹ Grossman, *On Killing : The Psychological Cost of Learning to Kill in War and Society*.

⁵² Gregory, "From a View to a Kill: Drones and Late Modern War." 198.

⁵³ Scott Lindlaw, "Uav Operators Suffer War Stress," *AirForceTimes*, Aug 7 2008.

⁵⁴ Gregory, "From a View to a Kill: Drones and Late Modern War." 193.

Although drone operators are affected by the outcomes of their actions,⁵⁵ Gregory quotes a report from a strike team stating that “the personal and almost daily interaction” between ground forces and UAV operators and “the strong personal relationships with the pilots and sensor operators” successfully “compressed kill-chains and produced intelligence of greater value”.⁵⁶ The feeling of identification and involvement induced by these new forms of time-space compression takes on special significance in light of Grossman’s claim that a “sense of accountability” to comrades-in-arms is a powerful means of overcoming resistance to killing.⁵⁷ It has also been suggested that precisely because they are “operating safely from a distance”, drone operators may feel a heightened sense of accountability to their comrades on the ground.⁵⁸

Given the increasing insecurity of humanitarian workers, a parallel can be imagined whereby loyalty to those on the ground shapes where the operators direct the drones to go, the types of footage they capture, and how the footage is interpreted—and, further down the line, whether a drone is deployed to fire “humanitarian missiles”, or to deliver or withhold aid, depending on the operator’s perception of whether recipients are “deserving”. Furthermore, we argue that the complicated interplay between distance and intimacy in the drone wars may be replicated in the ways in which crises are interpreted and mediated by humanitarian drones.

⁵⁵ A 2011 Pentagon study suggested a 30% rate of post-traumatic stress disorder among drone pilots. The study also indicated that the stress is caused, in part, by the requirement that pilots linger over the scene after strikes are carried out; this requirement is in contrast to the assignments of traditional fighter pilots. See Rachel Martin, "Report: High Levels of 'Burnout' in U.S. Drone Pilots," *NPR*, 19 December 2011.

⁵⁶ Turner et al. 2009 in Gregory, "From a View to a Kill: Drones and Late Modern War." 200.

⁵⁷ Grossman, *On Killing : The Psychological Cost of Learning to Kill in War and Society*. 90.

⁵⁸ Daniel Brunstetter and Megan Braun, "The Implications of Drones on the Just War Tradition," *Ethics and International Affairs* 25, no. 3 (2011). 349.

Drones may improve humanitarian action, but they may also contribute to the gradual transformation of both emergencies and the humanitarian response into a species of virtual reality for global audiences. Alternatively, the new closeness to human suffering may lead to a new visibility that will foster more sympathy for “the humanitarian way of doing things”—that is, for humanitarian governance practices—but less empathy for those affected by crisis.⁵⁹

Drones for Global Justice: Implications for the Humanitarian Enterprise

The notion of framing the drone wars as a human rights issue and a humanitarian problem has gained significant traction, but the view that drones can also address injustice is only now beginning to acquire momentum. Jack Chow describes drone proliferation as a “game changer” for delivering aid—a potential means of eliminating or reducing the corruption, theft, and insecurity (as well as the logistical problems) that compromise aid delivery.⁶⁰ Although surveillance drones are still not in regular use by nonstate humanitarians, there is currently a strong rhetorical embrace of aerial surveillance as a versatile tool for humanitarian missions undertaken by political actors: deployed for crisis mapping, for example, drones could alert the international community to an emerging crisis.⁶¹ Drones could also provide international criminal justice: on a 2011 visit to Uganda, then-US Secretary of State Hilary Clinton expressed optimism

⁵⁹ There is already considerable anxiety over the “bunkerization” of humanitarian workers and the institutionalization of remote management. See Stoddard, Abby, Harmer, and Renouf, Jean F., “Once removed: lessons and challenges in remote management of humanitarian operations for insecure areas”, *Humanitarian Outcomes*, (2010).

⁶⁰ Chow, “Predators for Peace.”

⁶¹ For a brief overview of UN Early Warning mechanisms, see Micah Zenko and Rebecca R. Friedman, “Un Early Warning for Preventing Conflict,” *Council on Foreign Relations*, February 2011.

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that drones would soon be able to find Joseph Kony.⁶² The hope, articulated by A. W. Dorn, is that UN peacekeepers stationed in conflict zones could use drones to detect “dangerous movements of arms and fighters”, which “could help prevent truce violations, large-scale atrocities or clandestine smuggling of weapons or humans”.⁶³

A view of the drone as the perfect aid worker and humanitarian “eye in the sky” raises questions about the ethics of international humanitarian engagements. For example, the idea of cargo drones as a panacea for all the problems that currently attend relief provision evokes a utopian vision of aid delivery: without discomfort, waste, physical insecurity, or risk of jeopardizing foreign policy objectives or contradicting mission statements. But will drones really eliminate the obstacles to providing humanitarian relief? And will access to drones make humanitarians better at their jobs? Discussion is needed not only about the imagined potential of the humanitarian drone, but about the distributive consequences of this type of utopian framing, particularly in relation to procurement, and funding for research and development. In response to Chow’s endorsement of drones as a means of providing relief, one online reader left a telling comment: “This sounds like it’s going to be really expensive. Do aid groups really have the money and resources to acquire and operate drone aircraft?”⁶⁴

It is also worth exploring assumptions about the causal relationship between knowledge of suffering and political action: one of the ideas that underpins the call for humanitarian drones to address suffering and injustice is the notion that they can, in and of themselves, change the nature of our engagement with suffering. Surveillance drones can potentially serve as a

⁶² Matthew Lee, "Clinton Says She Hopes Drones Help Find Kony," *Philly.com*, Aug 5 2012.

⁶³ A.W. Dorn, *Keeping Watch: Monitoring, Technology and Innovation in Un Peace Operations*(United Nations University Press, 2011). 2.

⁶⁴ Chow, "Predators for Peace."

“technology of witnessing”—providing accurate, real-time information about atrocities, and thereby engaging in what Michael Givoni describes as an “act of advocacy that may furnish a response to the plight of distant victims”.⁶⁵ As noted by Richard Ashby Wilson and Richard D. Brown,

as an ethos, humanitarianism has a strong narrative and representational dimension that can generate humanitarian constituencies for particular causes. The emotional nature of compassion is closely linked to visual and literary images of suffering and innocence.

Because suffering is a universal human experience, potentially all individuals can connect emotionally to specific people and their woes.⁶⁶

Yet, as is already evident from the history of humanitarian (in)action, there is no necessary link between knowing about human rights violations and responding to them.

Two further developments are worth noting: drones can collect ever-larger amounts of information about disasters, wars, and the impact of humanitarian assistance.⁶⁷ Thus, drones will become part of the ongoing humanitarian challenge of securing, making sense of, and

⁶⁵ Michal Givoni, "Beyond the Humanitarian/Political Divide: Witnessing and the Making of Humanitarian Ethics," *Journal of Human Rights* 10, no. 1 (2011). 58.

⁶⁶ Richard Ashby Wilson and Richard D. Brown, *Humanitarianism and Suffering : The Mobilization of Empathy*(New York: Cambridge University Press, 2009). 2-3.

⁶⁷ As an example, the ARGUS (Autonomous Real-time Ground Ubiquitous Surveillance Imaging System), recently developed by World Surveillance Group Incorporated, allows the collection of six petabytes of video in a single day, which roughly equals 80 years of high-definition video. Spencer Ackerman, "Every Day, Army's Panopticon Drone Will Collect 80 Years' Worth of Hd Video," *Wired*, 17 January 2012. Research is currently under way, for example, to create “disaster drones” that will fly in squadrons, with little or no human intervention. Dougal Shaw, "Disaster Drones: How Robot Teams Can Help in a Crisis," *BBC*, July 23 2012.

maintaining big data, as well as developing processes for leveraging credible and actionable information in a reasonable amount of time. At the same time, the humanitarian enterprise is gradually becoming concerned about the privacy implications of surveillance, and the possible costs of witnessing.⁶⁸

In their descriptions of the current and future capabilities of surveillance technologies, scholars are invoking images of a Kafkaesque universe where “an individual never quite knows whether information is being gathered or used against her”.⁶⁹ This perspective ties in neatly with the increasing debate in human rights scholarship about the practice of witnessing: When does witnessing become a tool of repressive governance? Is it naïve to think that exposure limits acts of violence? As Sam Gregory has noted, “despite the growing online circulation of images of human rights violations, of victims and survivors, there is limited discussion of crucial safety, consent and ethical concerns—particularly for people who are filmed.”⁷⁰ Drones with high-powered cameras flying over populated areas raise serious safety and privacy concerns. Data can be reworked and redistributed in ways that may lead to retaliation or revictimization. So far, advocates for the humanitarian drone have given little attention to civil liberty issues such as data protection and privacy.

Finally, the use of humanitarian drones raises important questions about the potential for mission creep. The following example illustrates some of the central concerns: in a 2012 op-ed

⁶⁸ Sandvik, “The Risks of Technological Innovation.”

⁶⁹ Ryan Calo, "Robots and Privacy" in Patrick Lin, Keith Abney, and George A Bekey, *Robot Ethics: The Ethical and Social Implications of Robotics* (The MIT Press, 2011), 190.

⁷⁰ Sam Gregory, "Cameras Everywhere: Ubiquitous Video Documentation of Human Rights, New Forms of Video Advocacy, and Considerations of Safety, Security, Dignity and Consent," *Journal of Human Rights Practice* 2, no. 2 (2010). 191.

piece in the *New York Times*, Andrew Sniderman and Mark Hanis, representing the Genocide Intervention Network, called for the use of surveillance drones to monitor and collect evidence of human rights abuses in Syria, stating that “it’s time we used the revolution in military affairs to serve human rights advocacy,” and that “if human rights organizations can spy on evil, they should”. Sniderman and Hanis further suggested that the evidence could be broadcast to a global audience, including prosecutors at the International Criminal Court.⁷¹

Implicit in Sniderman and Harris’s position is a belief that information gleaned from humanitarian drones can support “better” decisions on the part of the international community regarding a possible imminent threat to civilian populations. Critics of Sniderman and Harris have questioned the benefits of replacing human witnessing with aerial surveillance produced by drones, along with the supposedly superior ability of drones to produce a level of moral outrage that would evoke effective political action.⁷² Critics have also argued that the use of humanitarian drones would not only have “legitimizing effects” on existing government uses of drones for targeted killing, but would push the boundaries of the use of force, leading to a future scenario where “any humanitarian drone witnessing a possible massacre in real time is morally obligated to carry and fire ‘humanitarian missiles’”.⁷³ We will explore this line of argument further in the next section.

⁷¹ Andrew Stobo Sniderman and Mark Hanis, "Drones for Human Rights," *The New York Times*, 30 January 2012.

⁷² Mark Kersten to Justice in Conflict 2012, <http://justiceinconflict.org/2012/02/02/drones-for-human-rights-are-drones-the-answer/>.

⁷³ Darryl Li, "Some Bad Ideas Can't Be Shot Down," *New York Times Examiner*, 1 February 2012.

Humanitarian Combat Drones for the Protection of Civilians?

The most difficult aspect of the humanitarian drone concerns its political currency as a “humanitarian weapon”. The properties of drones have become the focal point for attempts to redefine both military action and the political rationales for relying on military action. Earlier sections addressed the ways in which the practices associated with military usage will travel with the hardware, as surveillance drones and cargo drones become tools of humanitarian action for nonstate humanitarian actors, as well as for nation-states and supranational organizations such as the EU and the UN. This section, however, focuses on a different type of transfer, in which the technical and institutional context for the deployment of combat drones remains unchanged—but drone strikes, instead of being construed as military action, are relabelled as humanitarian action. These “humanitarian combat drones” will presumably be deployed only by states and international or regional organizations; our concern, however, is that they may pose a number of problems, regardless of whether they are deployed to “humanize” the war on terror, to win legitimacy for humanitarian interventions with shaky mandates, to shore up political support for R2P missions, or to make UN “peace enforcement” more effective.⁷⁴ While it is not possible to examine every conceivable scenario, a survey of the arguments made in support of humanitarian combat drones can (1) help illuminate proponents’ views of the characteristics and uses of the humanitarian drone, and (2) provide the basis for a consideration of the ways in which the deployment of such drones may legitimate governmental and intergovernmental use of force.

Across the board, proponents of humanitarian combat drones subscribe to a shared set of assumptions regarding expediency: by reducing both relative cost and troop deployments, humanitarian combat drones offer financial and political advantages, as well as human ones:

⁷⁴ We are grateful to an anonymous reviewer for alerting us to the ramifications of various uses.

replacing troops with drones not only reduces the threat to one's own soldiers but is also better for civilians on the ground.

Later in the article, we suggest that such arguments play out differently in various contexts. At this point, however, important insights can be gleaned from the democratic distinctiveness literature, which is beginning to engage with the issue of drones.⁷⁵ In the context of "liberal warfare",⁷⁶ drones may be more than a weapon of choice⁷⁷: Frank Sauer and Niklas Schörnig caution that when drones are seen as capable of satisfying the rules of "risk-transfer war"—specifically, respecting the laws of armed conflict and limiting expenditure at the same time—they appear to offer a "silver bullet" for democratic decision makers.⁷⁸

The contemporary use of combat drones originated in the global war on terror and its politics of targeted assassinations: among supporters, drones are often presented as a humanitarian alternative to troop deployments—and thus "a step forward in humanitarian technology".⁷⁹ But this view may be called into question by the potential for armed drones to

⁷⁵ Frank Sauer and Niklas Schörnig, "Killer Drones: The 'Silver Bullet' of Democratic Warfare?," *Security Dialogue* 43, no. 4 (2012); Anna Geis, Harald Müller, and Niklas Schörnig, *The Militant Face of Democracy: Liberal Forces for Good*(Cambridge University Press, 2013).

⁷⁶ To counter the notion of "democratic peace theory," scholars have focused on democratic aggressiveness, coining the phrase *democratic wars* to refer to wars fought by democracies toward nondemocracies on the basis of a range of liberal justifications, such as "democratic regime change," "order wars", and "humanitarian interventions". See *The Militant Face of Democracy: Liberal Forces for Good*.

⁷⁷ For this view, see Joshua Faust, "A Liberal Case for Drones," *Foreign Policy*, May 14 2013.

⁷⁸ Sauer and Schörnig, "Killer Drones: The 'Silver Bullet' of Democratic Warfare?." 370; also M. Shaw, *The New Western Way of War: Risk-Transfer War and Its Crisis in Iraq*(Polity Press, 2005).

⁷⁹ Kenneth Anderson, "Targeted Killing in US Counterterrorism Strategy and Law," *Available at SSRN 1415070* (2009). 13.

reshape the principle of last resort, a principle whereby all reasonable alternatives must be exhausted before lethal military force is deployed. According to their proponents, by selectively eliminating targets, drones minimize the risk of a conflict escalating into full-scale war. Daniel Brunstetter and Megan Braun argue, however, by staving off the use of larger military deployments, the use of armed drones paradoxically paves the way for drone strikes and extrajudicial killings to avoid being labelled as “actual warfare”—and thereby potentially *lowers* the threshold for the use of force.⁸⁰

In the somewhat less contentious setting of humanitarian interventions outside a UN mandate, the properties of armed drones may also be relevant to decisions regarding whether to intervene, on whose side to intervene, and how to evaluate projected injuries to civilians with and without intervention.⁸¹ On the one hand, armed drones may meet the requirements outlined by Alex Bellamy in relation to humanitarian military intervention—namely, the obligation to exercise due care in the selection of targets and weapons, and to choose the military strategy calculated to achieve the best humanitarian outcome.⁸² And in the case of peacekeeping and R2P operations—that is, legally mandated international interventions—avoiding troop deployments may be good for both the purse and the security of civilians and soldiers. However, the expediency arguments will play into discussions of whether to intervene differently in various contexts.

⁸⁰ Brunstetter and Braun, "The Implications of Drones on the Just War Tradition." 346.

⁸¹ For a helpful discussion of the complexity of humanitarian intervention and the variables that must be balanced, see Miroslav Nincic and Donna Nincic, "Humanitarian Intervention and Paradoxes of Moral Authority: Lessons from the Balkans," *The International Journal of Human Rights* 8, no. 1 (2004).

⁸² Alex J Bellamy, *Just Wars: From Cicero to Iraq* (Polity Press Cambridge, 2006).

In contrast to humanitarian intervention, R2P places the primary responsibility for protection within the state itself; only when the state has manifestly failed to protect its population from one or more of the four crimes (genocide, war crimes, ethnic cleansing and crimes against humanity) will “the international community’s responsibility to take timely and decisive action, in accordance with the UN Charter” be triggered.⁸³ Assuming that airspace can be accessed, surveillance drones may provide comprehensive and timely evidence, and thereby contribute to mobilizing action. The debate on R2P, however, has always been plagued by confusion about whether R2P is itself a normative vocabulary, a speech act or a policy agenda, informed by normative principles and in need of implementation. This conceptual uncertainty is intensified by the practical reality of states’ reluctance to commit forces and resources.⁸⁴ In situations of apparent atrocity, illegitimate actors, and limited strategic interests, armed drones offer an alluring quick fix, a “measure short of full-scale war”.⁸⁵ This quick fix may be exactly what R2P needs to (re)gain potency, beyond serving as a rallying call for international activism.⁸⁶ On the other hand, where states’ ideational, institutional, and material power balance is significantly threatened, drones will not alter the rules of the game: the legality and legitimacy of just cause for the use of armed force is still dependent on UN authorization, arguably to the detriment of the R2P doctrine as a liberal cosmopolitan ideal.

At the same time, as the trend toward more aggressive mandates for UN peacekeeping operations continues, the presumed ability of armed drones to more effectively secure the

⁸³ Outcome Document of the 2005 United Nations World Summit ([A/RES/60/1](#), para. 138-140).

⁸⁴ Alex J Bellamy, "The Responsibility to Protect—Five Years On," *Ethics & International Affairs* 24, no. 2 (2010).

⁸⁵ Brunstetter and Braun, "The Implications of Drones on the Just War Tradition," 339.

⁸⁶ Alex J Bellamy, "The Responsibility to Protect: Added Value or Hot Air?" *Cooperation and Conflict* 48, no. 3 (2013).

protection of civilians, through better targeting, could garner significant attention. In Resolution 1925, the UNSC authorized UN peacekeepers participating in MONUSCO to use “all necessary means to carry out its protection mandate”, including force, to protect civilians facing imminent violence. Arguing for the benefits of peacekeeping drones, John Karlsrud and Fredrik Rosén suggest that “if the UN employs drones capable of carrying weapon systems able to minimize harm and enable the UN to implement its mandate more effectively, it is difficult to find arguments against such armament”.⁸⁷

Generally, proponents of humanitarian combat drones cite their potential for improving *jus in bello* compliance: first, the ability to discriminate between innocent civilians and legitimate targets lowers the risk of collateral damage; second, because of their superior view of the battlefield, drone combat teams can make more accurate determinations of proportionality, better balancing military gain with civilian harm. While the arguments supporting the use of combat drones in humanitarian operations seem to lean toward a form of technological determinism—reflecting the belief that, indeed, technology *can* clean up combat—this perspective has been criticized for its conflation of technological ability with increasingly sophisticated individual judgment.⁸⁸ In an important contribution primarily directed at the war on terror paradigm, Sarah Kreps and John Kaag argue that the defenders of armed drones overstate the ability of technology to answer the difficult ethical, legal, and political questions posed by the principles of distinction and proportionality, observing that “technology, even when it is sophisticated and precise, cannot

⁸⁷ Karlsrud and Rosén, "In the Eye of the Beholder? UN and the Use of Drones to Protect Civilians," 7; Karlsrud, J and Rosén, F (2013).

⁸⁸ Sarah Kreps and John Kaag, "The Use of Unmanned Aerial Vehicles in Contemporary Conflict: A Legal and Ethical Analysis," *Polity* 44, no. 2 (2012).

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determine the proportionality of strikes when nearly everything counts as a military objective”.⁸⁹ This critique has resonance for the three other potential uses of humanitarian combat drones: the perceived technical ability to effectively target designated individuals risks becoming the rationale for doing so.⁹⁰ Moreover, doing so under the guise of humanitarian targeting risks further lowering the threshold for the use of force.⁹¹

Conclusion: Making Sense of the Humanitarian Drone

This article attempts to make sense of the emergence of the humanitarian drone as a political concept by subjecting UAV technology, and the ideas that have formed around it, to some much-needed scrutiny. We are particularly concerned about the potential consequences for humanitarian discourse and the humanitarian enterprise: in our view, a focus on weaponised drones fails to capture the transformative potential of humanitarian drones and their possible impact on humanitarian action, and the associated pitfalls.

The starting point for our investigation is the emerging assumption that drones will change the humanitarian enterprise for the better. To explain the rise of the concept of the humanitarian drone, we note that the humanitarian enterprise embraces the idea of improving humanitarian action through technology. We further suggest that the humanitarian drone should be understood, at least in part, as a war dividend flowing from military spending on the war on terror. Importantly, just as the humanitarian enterprise has been identified as a significant market

⁸⁹ Ibid., 261.

⁹⁰ John Kaag and Whitley Kaufman, "Military Frameworks: Technological Know-How and the Legitimization of Warfare," *Cambridge Review of International Affairs* 22, no. 4 (2009).

⁹¹ Similarly, Sauer and Schornig (2012) argue that in the long run, democracies will not only be burdened with the costs of an arms race but will also be rendered more prone to engage in war than nondemocracies.

for UAVs, the humanitarian ethos has become an important commodity for drone manufacturers. Hence, it is important to attend to the strong commercial logic underpinning the promotion of the humanitarian drone. It is equally important to be aware of the ways in which drone use may shift humanitarian agendas and the political and financial priorities of governments (who tend to be protective of domestic defence contractors), international organizations, and NGOs. Also of note is the industry's attempt to forge a moral economy based on a shared humanitarian logic that is, in part, embraced by a humanitarian enterprise that holds firm to the belief that adding technology automatically generates progress.

In addition to predicting that military rationales and practices will travel with drones used for humanitarian purposes, we propose that existing tensions between the military and the humanitarian fields will shape how the humanitarian drone is used to mediate and respond to human suffering. Assumptions about precision and access, which are central to the appeal of drone technology, also underlie arguments in favour of humanitarian drones: to proponents of humanitarian drones, "perfect information" about targets and crises is expected to substitute, to some degree, for decision making. Nevertheless, in practice, perfect information remains a fantasy, and will continue to be undermined by challenges of airworthiness and safety, software and hardware problems, and human error, as well as problems inherent in the targeting logic itself.

As is clear from our discussion, the notion of the humanitarian drone is still an immature concept, forming around an immature technology. It is unclear whether the integration of drones into humanitarian action will be cost-effective, ethical, or feasible. An important part of the prevailing, pro-drone rhetoric is that UAVs can undertake dull, dirty, and dangerous jobs without suffering from any human frailties, such as the need to rest or eliminate bodily waste, or the experience of emotion (whether anger or empathy). Nonetheless, regardless of technological

improvements and the claims of some proponents, the humanitarian drone will not be a humanitarian worker: in other words, empathy will not be part of the job.

Because the concept of the humanitarian drone is rapidly gaining purchase in political discourse, the notion requires critical attention: we have attempted to show that the humanitarian drone is often viewed as a neutral technology, without sufficient context, and absent discussions of matters such as airspace regulation, data protection, and privacy. Nor are ethical issues (such as the “Do no harm” principle) or the role and content of regulatory frameworks being addressed in any systematic manner: seeing the humanitarian drone as a tool for human rights advocacy is quite different from seeing it as a tool for humanitarian action, in which case the norms of international humanitarian law come into play.

Drones have the potential to do a lot of work in contemporary political struggles. Just as drones are unable to clean up combat, they will be unable to clean up humanitarian action. Their diffusion, however, the strategic grafting of humanitarian logic onto the hardware, and the proliferation of proposed humanitarian usages will engender new types of transactions that, in turn, will produce new forms of institutional power. The road ahead must involve some difficult conversations—within the humanitarian community, and particularly among those designing humanitarian policies—about *what* humanitarians will be doing and *who* they will become when they deploy drones for crisis mapping or relief drops, or advocate for others to deploy humanitarian combat drones.

We would like to conclude by indicating where we think more research is needed. First, we encourage international relations scholars to follow the money: What is the political economy of humanitarian drones? How do the development and marketing of new prototypes correspond to regulatory efforts, and with the ways in which UAV procurements are processed, labeled and legitimated by governments and international organizations? Second, given the increasing use of

drone technology in civilian airspace, it is essential to examine the political meanings surrounding representations of all categories and uses of drones—from human rights drones, to eco drones, anti-poaching drones, agro drones, and so forth. How do other types of drones, and the work they do, compare with the idea of the humanitarian drone? Third, returning to our argument that practices travel with hardware, sound empirical research is needed to explore not only how humanitarian drone practices are enacted, and by whom, but also how this novel form of humanitarian praxis is experienced and interpreted by those at the receiving end. Finally, as noted earlier, the paradigm of the democratic war sheds valuable light on the linkage between liberal warfare and humanitarian agendas. We believe that greater scholarly efforts must be made to understand the distributive consequences of adding humanitarian drones to this equation. Particular attention must be paid to the possibility that drone strikes may, over time, be appropriated as a specific technological expression of humanitarian reason.