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COMMUNICATING THREAT IN AN ERA OF SPEED AND FETISHISED TECHNOLOGY

A Review Essay by Karen Allen

Army of None: Autonomous Weapons and the Future of War
Paul Scharre. WW Norton & Company, 2019.

Future War—Preparing for the New Global Battlefield
Robert Latiff. Alfred A. Knopf, 2017.

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In 2003, in the early stages of Operation Telic (the British equivalent to the US Operation Iraqi Freedom), a US Patriot Missile downed a British Royal Air Force Tornado not far from the Kuwaiti airbase at Ali Al Saleem. The pilot and navigator, both men in their mid 30s, with whom I, as an embedded journalist, had shared breakfast on the base earlier that day, were killed instantly. It was a tragic mistake and a sobering reminder of the perils of friendly fire, from what back then was a state-of-the-art piece of technology and a crucial component of the coalition's air defence capability. The Patriot Missile's powerful radar had the ability to react at speed to incoming ballistic missiles, which doubtless saved many thousands of lives during the conflict. Yet when it mistook an allied fighter jet for an enemy anti-radiation missile there was simply no time for humans to intervene.

Moreover, the swift communication of the incident was delayed for the sake of 'force protection' and presumably an awareness among military and government communicators of the strategic value news of this tragic incident would have for Saddam Hussein's forces. This news containment strategy was possible given the terms of agreement between the military and broadcasters to embed their journalists during the early stages of the conflict—a trade-off between security and access on the one hand and reporting restrictions on the other. Yet in the weeks that followed, as coalition forces headed closer to Baghdad, that control mechanism was relaxed. 24/7 news and the speed of imagery enabled TV journalists to broadcast, in real time, Tornado jets armed with 'precision guide' weapons departing from their base in the Kuwaiti desert, and then, shortly after, to relay live the impact of those weapons on the ground (not always hitting their intended targets). This marked a milestone in strategic communications during conflict. 'Precision' was a key term in the lexicon of government communicators; it was used to convey the idea that conflicts would be resolved with minimal 'collateral damage'. To policymakers, the second Iraq war in 2003 revealed the promise and perils of real time news, as mobile satellite technology became ubiquitous in conflict reporting.

Nearly two decades later, speed has become further entrenched as the currency of war. It has been amplified with the dawn of new autonomous technologies able to react at hypersonic speeds. Speed, combined with the fetishisation of tech, both in the civilian and military spheres, along with social media platforms enhanced by artificial intelligence (from which both state and threat actors can livestream their '*propaganda of the deed*' messaging and engagements) presents a stark vision of a future battlefield, which both Robert Latiff in *Future War*—

Preparing for the New Global Battlefield and Paul Scharre's *Army of None* set out in steely detail. Scharre describes how an 'arms race in speed' has already begun, drawing parallels with the accelerated pace of trading on the financial stock markets. His interviews with David Brumley, a celebrated computer scientist and winner of the Defense Advanced Research Projects Agency (DARPA) Grand Cyber Challenge, reveal the dash to dominate. The interviews capture the competitive cycle between adversaries, and how cyber threats 'co-evolve as the other deploys new systems and measures' pushing players to 'react and evolve faster than [their] adversaries'.[1]

What this review essay seeks to highlight is that speed and the fetishisation of tech are mutually reinforcing qualities, both in conflict settings and in strategic communications, continuously escalating the speed of delivery. This can be a force for good or for ill. Accelerated speeds and coveted cutting-edge technologies mean that threats can now be detected faster than the human brain can comprehend, but this also further dehumanises warfare by potentially threatening human autonomy and relegating individuals to the role of bystander or commentator. In the field of strategic communications, the ubiquitous use of newer, faster, and more aesthetically pleasing smart phones (the industry estimates there are at least three billion smartphones in circulation worldwide)[2] has wrested away from governments the monopoly of 'one-way traffic of information',[3] thus democratising messaging. Global politics are now shaped in part by the voices of individuals and other non-state actors on the basis of 'likes' swiftly amplified through social media. This process in turn creates a self-perpetuating dynamic and arguably forces a race for technological advantage in both warfare and communications. Speed is privileged over time-consuming reflection and deliberation about how to communicate nuances.

Cultural scientist Paul Virilio studies the impact of speed and technology on society and politics. He characterises speed as: 'nothing other than [the] unleashing of violence'.[4] There is a calamitous inevitability in his vision. Virilio focuses on what he terms 'dromology'—the logic of speed—in his seminal work *Speed and Politics*. He concludes that speed will be the trigger for new wars due to unintended consequences resulting from technological advances. His analysis is at odds with the Clausewitzian aphorism that 'war is a continuation of

1 Paul Scharre, *Army of None: Autonomous Weapons and the Future of War* (W.W. Norton & Company, 2019), p. 203.
2 'Number of Smartphone Users Worldwide from 2016 to 2021', *Statista*, 28 February 2020.
3 Neville Bolt, 'Strategic Communications in Crisis', *RUSI Journal*, Vol. 156, Nº 4, 1 August 2011.
4 J. Armitage, *Virilio Now: Current Perspectives in Virilio Studies* (Polity Press, 2011), p. 62.

politics by other means'.[5] In Virilio's world view, technology, not power politics, drives conflict; it is speed that has agency, not the individuals who seek to tame or usurp it.

This essay argues that maintaining human agency in deploying speed through emerging technologies is critical, as we enter what has been described by Klaus Schwarb of the World Economic Forum as the Fourth Industrial Revolution. Although this essay will not dwell on the philosophical basis of speed and conflict, Virilio's sense of a breathless (and reckless) technological dash to acquire ever faster technologies conjures up the potent image of a runaway vehicle whose brakes have failed and is hurtling out of control. It is that loss of control, or rather of *human* control, that will be our focus. Indeed, in *Future War* Latiff predicts that 'the sheer speed of battle will stress decision making'[6] moving forward. By extension, that same stress, underpinned by speed, will also be felt in any policy communications associated with conflict. Does this mean that we will be making poor decisions and transmitting mixed messages? Or does it suggest that decision-making will be surrendered to machines capable of faster speeds than the human brain? The answer may be all of the above.

How is warfighting manifested and communicated in the age of speed?

The new global battlefield is characterised by dual-use technologies—those that have both civilian and military applications. Furthermore, this new terrain is defined by the democratisation of technology; innovations in applied science that were once reserved for the military are now widely available and affordable. GPS and geolocation technologies are clear examples of this. Manuals and information exchange about some of today's most powerful weapons are now freely available on the internet. Drone technology is a powerful example of the democratisation of tech. Feted for their transformative role in delivering blood samples and lifesaving medicines in developing countries, and for facilitating public messaging over wide geographical areas in emergencies such as the global COVID-19 pandemic, drones can also be deployed by threat actors to deadly effect. In 2016 I personally witnessed in the field how shop-bought drones, or Unmanned Aerial Vehicles (UAVs), were being weaponised in Iraq. Carrying a payload of Improvised Explosive Devices (IEDs), drones became ISIS's favoured weapon in the battle for Mosul. As a journalist and embedded observer,

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5 Carl von Clausewitz, *On War*, (Harmondsworth, England: Penguin Books, 1968), p. 87.
6 Robert Latiff, *Future War—Preparing for the New Global Battlefield* (Alfred A. Knopf, 2017), p. 24.

I felt that a new milestone in warfighting had been reached—a paradigm shift in how the state's previous monopoly on emerging tech was being smashed and hijacked. Anecdotal reports have since emerged of non-state actors using armed UAVs in their piracy operations off the coast of Africa. Power is shifting from states to private entities and individuals in borderless battlefields. At times it surely feels like states are playing catch up.

The same shift is being observed in how conflicts are represented. As Bolt writes, 'state communicators are being outmanoeuvred by insurgent strategists'[7] as access to aggregated data and speedier transmission mechanisms becomes more affordable and readily available. Whilst the traditional top-down bureaucratic channels of state communications are slow moving, the networked character of insurgent groups such as ISIS affords threat actors greater agility in conveying their messages. For example, video imagery of the Christchurch mosque attack in 2019 was streamed in real-time by right-wing extremists as events unfolded. Law enforcement was caught on the back foot. The incident prompted the tech industry to tighten controls for livestreaming and otherwise sharing news of shocking events, which challenged their claim of neutrality.[8] It was also a salutary reminder for strategic communicators of their own vulnerabilities. Given the ubiquitous nature of social media platforms, states and their media mouthpieces are no longer the gatekeepers of messages broadcast to the public, which increasingly forces them into defensive communications positions. The distance between actor and audience has shrunk whilst the ability to convey information (or disinformation) at speed and on a large scale has increased, providing nearly any 'influencer' with a bully pulpit. The potential of new technology is as apparent to commercial marketeers who pay data analysts considerable sums for identifying advantageous influencer networks as it is to governments and threat actors seeking superiority in contested spaces.

The new terrain in cyberspace has forced us to redefine the battlefield, the nature of threat, and the possibilities for strategic response. The lines have become blurred. Whilst legitimate state communicators must be aware of how different audiences perceive the nuances of strategic messaging, threat actors are under no such constraints. Unencumbered by qualms over collateral damage, fear-inducing *propaganda of the deed* can be widely disseminated. For communications professionals it is an asymmetric domain.

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7 Bolt, 'Strategic Communications in Crisis'.
8 'Christchurch Attacks: Facebook Curbs Live Feature', *BBC News*, 15 May 2019.

The internet has enabled malevolent actors to attack at scale. Think of the high-profile distributed denial of service (DDoS) attack against Estonia in 2007[9] or the attack by a lone hacker against Google and Skype in 2018.[10] Threats are no longer emanating from competing militaries and state actors but from armed insurgents, predatory commercial entities, 'hacktivists' articulating protest, and individuals acting for personal gain. In a world of hybrid threats, soldiers of the future—likely including drug smugglers, computer hackers, and financiers—will be able to combine cyberattacks with conventional warfare to achieve their ends.

Urgent high-level discussions are taking place in the UN to define what constitutes a threat in cyberspace and to determine whether the existing laws governing armed conflict are sufficient to grapple with this new paradigm shift. There is a breathlessness about the efforts of the UN's First Committee in establishing a Group of Government Experts and an Open-Ended Working Group to discuss responsible state behaviour in cyberspace. Yet no definition of cyberwar has been agreed upon to date. This is contentious terrain that touches upon issues of freedom of speech, state surveillance, and sovereignty. Furthermore, as the boundaries between virtual threats and their real-world consequences are increasingly blurred, pressure to react rapidly and competently is mounting. But speed does not guarantee good decisions. As Latiff observes: 'traditional deliberations and decision making are being lost'. Time, it would seem, is an important condition for achieving peace, although the growing culture of 'Twitter Diplomacy' suggests that some global leaders hold an alternative view.[11]

The boundary between the real and the virtual is also being obscured by wearable technologies that enhance a soldier's fighting capabilities on the ground (this will be touched upon later). Such technologies enable combatants to receive vast amounts of data about their targets, which is justified by the greater precision and efficiency that can be achieved. The growing interconnectedness among objects (the Internet of Things) that can be transformed into tech-enabled weaponry is facilitating the emergence of 'networked war'. Networked war has ushered in new modes of operation that increasingly involve humans working alongside robots. As the speed and functionality of new tech increases it may not be clear who is actually in charge. As we shall see later, this shift in humans

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9 'Russia Accused of Unleashing Cyberwar to Disable Estonia', *The Guardian*, 16 May 2007.
10 Charlie Osborne, Hacker Jailed for DDoS Attacks against Skype and Google', *ZDNet*, 22 January 2018.
11 Chu Wang, 'Twitter Diplomacy: Preventing Twitter Wars From Escalating Into Real Wars', Harvard Kennedy School Belfer Centre for Science and International Affairs, 20 May 2019.

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ceding responsibility to robots has implications for the foundational principles of the laws of war—necessity, distinction, and proportionality. It also muddies the waters with respect to accountability, which influences the strategic narratives governments use to motivate the decision to go to war.

Speed in conflict is also enabled by vast amounts of data and data processing capacity assisted by artificial intelligence. Whilst such developments provide more accurate information and actionable e-evidence, they similarly enable networking, virtual recruitment, and disinformation campaigns undertaken by non-state actors as part of their information war strategy. The acquisition of speed by threat actors forces governments to rebut and retaliate with equal velocity, feeding the idea of an 'arms race' in speed that subordinates long-game strategic communications to tactical and reactive messaging. This comes with the risk of inconsistent and even contradictory communications, which ultimately serves to undermine credibility. The confused narratives surrounding the US bombing of a hospital run by the charity Médecins Sans Frontières in Northern Afghanistan in 2015 provide a potent example of this.[12]

Speed also challenges attempts to secure peace and potentially compromises states' ability to de-escalate conflict through early, non-kinetic interventions, such as throwing a 'kill switch' or introducing a 'pause' to enable politics to resist the slide into war. Widely-reported drone incursions in the East China Sea, referenced by Latiff, are perhaps a good example of how technological advances can, accidentally, edge us closer to war. Efforts to quickly de-escalate tensions when UAVs are captured or lost over contested territories may have worked in the past, but they are not guaranteed.

The fetishisation of technology

As speed marches ever forward, the fetishisation of tech becomes increasingly seductive.[13] The desire to go faster and farther, more efficiently and at a lower cost, forms part of the allure of the new. This is true in civilian life as well; in 2016, carefully crafted marketing campaigns ensured that shop-bought drones would be among the most coveted Christmas gifts that year.[14] Unlike plodding evolution in human knowledge and understanding, or time-consuming compromises

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12 *'Pentagon Details Chain of Errors in Strike on Afghan Hospital'* New York Times 30/04/2016.
13 Neil Postman, *Technopoly: The Surrender of Culture to Technology* (Vintage, 1993).
14 Ashley Halsey III, 'Drone Sales Soaring this Christmas, Capping a Record Year for the Industry', *The Washington Post*, 23 December 2016.

and negotiated deals, speedier tech promises immediate impact. Furthermore, tech seduces users with what Latiff calls the illusion of security.[15] Back in the civilian world, the recent hacking or 'surfing attacks' on voice assistants such as Google Assistant and Siri, challenge this illusion.[16] And yet, these products continue to sell well. The instant gratification of spending rather than saving, is perhaps another useful analogy through which to view the fetishisation of speed. This is not to undermine the clear benefits of emerging technologies in conflict situations. The use of robots to defuse roadside bombs, reducing the risk to human life, is clearly attractive both in political and humanitarian terms. So too are the futuristic biological enhancements Latiff describes, wired directly into the brain, that identify targets quickly and precisely 'bypassing other slower bodily functions' (i.e. sight, sound, and smell).[17] The benefits of emerging technologies notwithstanding, there is also a 'use it or lose it' culture among war planners and politicians. Fewer casualties and the desire to downsize the military make robots a more politically attractive option in battle. Similarly attractive are the protective properties of emerging tech designed to respond swiftly to cyber threats. Greater autonomy enables machines such as the 'Mayhem System', a technology favoured by DARPA and described in *Army of None*, to detect vulnerabilities 'before humans can spot them and develop either exploits or patches'.[18] It is within this context that the allure of ceding human autonomy to machines grows ever stronger.

Let us briefly consider who benefits from the fetishisation of tech. In the civilian world, the ubiquity of cleverly marketed tech embodies the march of consumer capitalism. Studies on mobile phone acquisition conducted by the Pew Research Centre show their growing proliferation in emerging economies, e.g. in sub-Saharan Africa—not only in developed countries.[19]

Militaries and research institutions also clearly benefit from the advance of technology, and millions of government jobs depend on it. Latiff gives us figures: 'with a total annual defence budget of 600 billion US dollars, the US spends close to 200 billion in research, development and testing and procurement of new systems'.[20] Furthermore, weapons are an important source of revenue: 'in 2014

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15 Latiff, p. 82.
16 'Siri and Google Assistant Hacked in New Ultrasonic Attack', *Naked Security by Sophos*, 2 March 2020.
17 Latiff, p. 113–14.
18 Scharre, p. 217–23.
19 'Technology Use in Africa', *Pew Research Center*, 9 October 2018.
20 Latiff, p. 82.

the US sold more than 10 billion US dollars' worth of arms to other countries, whilst Russia sold almost 6 billion'.[21] Technology has addictive fiscal benefits. In the civilian world, tech giants are also benefiting from the public craving for tech. Thanks to the Internet of Things—expanding rapidly to encompass over 20 billion connected devices—the contents of a household refrigerator can be monitored and replenished automatically with produce ordered online. However, more sinister applications have been widely reported, including, for example, explosive material being automatically triggered by a connected light switch or toaster.

Threat actors also benefit from the fetishisation of tech. Our attraction to the new gives anyone access to a vast civilian audience. The ubiquitous nature of digital data in everyday life provides an unprecedentedly large pool of potential recruits, and a global audience at which to target messages in an information war campaign. The circulation of images, many of them 'deep fakes' or altered in some way, add potency to a campaign. More data also offers the prospect of more targets. Devices connected via the Internet of Things are widely held to be particularly vulnerable to attack. These are but two of the unintended consequences of the contest for cutting-edge technology. Moreover, devices such as affordable and weaponised drones provide opportunities for threat actors to strike harder and farther.

As warfighting becomes more networked and less hierarchical, groups such as ISIS, al-Qaeda, and their affiliates, enjoy a strategic advantage without the rigid command structure of regular armies. This would appear to enable them to adapt more nimbly than state actors to new technological opportunities as they arise. Vertical government structures tend to impede adaptation to new challenges, or swift delivery of strategic counter-narratives.

What are the downsides?

Consider the following: speed combined with the fetishisation of tech has the effect of neutralising human decision making, which potentially undermines the ability of states to de-escalate crises. But the cost in human lives can be severe as the Patriot Missile incident, described at the start of this essay, illustrates. The mutually reinforcing qualities of speed and state-of-the-art tech threaten to reduce the human dimension of warfare. '[W]arfighting will exceed the

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21 Ibid.

capabilities of the human senses to collect and process data', argues Latiff.[22] Furthermore, soldiers will likely find themselves agents, delivery systems, and recipients of exponentially growing volumes of data. This can be achieved through myriad enhancements, such as sensors tracking situational data and biological responses. '[T]he soldier of the future will be a collection of data points';[23] at the extreme, soldiers will become redundant on the battlefield owing to the limits of human processing capacity. Instead, AI-assisted machines will derive meaning from the data used to weigh decisions and calculate risks.

This has serious implications for how warfighting is conducted and how ordinary citizens are persuaded to consent to war; the long-standing codes of armed conflict are being challenged. If we do not wish to abandon human decision-making about going to war and fighting war, the reduction of the need for soldiers on the battlefield must be calibrated against a risk-reward scale that is constantly reviewed; decisions about each scenario must be context-specific and clearly communicated.

The principles of necessity, proportionality, and distinction enshrined in the laws of armed conflict have served as a brake on warfighting without limits. The emergence of unbridled tech evangelism and the allure of the new, coupled with new battle-spaces and inexorably faster speeds, threaten the nuanced judgement of human beings engaged in battle, our ability to distinguish friend from foe and to discern the intent of players on the battlefield. At the present time such beneficent human traits cannot be augmented by machines—they have not only served to temper warfare, but have also provided an accountability mechanism by setting agreed standards in international law, which if breached, subject the offending party to sanction. It is true that threat actors by and large fail to adhere to the laws of war, an argument that is often cited in defence of transgressions by states—the entities that establish those international codes in the first place.

Although in some instances armed groups have developed their own technologies (e.g. the parallel communications systems developed by drug cartels in Latin America), as a rule the main initiators of technological innovation are states and their commercial agents. Consequently, there has been an understanding among legitimate states that they should at least adhere to the agreed norms of war and the rules set forth in international treaties.

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22 Latiff, p. 113.
23 Ibid., p. 42.

In future, limits on the ability of machines to replicate human judgement at speed may be overcome. Some scientists believe that within two decades a hypothetical future could be realised, in which machines evolve to have 'Artificial General Intelligence' characterised by the ability to execute the full range of cognitive tasks and, crucially, to understand context. Humanity would then face a choice regarding the application of evolved AI, the moral dilemma brought on by the realisation that 'just because we can, doesn't mean we should'. Ethics and judgement are human considerations; simply because science has taught us how to despatch lethal force at ever greater speeds with a limited need for human intervention, that does not mean such technology should be deployed. Normative decision making on matters of such great consequence surely cannot be relegated to an algorithm with its inherent biases.

It is in this capacity that the need for considered vision and strategic communications is surely greatest. But, according to Virilio, speed dictates the pace and the rules of the game. Somehow the value of slow communication (like that of slow food), needs to reclaim space in the public discourse and re-entrench itself as a norm, if only in limited spheres. One size communication does not always fit all.

The technology of deterrence

The case for human mastery over science and speed is more pressing than ever. Untamed technological proliferation could lead to the dystopian future Virilio conjures up—a world where technology delivered at speed, rather than political deliberation, is the driving force behind war. Yet the concept of strategic restraint has stood the test of time and has particular utility now. Informed by the threat of a nuclear arms race during the Cold War, then need for speed hinges on a dynamic of mistrust—mistrust between competing states in a classical Realist world, characterised by anarchy, in which national interests and survival are paramount. When a state is susceptible to 'first strike vulnerability', adversaries have an incentive to launch pre-emptive attacks. Stability is achieved 'when neither [state] in striking first can destroy the other's ability to strike back'.[24] A contemporary example of this is the standoff in 2017 between North Korea, which was testing its intercontinental ballistic missiles, and the United States, which found its west coast within their range. In the context of emerging tech, strategic stability is achieved in the same way. However, in a future where

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24 T. Schelling as cited by Scharre, p. 298.

autonomous weapons dominate and human beings are removed from decision making, is strategic stability thrown off balance? Not necessarily. If 'used in the right way', scholars ague, the automation of weaponry can provide greater safety, just as automatic brakes in cars do.

Furthermore, in terms of safety, there is a trade-off between humans reaching for the latest hypersonic technology and pausing to reflect on history and experience.

Latiff's experience as a US Air Force General, for whom innovation has provided a level of dominance, make his blunt observations about the fetishisation of tech compelling. His words are a sobering reminder to global decision-makers of the perils of embracing uncritically the latest technology, with its impact on global stability. He warns that the 'unbridled military adventurism' results in the 'loss of careful deliberation about the consequence of our actions';[25] he cites the protracted wars in Iraq and the 'disastrous forays into Somalia' as examples of such 'arrogance'. [26]

Whilst debates about the speed of warfighting technology may be confined to academic, policy, and military circles, there is unquestionably a need for broader public debate about the parameters of tech-enabled knowledge and capabilities, and their place in achieving global stability. Yet that selfsame technology shapes the direction of debate online. Artificial intelligence tools, such as bots deployed on social media platforms, have the capacity to amplify narratives for online audiences beyond what they would ordinarily achieve in real world settings. This makes it possible for individuals holding similar views to converge on an idea, re-enforce their beliefs, and drown out contrary views. It enables disinformation campaigns by vested interests to travel at speed, leaving little room for rebuttal and retraction. That is not honest debate. But citizens' lack of trust in their governments in the 'post-truth era' is being weaponised or, at the very least, exploited. Having lost their role as gatekeepers to information and careful strategic communicators, governments are presented with a huge challenge. In the quest for authenticity (rather than balance and context) voices on social media platforms (real or 'bot') intensify the polarisation of political discourse. As social media gain parity with the traditional media, they gain currency in 'influencing national and ultimately Global Politics'.[27]

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25 Latiff, p. 125.
26 Ibid.
27 Bolt, 'Strategic Communications in Crisis'.

Still, traditional media can play a crucial role in counteracting polarisation and instability by injecting critical thought into debates about the possibilities and perils of emerging technology. Whilst warfighting may seem to be the domain of professional soldiers, the appropriation of emerging technology by threat actors contributes to a sense of urgency and shared responsibility because terrorists target civilians through acts of violence, cybercrime, and disinformation campaigns, aiming, for instance, to distort election campaigns or undermine traditional law enforcement through acts of digital vigilantism. Public broadcasters have an especially critical role to play in this regard; unencumbered by commercial interests, they can position themselves as transmitters of facts rather than peddlers of 'click bait'—a term that has recently found its way into the *Oxford English Dictionary*.

The power of technology can be harnessed for human betterment and for the alleviation of suffering, but world leaders are driven to embrace the latest technological innovations under the pretext of global stability. Surely this needs to be kept in check. At the heart of all this is the question of trust—trust in technology's promise to deliver a safer global environment, trust in the communication of that vision, and trust in global leaders to hold back from surrendering their decision-making powers to machines; not because they can but (to borrow Latiff's phrase) because they must.