Killing in a Posthuman World:

The Philosophy and Practice of Critical Military History

Professor Joanna Bourke

Birkbeck, University of London and author of What It Means To Be Human

J.Bourke@bbk.ac.uk

The posthuman was spawned within the military complex. For all its emancipatory potential, which Rosi Braidotti has eloquently written about and of which I will say more later, the armed forces of advanced western states (particularly the U.S.) were responsible for conjuring up its existence, funding the techno-scientific apparatus required for its birth, sponsoring its proliferation, and subsidizing the diversionary apparatus (such as within entertainment industry) that has been central to its infiltration into the popular imaginary. As Braidotti astutely observes in The Posthuman (2013), "the advocates of advanced capitalism seem to be faster in grasping the creative potential of the posthuman than some of the well-meaning and progressive neo-humanism opponents of the system".[1] Indeed, defenders of militarism in the twenty-first century have identified the posthuman as the central component of the latest Revolution in Military Affairs (RMA), which they claim is as important as previous RMAs, such as the invention of gunpowder, of armoured vehicles, and of aerial flight. The crushing force with which the military complex has grasped the destructive potential of this militarised posthuman points to a very real crisis in posthumanist thinking and practice.

Although the new RMA has dislodged the human as the central agent in the waging of war, modern wars began the process. The American Civil War and the First

World War saw prodigious expansions in the mechanisation of killing, but the move towards a posthuman military really occurred during the "wizard's war" of 1939-1945 when, in an unprecedented fashion, scientists came to define and revolutionalize how war was actually fought. Initially, the revolution was not driven by conventional concerns (after all, scientists had long been necessary for the development of military technologies such as artillery pieces) but by more theoretical concerns associated with radar, sonar, and the atomic bomb. By the 1950s, the Military Industrial Complex was firmly entrenched. At the end of that decade, nearly ten per cent of Americans in employment were working either directly or indirectly by the Department of Defense.[2] In the 1950s, the armed forces and their firms consumed between 85 and 90 per cent of all goods and services purchased by the federal government.[3]

Today, however, advanced western powers no longer fight modern wars, but posthuman ones. As two spokesmen from the U.S. Naval War College put it in 2013, in order to maintain "a technical edge over potential adversaries… by fielding systems that enable [American forces] to deliver lethal force while minimizing the risk to their own forces",[4] the militarist posthuman relies on external extensions (technological "add-ons") to human and non-human animals, as well as internal modifications of the physiological body. The range of these modifications can be illustrated by looking at what is being funded by the U.S. Defense Advanced Research Projects Agency (DARPA), a central organisation in the posthuman military project. DARPA is dedicated to developing "materials and devices inspired by living-systems and using these new technologies to create new military systems". They feature a formidable arsenal of posthuman enhancements, from the "Warrior Web" (an under-suit that enhances the ability of soldiers to carry heavy gear for long periods) and prosthetic products controlled by brain-machine interfaces to robots, microelectromechanical systems, and nanotechnologies.[5] In true posthumanist fashion, they celebrate difference, heterogeneity, and flexibility, boasting about their "heterogeneous Mobile Military Networking Infrastructure", "dynamic, autonomous, airborne, terrestrial, and littoral assets", and "transient addresses".[6]

They insist that "DARPA is well on its way to creating a Bio-Revolution" which will "help warfighters".[7]

Central to the militarist project is a decentring of the human made possible through technology. For advanced military states, armed conflicts are waged by posthumans, that is, by humachines. Warbots – a generic term for drones, robotic weapons, unmanned vehicles, and suchlike – are at the heart of twenty-first century aggression. In the words of a headline in The Economist: "The Future of Warfare: Select Enemy. Delete".[8] During "Operation Enduring Freedom" and "Operation Iraqi Freedom", unmanned aircraft systems as part of the U.S.-led coalition flew almost half a million hours and unmanned ground vehicles conducted over 30,000 missions during which they detected and neutralized over 15,000 IEDs (improvised explosive devices).[9] While the U.S. Department of Defense had only 50 unmanned aircraft in 2000; by October 2009, they had 6,800 and were expanding (in 2010, the Department requested a further $6.1 billion for new unmanned systems).[10]

From the tiny "Wasp" drone, which is small enough for a soldier to toss into the air like a mobile aeroplane to discover what might be behind a wall or hill, to the 44-foot long Global Hawk, which flies at 60,000 feet and can remain airborne for 35 hours, human-machine systems dominate "Bellum Americanum". The drone pilot – operating thousands of miles from his target – is a networked being, connected to local, national, and global computer and satellite systems, including being streamed directly into the offices of the U.S. Secretary of State for Defense and the President. To ensure effective combatant dominance, the posthuman drone pilot has to allow the machine to get under his skin; he has to feel the machine in order to effectively navigate or fly it. This was what Matt Martin (an experienced pilot of conventional warplanes) learnt when being taught to fly the Predator drone. He recalled being yelled at by his instructor: "You're in that airplane, Captain Martin. Feel it". Martin commented that he "knew how an airplane was supposed to feel – and sitting in a GCS [ground control station], for all it looked like a flight cockpit, wasn't it". In an

airborne plane, pilots "felt gusts of wind, turbulence, a change in the aircraft's relative position to the ground" but the Predator pilot "had no such connections to his plane". Martin was only considered to be fully trained after he was observed crouching forward to better see over the nose of the aircraft when landing ("a futile gesture when flying an RPA [remotely piloted aircraft]". "Not too bad, shithead", was the way his instructor complimented him.[11] Martin's physiological body was a constructed entity; it had to be regulated through intensive military training. Medical, legal, economic, and political forces systematically altered his posture, affect, and proprioception. The technological affordances of the computer console extended his body boundaries. In other words, despite the networked, techno-scientific interface, the posthuman military does not so much eradicate the subject but extends it.

One result is the deterritorialization of warfare. This happens in a number of different ways. One of the most basic is the way posthuman militarists fail to recognize state-borders. Drones conduct their killings without regard for national territories or liberal notions of sovereignty. They exercise persistent surveillance over large areas of the globe. This has significant implications for the traditional legal constructions of human rights and for humanitarian law. As Hannah Arendt astutely observed in The Origins of Totalitarianism (1973), human rights have customarily been associated with nation-states: personhood is both conferred and revoked by sovereign leaders.[12] This is no longer the case. If the human of "human rights talk" is defined by citizenship, the posthuman military state denies this by eradicating the relevance of national boundaries or categories of citizens.

Humanitarian law also falters under this deterritorialized form of warfare. In Wired for War: The Robotics Revolution and Conflict in the Twenty-First Century (2009), Singer quoted a proponent of military robotics as saying that "the robot is our answer to the suicide bomber".[13] In 2011, a commentator in the Harvard

National Security Journal noted that this "analogy between a robot and a suicide bomber is a chilling portent of post-human warfare". He explained that

> both are the extremities of war: present in combat, lethal, and neither is entitled to the protections of IHL [International Humanitarian Law]. In short, they are objects of war not contemplated by humanitarian law, and place discourses of "humanity" in question. They are post-humanitarian concerns.[14]

In other words, the "jus in bello" in humanitarian law is based on the idea of an active, willing human agent who can be held accountable for lethal decisions made in war. With the increase in semi-autonomous machines – and the future risk of fully autonomous machines charged with making decisions about whom to kill – the basis of humanitarian law is undercut. In this way, the posthuman has liberated itself not only from the constraints thrown over it by "nature" but also from the constraints of humanist ideology that insists (in theory although not in practice) on the application of humanitarian law in armed conflicts.

Deterritorialized warfare is not the only similarity between the posthuman military and the terrorist: the other is the absence of temporal limits. For both, the aims are unlimited (thus precluding any decisive victory – indeed, rendering the concept of "victory" redundant) and the means are bounded only by capacity and imagination. Both the terrorist and advanced western militaries understand that their violence is futile in a liberal human sense: the suicide bomber who kills revellers in the Bali nightclub and the drone pilot who targets him victims from 60,000 feet in the sky are not attempting to change people's minds or even to effect political change. Their state of war is indefinite; it is criminal action and police reaction masquerading as war.

Posthuman violence also extends far beyond the body of the soldier (or, in current military jargon, “Warfighters”) and his physical context, creating a schizoid subject. This was what Predator-navigator Martin alluded to time and again in his memoir. He recalled how the typical drone-operative would

> commute to work in rush-hour traffic [in Nevada], slip into a seat in front of a bank of computers, “fly” a warplane to shoot missiles at an enemy thousands of miles away, and then pick up the kids from school or a gallon of milk at the grocery store on his way home for dinner.[15]

In addition to technological extensions to the human, which enable “Warfighters” to vastly exceed previous physiological capabilities, there are also technologies which chemically alter brain states. Psychopharmacology has become a significant area of research and practice in posthuman militaries. Amongst other things, it involves administering steroids to enhance physical traits like strength and endurance and “Go Pills”, which contain the stimulant dexamphetamine. The latter are commonly used in the U.S. Air Force. Although these pills are said to be voluntary (and pilots have to sign a document to that effect), refusing to take them could result in a pilot being banned from flying, thus jeopardizing his career in the Air Force.[16] Research is also being conducted into what is popularly known as the “anti-remorse pill”, aimed at eradicating the fear of engaging the enemy as well as the guilt arising from killing. As Leon Kass (chairman of the President’s Council on Bioethics) explained, “It’s the morning-after pill for just about anything that produces regret, remorse, pain, or guilt”.[17] A national coordinator for Vietnam Veterans Against the War put it more succinctly: scientists were creating an “anti-morality pill”.[18]

The Warfighter is enhanced by posthuman technologies and pharmaceuticals forged in the military-industrial complex of the twenty-first century. However, this aggressor is encouraged to view his victims as posthuman too. Seen through the pixeled computer screen, the distinction between the life of the sentient body and the avatar is blurred. Biological and simulated existence becomes interchangeable. In front of his computer screens in Reno (Nevada), drone navigator Martin reflected on how it felt to be "among the first generation of soldiers working with robots to wage war". He confessed to feeling a

> thrill… at the moment I prepared to squeeze the trigger…. It had not been quite real, even afterwards…. The ability to kill people from such great distances, playing God, widened the gap between the reality of war and out perception of it. It was almost like watching an NFL game of TV with its tiny figures on the screen….. It could even be mildly entertaining.[19]

He admitted that this kind of killing was indistinguishable to "simulated combat, like the computer game Civilization".[20] When he launched a missile he explained that "I experienced the by-now-familiar pixilation of the screen as the missile launched from its rail to briefly interrupt the return link" before, 30 seconds later, "the Papa streaked straight down to impact between [two men]. They never knew what hit them". He admitted "Sometimes I felt like God hurling thunderbolts from afar".[21]

Sergeant Sinque Swales from Chesterfield (Virginia) made a similar comment. He observed that war gaming was crucial to his ability to shoot a .50-calibre machine gun at Iraqi insurgents in the northern town of Mosul. He recalled that

> It felt like I was in a big video game. It didn't even faze me, shooting back. It was just natural instinct. Boom! Boom! Boom! Boom!... I couldn't believe I was seeing this. It was like "Halo". It didn't even seem real, but it was real.[22]

As David Bartlett (former chief of operations at the Defense Modelling and Simulation Office and the creator of the video game and training device Marine Doom) explained, when the time came for Swales to kill in real life

> he was ready to do that…. His experience leading up to that time, through on-the-ground training and playing "Halo", and whatever else, enabled him to execute. His situation awareness was up. He knew what he had to do. He had done it before – or something like it.[23]

The posthuman gaze streamed through entertaining war games united cybernetically-enhanced super-soldiers in Halo and Reno, Mosul and Chesterfield.

In such posthuman settings, spectacle is paramount. This point was made by Jean Baudrillard in Simulacra and Simulation as long ago as 1995 but, since then, has taken on new life with the development of particularly intimate connections between the military and the entertainment industries. The decisive year was 1999 when the National Academy of Sciences hosted a workshop on simulation aimed at encouraging co-operation between the defence and entertainment industries. After its report, a $45 million partnership was established between the army and the University of Southern California to establish the Institute for Creative Technologies (ICT).[24] In 2011, the U.S. Department of Defense extended ICT's contract to 2014 by giving it a further $135 million.[25] The ICT brings together military specialists,

computer scientists, social scientists, writers, artists, and cinematographers. Although the aim is to improve military modeling and simulations, the initiative is also part of an attempt to give a more modern face to the armed services. By 2011, the ICT estimates that over 75,000 soldiers had been trained using the innovative ICT-developed technologies.[26] Importantly, war gaming does not only move from barracks to bedrooms. It also moves in the other direction: commercially available war games are adopted by military-training regimes. As the U.S. Secretary of the Army Louis Caldera boasted in 1999, the ICT is "a joint effort of the Army, the entertainment industry and academe – an innovative team to advance dazzling new media and ultimately benefit training and education for everyone in America".[27] Significantly, Caldera did not see the cooperation as benefiting the military forces solely, but all of society. It is a typical assumption, and not unrealistic given the snowballing militarization of American life.

What was so pioneering about the ICT initiative? Prior to its establishment, military simulations had focused primarily on developing applications that could advance strategic planning, improve procedural systems, and introduce guidelines concerning military doctrine. In contrast, ICT researchers recognized that humans were emotional beings. They sought to inject feelings and interpersonal relationships into decision-making and battle-conduct.[28] They believed that efficient military organizations needed to be sensitive to the emotional lives of everyone from the raw recruit to the most seasoned commanding officer. Environmental thrills, emotional reactions, and intellectual challenges were necessary to spur posthuman Warfighters to effective techno-scientific engagement with the enemy.[29]

In September 2004, the ICT released the first military training application developed for a commercial game console: this was Full Spectrum Warrior, a squad-based, tactical-action game. They developed this game in close cooperation with the U.S. Army Infantry School at Fort Benning in Georgia in order "to ensure content fidelity", but they also filmed real-life soldiers in order to create their computer

character animations.[30] It is no coincidence that the game was set in a fictional place in the Middle East and is based on the "war against terror". Its purpose is to train infantry soldiers in asymmetrical, posthuman warfare. As ICT spokesmen insist time and again, the new kinds of war demands different interactions within gaming environments. It is one of many games that serves a dual function as training programme for the military and entertainment for a wider (primarily male) public.

The ICT also cooperates with commercial toy makers, enabling them to produce imitation weapons that exactly matched their lethal counterparts.[31] Once again, the exchange goes both ways: real-life weapons are also modeled on toys. Thus, when the Marines used the Dragon Eye remote controlled reconnaissance air vehicle in Iraq, they were probably unaware that model planes had inspired the bungee cord that launched it.[32]

Gaming is profoundly relevant to the citizen's political life. By blurring entertainment and war – "militainment" or, in J. Der Derian's coinage, the "military-industrial-entertainment-complex"[33] – citizens come to expect war without end. Entertainment has become a way of creating militarized citizens. The war is sanitized for easy consumption. We are all turned into citizen-soldiers – no longer viewing the war but being embedded into it, albeit virtually. This brings war closer in some aspects but at the same time further decontextualises it.

Finally, this posthuman military is classed, racialised, and gendered. Technology is not autonomous of cultural production. American "Warfighters" are constantly enthusing over the stark contrast between their god-like capacities to kill by means of drone warfare in comparison to the puny resources available to mere "insurgents" with their beaten-up trucks and crude weapons. Less-than-human combatants are excluded from both the productive and destructive symbiosis of the human and the technological. The new connections between bodies and

technologies are invested with power that is already set in place. This militarized posthuman-becoming is even available to women in advanced western states. Recruiting such women has become a major task for the U.S. military, even if the model remains male (as in U.S. Army advertisements that proudly state that "Our Best Men are Women").[34] We cannot assume that the technologies and networks essential to the posthuman project will be universal or equitably distributed. Although the technologies upon which the posthuman military depends will eventually be adopted widely, the "others" are not likely to "catch up" in the near future. After all, at the individual level and in terms of global economic networks, the posthuman is a late-capitalist project, requiring vast resources. It is a project that is committed to an extreme form of rationalist, technologist, and consumerist ideology. It is not able to escape from the violence of late global capitalism because it is a product of that violence.

The posthuman of the military – the militarist, masculine cyborg – is the opposite of Braidotti's vison of the cyberfeminist. The picture I have drawn of the posthuman as a creation of the military complex and as central to contemporary violence is depressing. As Braidotti observed in Transpositions, "the potentially innovative, de-terrirtorializing impact of the new technologies is hampered and turned down by the reassertion of the gravitational pull of old and established values".[35] She is very careful to insist that her emphasis on the affirmative praxis of posthumanism "does not deny the reality of horrors, violence and destruction" but she identifies something beyond violence.[36]

What is to be done? Can we rehabilitate the toxic genealogy of the posthuman? The time to re-biologise the posthuman and its victims by reinstating binaries such as human/machine or by returning to some notions of humanity or either an innate or constructed human-ness is over. The liberal humanist project is dead already, and it died giving birth to the posthuman. We can't go back. We don't want to either. Braidotti calls upon feminists to rethink the posthuman moment. She

offers the best chance of reviving the potential of critical posthumanism. She calls on people – including historians, who resolutely attempt to look backwards into "what used to be" – to engage with the present and future or, as she puts it, to grapple "with existing social and political givens – including the horrors of our times – in order to bring about counter-effects, that is to say unexpected consequences and transformations". We need to become "worthy of the times" and confident of our ability to "construct[] positivity, thus propelling new social conditions and relations into being, out of injury and pain".[37] At a time when thanatopolitical practices dominate military research and practice, scholars need to follow Braidotti's nomadic journey towards a critical posthumanism.

[1] Rosi Braidotti,. The Posthuman (Cambridge: Polity Press, 2013), 45.
[2] Glen Scott Allen, "Master Mechanics & Evil Wizard: Science and the American Imagination from Frankenstein to Sputnik", The Massachusetts Review, 33.4 (winter 1992), 548.
[3] Glen Scott Allen, "Master Mechanics & Evil Wizard: Science and the American Imagination from Frankenstein to Sputnik", The Massachusetts Review, 33.4 (winter 1992), 548.
[4] Michael N. Schmitt and Jeffrey S. Thurnher, "'Out of the Loop': Autonomous Weapon Systems and the law of Armed Conflict", Harvard National Security Journal, 4 (2012-13), 232.
[5] http://www.darpa.mil/NewsEvents/Releases/3013, viewed 2 January 2014.
[6] Rajesh Krishnan and Zhensheng Zhang, "Mobile Ad-Hoc Networking (MANET) Formulation Considered Harmful", 7-8 August 2013, slide 16, on the DARPA's website http://websearch.darpa.mil/search, visited 2 January 2014.
[7] Jonathan Beard, "DARPA's Bio-revolution", on the DARPA's website http://websearch.darpa.mil/search, visited 2 January 2014.
[8] Michael O'Hanlon, "Can High Technology Bring U.S. Troops Home?", Foreign Policy, 113 (winter 1998-99), 72.
[9] U.S. Department of Defense, FY2009-2034 Unmanned Systems Integrated Roadmap (Washington DC: U.S. Department of Defense, 2009), xiii, at http://www.dtic.mil/docs/citations/ADA522247, viewed 6 January 2014.
[10] U.S. Government Accountability Office, "Unmanned Aircraft Systems: Comprehensive Planning and a results-Orientated Training Strategy Are Needed to Support Growing Inventories" (Washington DC: U.S. Government Accountability Office, 2010), at http://www.gao.gov/new.items/d10331.pdf, viewed 6 January 2014.
[11] Matt J. Martin with Charles W. Sasser, Predator. The Remote-Control Air War Over Iraq and Afghanistan (Minneapolis: Zenith Press, 2010), 23-5.
[12] Hannah Arendt, The Origins of Totalitarianism, 1st pub 1951, new edition (New York: Harcourt Brace Jovanovich, 1973), 279-80.
[13] P. W. Singer, Wired for War: The Robotics Revolution and Conflict in the Twenty-First Century (New York: Penguin, 2009), 60.
[14] Vik Kanwar, "Post-Human Humanitarian Law: The Law of War in the Age of Robotic Weapons", Harvard National Security Journal (2011), 628.
[15] Matt J. Martin with Charles W. Sasser, Predator. The Remote-Control Air War Over Iraq and Afghanistan (Minneapolis: Zenith Press, 2010), 2.
[16] Frank Main, "Guard pilot Blames Drug with Fatal Bombing", Chicago Sunday Times (3 January 2003), 7 and Bruce Rolfsen, "Sliding Home: A B-1B Arrives with Landing Gear Up", Air Force Times (2 October 2006).
[17] Erik Baard, "The Guilt-Free Soldier", The Village Voice (21 January 2003), at http://villagevoice.com/2003-01-21/news/the-guilt-free-soldier, viewed 6 January 2014.
[18] Erik Baard, "The Guilt-Free Soldier", The Village Voice (21 January 2003), at http://villagevoice.com/2003-01-21/news/the-guilt-free-soldier, viewed 6 January 2014.
[19] Matt J. Martin with Charles W. Sasser, Predator. The Remote-Control Air War Over Iraq and Afghanistan (Minneapolis: Zenith Press, 2010), 46-7.
[20] Matt J. Martin with Charles W. Sasser, Predator. The Remote-Control Air War Over Iraq and Afghanistan (Minneapolis: Zenith Press, 2010), 46-7.
[21] Matt J. Martin with Charles W. Sasser, Predator. The Remote-Control Air War Over Iraq and Afghanistan (Minneapolis: Zenith Press, 2010), 219 and 3.
[22] Sgt. Sinque Swales interviewed in Jose Antonio Vargas, "Virtual Reality Prepares Soldiers for Real War; Young Warriors Say Video Shooter Games Help Hone Their Skills", The Washington Post (14 February 2006), A01.
[23] David Bartlett interviewed in Jose Antonio Vargas, "Virtual Reality Prepares Soldiers for Real War; Young Warriors Say Video Shooter Games Help Hone Their Skills", The Washington Post (14 February 2006), A01.
[24] T. Lenoir, "All But War is Simulation: The Military-Entertainment Complex", Configurations, 8 (2000), 328.

[25] "USC Institute for Creative Technologies Receives $135 Million Contract Extension from U.S. Army", in http://ict.usc.edu/news/usc-institute-for-creative-technologies-receives-135-million-contract-extension-from-u-s-army, posted 1 September 2011, seen 20 September 2013.
[26] "USC Institute for Creative Technologies Receives $135 Million Contract Extension from U.S. Army", in http://ict.usc.edu/news/usc-institute-for-creative-technologies-receives-135-million-contract-extension-from-u-s-army, posted 1 September 2011, seen 20 September 2013.
[27] Louis Caldera cited in "USC Institute for Creative Technologies Receives $135 Million Contract Extension from U.S. Army", in http://ict.usc.edu/news/usc-institute-for-creative-technologies-receives-135-million-contract-extension-from-u-s-army, posted 1 September 2011, seen 20 September 2013.
[28] http://ict.usc.edu/?s=emotions&site_section=site-search, viewed 27 August 2013.
[29] M. Macedonia, "Entertainment Technology and Virtual Environments for Military Training and Education", Forum Futures (2001), 35-8.
[30] "Full Spectrum Video Games", in http://ict.usc.edu/prototypes/full-spectrum, dated 2003-2005, viewed on 20 September 2013.
[31] Roger Stahl, "Have You Played the War on Terror?", Critical Studies in Media Communication 23.2 (2006), 31.
[32] Karen J. Hall, "War Games and Imperial Postures: Spectacles of Combat in United States Popular Culture, 1942-2001", PhD thesis, Syracuse University, 2003), xi.
[33] J. Der Derian, Virtuous War: Mapping the Military-Industrial-Media-Entertainment-Network (Boulder: Westview Press, 2001).
[34] See http://siris-archives.si.edu/ipac20/ipac.jsp?uri=full=3100001~!273102!0, viewed 5 January 2014.
[35] Rosi Braidotti, Transpositions: On Nomadic Ethics (Cambridge: Polity Press, 2006), 2.
[36] Rosi Braidotti,. The Posthuman (Cambridge: Polity Press, 2013), 122.
[37] Rosi Braidotti,. The Posthuman (Cambridge: Polity Press, 2013), 129.