Autonomous Weapon Systems, Human Dignity and International Law

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Chapter Nine

Conclusions

The pursuit of values 'is part of what it is to be a human being'[1] and the basic value and dominant purpose of international law is the promotion of human welfare, dignity and freedom.[2] Therefore, humans must, to preserve their value and autonomy as persons and hence their dignity, retain their responsibility to think, reason and express judgment in essential realms of life. Compliance with responsibility in international and domestic affairs, however, can be literally a 'double-edged sword.'[3] All autonomous technologies, including weapons technology, raise important questions about where humans should exercise their reason, judgment and values. In this dissertation, I have demonstrated that the delegation of human responsibility for complex, value-based judgments to autonomous weapon systems erodes human dignity and, consequently, international law. Indeed, this problem permeates each of the bodies of international law discussed in the preceding chapters.

Nevertheless, as the speed of 'swarm' technologies and other autonomous machine actions and reactions inevitably increases in the future,[4] the role of autonomy – and the artificial intelligence that drives it -- will expand as the space for human reasoning declines.

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[1] I Berlin, 'My Intellectual Path,' *in The Power of Ideas*, H Hardy (ed.) (Princeton University Press, 2000), p. 23.

[2] L Henkin, *How Nations Behave: Law and Foreign Policy* (New York: Frederick A. Praeger, 1968), p. 35.

[3] B Mitchell (ed.), *The Battle of Maldon and Other Old English Poems*, K Crossley-Holland (trans.) (London: MacMillan, 1965), pp. 28 – 29, and 32. The Battle of Maldon took place in Essex, U.K. in August 901. A party of invading Danish Vikings defeated English warriors led by Byrhtnoth, who, under a duty to destroy the invaders, imprudently permitted the Danes to cross the Maldon river and engage the English in battle.

[4] Reflecting on his operations against the Wermacht in France, U.S. Army General George Patton distilled his vision of the art of war to an excerpt from Rudyard Kipling's poem, 'If':

> '…If you can fill the unforgiving minute
> With sixty seconds' worth of distance run, …'

In other take words, quickly take advantage of brief lapses in your enemy's strength, knowledge and/or preparedness. Letter, *George Patton Jr. to his son George IV*, 21 August 1944, in B Patton & J Scruby, *Growing Up Patton: Reflections on Heroes, History and Family Wisdom* (New York: Berkeley Publishing Group, 2012), p. 56.

These conditions increasingly will violate human dignity, as the ability of humans to fully develop their personalities progressively will diminish. Attempts to ameliorate this problem with semantic standards for human involvement such as 'meaningful human control' or 'appropriate levels of human judgment over the exercise of force' will be ineffective.

Fortunately, the use of an interdependent, 'co-active design' of autonomous weapon systems can serve as an effective buffer against risks to the development and preservation of human dignity. The co-active design permits human-machine teamwork at crucial moments of the application of, inter alia, international humanitarian law and international human rights law to facilitate development and expression of personal autonomy. This design thereby serves to protect the value of human dignity, and, on a more practical level, it also ensures the exercise of human reasoning and judgment for cognitive functions better suited for persons than machines.

Accordingly, in the context of international humanitarian law, humans should make decisions in situations, such as the application of the proportionality rule, where a balance must be struck between the foundational values of the law of armed conflict: military necessity and humanity. Similarly, humans should retain greater degrees of responsibility for decisions in other situations where multiple, conflicting values are constantly tested, such as urban combat or the control of security within facilities for prisoners of war. Conversely, the need for human involvement is reduced in scenarios that require automatic and instinctive behaviour, such as close-quarters combat distant from civilian populations, or during the location and fusion of intelligence information.

With respect to international human rights law, the use of autonomous weapon systems in exceptional law enforcement situations warranting the exercise of lethal force constitutes a relinquishment of human thought and expression in exchange for greater speed in the application of force. The former qualities are fundamental to the development of personal

autonomy and thus, human dignity. Human beings, therefore, should participate in decisions concerning the exercise of lethal force by these weapon systems outside of armed conflict and in situations where both international humanitarian law and international human rights law apply. Greater deference to autonomous technologies and artificial intelligence will be reasonable during tasks that are less value-based, such as distribution of food in detention centres.

By maintaining human-machine corroboration at such crucial moments, co-active designs of autonomous weapon systems help to strengthen accountability and thereby, the effectiveness of international criminal law. Greater accountability means greater dignity for all parties. Co-active designs also, by preserving opportunities for humans to apply law, protect the function of law to adjust the rights between citizens, between individuals and states, and between states. With each increment in the speed of lethal autonomous weapon systems, however, the underlying benefits of co-active designs begin to recede.

Even the most sophisticated and 'flawless technology of man'[5] can produce unforeseen injury to humankind. In the case of lethal autonomous weapon systems, however, we can *perceive* the damage that will be done to human dignity by the use of these weapons. Yet, as weapons technology rapidly becomes more automated and autonomous, the evolution of law concerning the proper design and use of these weapon systems lags behind. The resulting 'legal lacunae' presents a significant threat to human dignity and, therefore, the integrity of our system of international law.[6]

[5] P. Mahon, *Royal Commission of Inquiry into and Report Upon the Crash on Mount Erebus, Antarctica, of a DC10 Aircraft Operated by Air New Zealand Limited* (Wellington, P.D. Hasselberg, 1981), para. 398, <http://www.erebus.co.nz/LinkClick.aspx?fileticket=PUWvCWDoUoE%3D&tabid=159>.

[6] See *Barcelona Traction, Light and Power Company, Limited*, Judgment, I.C.J. Reports 1970, Separate Opinion of President Bustamente y Rivero, para. 4 (concluding that where the evolution of international economic law does not keep pace with the practicalities of transnational business, harm may occur to the 'proper working of justice').

In international law, the well-being of individuals takes priority over the well-being and freedom of states.[7] Accordingly, states bear a responsibility to ensure that their employment of lethal autonomous weapons complies with international obligations to promote and protect human dignity. Furthermore, in cases where the attribution of fault for harm caused by autonomous weapon systems is problematic, international courts and arbiters should use the international environmental law principles of prevention, precautionary measures and polluter pays by analogy to determine the responsibility of states and arms manufacturers. Concurrently, the development of due diligence measures designed to reduce the likelihood of accidental harm caused by autonomous weapons, and to minimize that harm when it occurs, will make the application of these principles more uniform.

Autonomous weapon systems will transform warfare and law enforcement operations.[8] To preserve and promote human dignity – the cornerstone and starting point of international law -- this transformation compels reflection about what it means to be human and the significance of humanity.[9] These concepts evolve when technology changes the way wars are fought and as societal understandings of acceptable human suffering change.[10] As autonomous functions develop and dominate aspects of warfighting and crime control, men and women lose their personal autonomy, including the ability to apply judgment and law. This sacrifice of human development and personality to machine autonomy and efficiency

[7] J Waldron, 'The Rule of International Law,' 30 *Harvard Journal of Law & Public Policy* (2006), 15, 24 - 25. Hersch Lauterpacht observed that 'no legal order … is true to its essential function if it fails to protect effectively the ultimate unit of all law – the individual human being.' *An International Bill of the Rights of Man* (1945) (Oxford University Press, 2013), p. 7.

[8] S Russell, 'A Brave New World? How Will Advances in Artificial Intelligence, Smart Sensors and Social Technology Changer Our Lives?' Panel Discussion at World Economic Forum, 22 January 2015, <http://www.weforum.org/videos/brave-new-world>.

[9] Law is most relevant precisely in the face of shifting political, social, economic and military conditions that call for 'fundamental assessments of human values and the purposes of society.' *Shaw v. Director of Public Prosecutions*, House of Lords, Opinion of Viscount Simonds, 4 May 1961, p. 7.

[10] H Nasu, 'Nanotechnology and the Future of the Law of Weaponry,' 91 *International Law Studies* (2015), 486, 501 – 502; H Eggen Røislien, 'Thoughts on Autonomous Weapon Systems and Meaningful Human Control of Cyber,' *Open Democracy: Free Thinking for the World*, 7 November 2014, <available online at https://www.opendemocracy.net/hanne-eggen-r%c3%b8islien/thoughts-on-autonomous-weapons-systems-and-meaningful-human-control-of-cyber>.

reduces 'human' to a simple delegate or conduit, rather than a source, of responsibility for moral and legal decisions.

As the meaning of 'human' narrows, however, the introduction of autonomous weapon systems, paradoxically, can alter perceptions of humanity to allow for less use of violence during conflict and civil strife, rather than more. If 'humanity,' in the context of war and civil disturbances, refers to the reduction of suffering, then 'humanity' (and human dignity) requires (at least in certain situations) the use of autonomous technologies.[11] The paradox, and the challenge, is to operationalize this perception of humanity without altering, and constraining, human dignity.

Two essential questions emerge from this challenge: first, as the role of lethal autonomous weapon systems increases, can our current, dignity-based interpretation of international law co-exist with this changing conception of 'humanity'? If not, are we willing to accept the legal and existential cost of transferring our responsibilities for complex, value-based reasoning and judgment to machines?[12] In this dissertation I have tried to demonstrate that the answer to both questions is 'no.' In his treatise on the history of the idea of human dignity, Herschel Baker concluded that '[t]he history of thought teaches us that if we lose one prop for human dignity we can always construct another.'[13] Baker does not, however, explain what new 'prop' humans may devise when they outsource their processes of reasoning and judgment. The damage to human dignity wrought from the use of fully autonomous lethal

[11] Potentially, autonomous weapons technology can give persons more options to act legally and morally. J Lanier, 'The First Church of Robotics,' *International Herald Tribune*, 9 August 2010, p. 6. However, it should not reduce the human *ability* to do the same.

[12] The Government of the Republic of Croatia contends that permitting 'automated technical systems' to make fundamental moral judgments about the taking of life 'would mark the end of humanity as such.' 'Opening Statement of the Republic of Croatia,' Convention on Conventional Weapons, Informal Meeting of Experts on Lethal Autonomous Weapons, 13 April 1015, <http://www.unog.ch/80256EE600585943/(httpPages)/6CE049BE22EC75A2C1257C8D00513E26?OpenDocument>.

[13] *The Image of Man: A Study of the Idea of Human Dignity in Classical Antiquity, the Middle Ages and the Renaissance* (New York: Harper & Row, 1961), p. 333.

weapons when complex values are at stake represents a regression in human evolution and thus, is too high a price to pay for greater efficiency in the use of violence.[14]

The obligation to protect human dignity is the starting point for the interpretation and application of international law. International law then creates normative frameworks and rules for resolving the moral issues subsumed by concerns about human dignity.[15] In light of its moral, social, political, military and economic role, law should serve these broader normative purposes rather than be a slave to scientific or technological inevitability.[16] It may be true that international life constantly evolves and international law, to remain relevant, must be a reflection of that life.[17] But it is also true that international law, to preserve its capacity to adjust rights and responsibilities between states, and between states and individuals, must ensure the pre-eminence of the principle of human dignity.

In the Introduction to this dissertation, I described this work as a 'predictive history' of the influence of autonomous weapon systems on international law and vice-versa.[18] 'But history,' as Grotius observed, 'is sometimes nothing more than a catalogue of actions marked with injustice, and ungovernable fury.'[19] International law can and should play a determinative role so that the use of autonomous weapons does not result in avoidable

[14] 'Liberty and equality, spontaneity and security, happiness and knowledge, mercy and justice – all these are ultimate human values, sought for themselves alone; yet when they are incompatible, they cannot all be attained, choices must be made, sometimes tragic losses accepted in the pursuit of some preferred ultimate end.' Berlin, 'My Intellectual Path,' in The Power of Ideas, p. 23.

[15] 'Only by being normative can law preserve a balance between its transformative force, which does not accept reality as it is, and its roots in social reality.' B Simma, 'The Responsibility of Individuals for Human Rights Abuses in Internal Conflicts: A Positivist View,' 93 *American Journal of International Law*, (1999), 302, 307.

[16] *Prosecutor v. Dražen Erdemović*, Joint Separate Opinion of Judge McDonald and Judge Vohrah, IT-96-22-A, Appeals Chamber, 7 October 1997, para. 75 (observing that '… the law should not be the product or slave of logic or intellectual hair-splitting, but must serve broader normative purposes in light of its social, political and economic role).' 'Moral and political considerations are not alien to law but part of it.' Simma, 'The Responsibility of Individuals for Human Rights Abuses in Internal Conflicts: A Positivist View,' 308. For a different view, see J Goldsmith & E Posner, *The Limits of International Law* (Oxford University Press, 2005), p. 185 (arguing that states have no moral obligation to follow international law).

[17] *Corfu Channel Case*, Judgment of 9 April 1949, Separate Opinion of Judge Alvarez, I.C.J. Reports 1949, p. 41.

[18] One function of law is to establish 'possible futures for society, in accordance with society's theories, values and purposes.' P Allott, 'The Concept of International Law,' 10 *European Journal of International Law* (1999), 31.

[19] H Grotius, *On the Law of War and Peace* (1625), A.C. Campbell (trans.) (Kitchener: Batoche Books, 2001, p. 172.

injustices and unnecessary violence. If and when individual, state and civil responsibility exist for the design, development and use of autonomous weapons, then this 'predictive' legal history becomes a present where autonomous weapon technologies can be employed without vitiating human dignity.

In the foregoing chapters, I have attempted to prove several propositions. First, as autonomous weapon systems operate at increasingly greater speeds, their use will undermine the opportunities for, and the value of, human reasoning and thinking. Second, when the value of human reasoning and thinking is diminished, the killing of human beings by autonomous weapon systems will violate human dignity, and, therefore, international law. Third, the use of autonomous weapons systems will undermine the function of law and the application of law. Fourth, co-active designs of these weapon systems are necessary to ensure that humans and autonomous weapon systems can operate interdependently so that individuals can: 1) fulfil their obligations under international law – including the preservation of their dignity -- and 2) ensure that human reasoning and judgment are available for cognitive functions better suited for humans than machines.

Thus, this dissertation explains (if not resolves) several of the legal and moral problems raised by the use of autonomous weapon systems. Some readers, naturally, may disagree with my proposed solutions. Nevertheless, the debate must include not only the impact of autonomous technology on warfare and security, but also its consequences for the preservation of human dignity and international law, and, ultimately, what it means to be human.