The Conduct of War in the 21st Century

Kinetic, Connected and Synthetic

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Chapter 19

Conclusion

Assessing change and continuity in the character of war

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Part VIII

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Lessons for thinking about war

19 Conclusion

Assessing change and continuity in the character of war

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Every age has its own kind of war with its own peculiarities. War's nature may be enduring; its character is prone to change – in each era as well as in each encounter. Ours is a time of considerable, some argue accelerating, societal, economic, political, and technological change. Accelerating or not, this megatrend of change permeates almost all walks of human life: how we live and communicate, how we work and collaborate, how we interact and create, and, to a large degree, how we fight. It thus affects how we prepare, equip, and organise for war as well as how we conduct war. Contemporary war continues to be characterised by the three enduring elements of kinetic activity, connectivity, and the symbiotic relationship between the human and the synthetic. The overarching theme that emerges from the contributions to this volume is the fact that across all three elements there has been considerable change over the past two decades.

The democratisation of kinetic means, traditional and non-traditional

On the kinetic front, a key trend has been the dissipation of power and the democratisation of violence. Put simply, the Davids of this world stand a better chance against the Goliaths. Insurgencies are proving to be remarkably robust confronted with ostensibly superior firepower in various conflict zones around the world. Beyond any doubt, in the past Western armed forces often faced difficulties in the fight against non-state adversaries. Today's non-state actors, however, prove to be increasingly capable of challenging ostensibly much stronger powers. In the 2010s IS showed how violent groups are able to punch above their initially purported weight. IS' ruthless exploitation of synthetic and connected elements allowed it to generate kinetic effects at a regional and even global level, greatly enhancing its resilience to withstand external attacks. The perseverance of other groups such as Al-Qaeda, Al-Shabaab, and Boko Haram – which were all targeted in extensive military campaigns – illustrates the levelling of the playing field between violent state and violent non-state actors. In the context of renewed confrontation between major military powers, violent non-state actors also

serve as puppets and proxies in increased grey zone competition. Russia's ties to the Donbass People's Militia in Eastern Ukraine, Iran's Quds Force's orchestration of Hezbollah fighters in Iraq and Syria, Egypt's – as well as rich Gulf states' – support for Khalifa Haftar's Libyan National Army in Libya may well be harbingers of what the 2020s will bring.

This all concurs with a more general trend of a changing balance of power between major and lesser military powers. These now have military capabilities at their disposal that allow them to level the playing field in a way that was unthinkable only a generation ago. Advanced C4ISR as well as military standoff capabilities are no longer the prerogative of Western powers alone. Low and high tech unmanned (weapon) systems are starting to be deployed by many conflict actors in the air and on land. Western military powers may still enjoy tactical military dominance, but Western military supremacy is no longer. Tactical excellence and operational craftmanship notwithstanding, strategic proficiency has been in short supply for an extended period of time now. Political leaders, especially, have performed poorly when it comes to formulating clear but also realistic political objectives, and allocating the required means to achieve these objectives. Other state actors have arguably proven to be more agile and more adept, both in terms of their ability to set coherent strategic objectives, match these with the required means, and to follow through on them, and in terms of their ability to adapt and innovate. A general disinclination prevalent in Western polities to engage with the messy and bloody realities of war based on a declining willingness to fight in postmodern societies has been further fed by close to two decades of few strategic successes in missions that yielded even fewer tangible benefits. This, in combination with steady technological progress in unmanned systems since the early 2000s, has resulted in greater emphasis on a new form of risk management from above and from afar, typically in collaboration with local proxy actors and spearheaded by small contingents of special forces, giving another dimension to the function of security force assistance. Such forms of risk management, variously indicated with terms as remote, surrogate, or liquid warfare, have become more prevalent over the past period amidst increasing geopolitical tensions. They are replacing the emphasis on counterinsurgency (COIN) and stabilisation missions of the aughts. It is far from certain that the valuable lessons learned during these missions will not be forgotten in a repetition of the strategic amnesia of the lessons painstakingly learned from counterinsurgencies in the past.

The exploitation of novel forms of *kinesis*

Meanwhile, new forms of *kinesis* – means and ways to exert pressure – have progressively materialised. The global wiring of our world of the past quarter century has paved the way for unprecedented global connectivity, alongside introducing a range of economic and social opportunities but also critical vulnerabilities that soon started to be exploited for malign

purposes. The existence of these vulnerabilities was identified by futurists and by military professionals already in the 1990s. The 2000s saw cautious experimentation with incidental, some would say audacious, endeavours in the latter half of that decade. But it was not until the 2010s that these were followed up with more serious large scale development of capabilities, strategies, and tactics deployed in real world operations, which are now taking off. A number of high profile cyber operations on but certainly also off the battlefield with considerable strategic impact showcased to all participants the tactical and strategic effects, if also the risks and limitations, associated with action in this new domain. The deployment of cyber instruments, alone or in combination with kinetic instruments, is now increasingly becoming the norm. For every pundit that argues this is a brave new world, there is a traditionalist arguing precisely the opposite. Be that as it may, international legal scholars and practitioners see themselves forced to reflect on the reinterpretation and possible adjustment of the rules and regulations guiding behaviour *in bello*, *ad bello*, and *extra bello*.

Political warfare in a connected world

The virtual arteries traversing our digitally connected societies have opened up a cloud of new possibilities to exert influence in the information realm. Traditional tricks of the political warfare trade are being applied to great effect, albeit in thoroughly modernised guises. The viral nature of information flows in social networks is exploited by shrewd conflict actors. The battle of the narrative in conflict theatres has given way to the emergence of widespread meddling in societal discourses in peacetime. In hindsight, the CNN effect of the 1990s pales in comparison to the effects of manipulated messages flowing through billions of people's Facebook or Weibo feeds. The echoes of these social media chambers expose a much more vulnerable cauldron than most political scientists and sociologists anticipated prior to the widespread adoption of these platforms over the past decade. The manipulation of societal discourses is nothing new and has been practiced by Western and non-Western powers alike – long before it started to be amply documented during the Cold War. Its sheer scale and impact, however, have become a pernicious problem that all actors, regardless of their regime type, are grappling with. Military commanders and their political leaders must now, certainly more than before, consider how citizen journalists or hostile state actors report on military operations, and anticipate how information will be faked, tweaked, and manipulated by adversaries. In the early stages of a conflict or confrontation, disinformation is often used to seize the initiative in the battle for the narrative. When a conflict continues for an extended period of time, a general sense of fatigue with a particular cause can creep in. This may result in a wish to move on to other things. Accumulating effects are difficult to differentiate from fatigue with a particular cause, but it is becoming clear that being first with the truth, deploying mass

in the scale of messaging, and being determined to see things through can win or lose a key narrative.

The effect of new propagandistic means on the conduct of war itself is certainly non-negligible either. The manipulation of information has become part and parcel of military operations across the globe once again implying that the truth is the first casualty of war. Western and non-Western military organisations have set up entire information manoeuvre units to pro-actively shape the information sphere in recognition of their vital role in compelling adversaries to change their minds. Russia's endeavours on this front certainly inspired others to copy and imitate. But the success of non-state actors and their ability to rally support, recruit adherents, and attract finance certainly also played a role. Information operations expanded not just the reach of non-state actors in the virtual realm but also their sheer prowess to project power in the physical realm. IS' rise in the 2010s and its tenacious tenure before it was defeated, at least in its conventional force incarnation, provided concrete corroboration of the risks posed by decentralised, distributed networks.

The impact of legal lawfare

Meanwhile, the term legal lawfare has been coined to describe contemporary conflict behaviour. This represents conceptual over-stretch to some who hold that war in its essence is about the organised use of violence in pursuit of political goals. Yet, the extensive legal corpus guiding the conduct of war, which has been spun since the days of Cicero and has been adjusted but also strengthened especially since the early 20th century, is now used and abused by state and non-state actors, both outside but also within the more traditional notion of war. Outside war, state actors seek to remain below the threshold of war and refrain from declaring war, leading to the pervasiveness of so called hybrid conflict, grey zone confrontation, strategic coercion or, in a more recent designation, liminal warfare. Inside war, there is an increasing salience of conflict actors seeking to gain tactical and strategic advantage over their opponents that try and abide by the laws of war through the positioning of military assets in the proximity of civilian facilities to induce violations and through the framing and distribution of the news of real or fabricated violations through media channels.

Vicious dynamics of renewed great power confrontation

Amid all the confusion about the impact of new domains on war, and heated debate about the analytical value of new nomenclature to capture changes in its character, great power competition and conflict have re-emerged. Starting in the early 2010s, established – (United States), emerging – (China), and resurgent powers (Russia) embarked on large scale military modernisation programmes with other states following suit. These major powers

are since prioritising not just the refurbishment of their conventional military capabilities but also seek to gain incremental as well as a punctuated strategic-military edge through investment in potentially more disruptive or enabling technologies, including Artificial Intelligence (AI). They are gearing up for renewed peer competitor conflict with the renewal of their nuclear arsenals, a shift to more aggressive nuclear postures, the development and deployment of a new generation of hypersonic delivery vehicles, and renewed attention to the militarisation of space. Meanwhile, frequent military aerial intrusions of national sovereign airspaces as well as gunboat diplomacy have become a regular recurrence in major powers' attempts to carve out and reconfirm spheres of influence, which is further driving a vicious cycle of military competition that in the 2010s did not escalate into direct major power conflict.

Incremental change: Machine learning in military operations

On the synthetic front, the explosion of computing power and the development of hardware (coincidentally as a side effect of a booming global gaming industry which spurred progress in graphical processing units' power) paved the way for rapid advances in machine learning (ML) from 2011 onwards. Military organisations were certainly not amongst the early adaptors, but confronted with the tremendous value created in industries as varied as trading and investment, advertising, and medicine, they started stepping up their efforts in the second half of the 2010s. They formulated plans, allocated considerable budgets, and started experimenting with the integration of ML applications in standing operations including in monitoring and detection, target acquisition, navigation, and logistics. Thus far, this is leading to incremental progress predominantly through the faster processing and analysis of ever greater amounts of information. The constant flow of information through ubiquitous surveillance capabilities is forcing the adaptation of command and control structures. ML has furthermore boosted the navigation abilities of semi-autonomous systems, and has made the enormously complicated and costly logistics required for fielding modern armed forces more efficient. It is, albeit slowly, contributing to shorter OODA loops, along different elements of that chain, and promises to change the economics of force generation in the future.

The role of the synthetic – in reality, not in science fiction

Hyper war remains at the horizon for now, but *accelerated war* is already a reality. In that sense, the 2010s have shown us glimpses of what AI enabled war can look like. Images of a dystopian future in which robots have taken over remain science fiction for the time being, but early manifestations of AI enabled war are definitely visible. In that vein, All Domain Operations is still a future concept but joint operations, enabled increasingly by more

advanced technologies, are integral to contemporary warfare. Similarly, mo-
saic warfare is still being funded by the Defense Advanced Research Projects
Agency (DARPA) as an aspirational concept, but networked and distrib-
uted warfare have become a reality. In sum, the aspirations of the 1990s of
informationised war materialised in the 2010s, whereas the intelligentised
battlefield as envisioned by the Chinese remains an aspiration to be imagi-
neered in the decade(s) to come. Overall, the *synthetic* – the artificial and the
manufactured – has been making further inroads into the ways in which vi-
olence is wielded in the pursuit of political objectives both as an enabler and
as an effector. The synthetic has only done so, however, as an extension of the
human, which continues to give it shape and direction, but the combination
of the synthetic and the human is giving birth to new ways of war.[1] In other
words, while synthetics greatly enhance the ability to deliver pressure, resist
threats, and even command, it is the human who remains in control.

The development of new grammars for war

During this period of considerable change, strategists grapple with the ad-
aptation of time tested strategic concepts to the challenges posed by today's
conflict environment, and consider how 19th- and 20th-century strategic
concepts such as centre of gravity and deterrence can be tweaked, expanded,
and refined to be brought to bear in this domain. The heated debates are not
only testament to the explosion of information exchange in a globally con-
nected world. They are also emblematic of the fact that the grammar of war
defined as the principles, rules, and procedures that govern the use of force
in new domains, as well as how it can contribute to its overarching logic, is
being reinvented.

The idea of a logic in war has long been contested, but in our current
context, what is discernible is a renewed sense of the utility of armed force
in the service of political objectives. E. H. Carr, the British historian, noted
that it is always hard to perceive the major shifts in the period in which you
are living. The sheer flux of events and changes often obscure the trends,
and we are, to cite Hegel, always wise after the event. Many political scien-
tists discern a decline in war which began in 1945, at the same time as many
social scientists maintain that violent conflict has seeped down from states
into societies. Strategic thinkers, meanwhile, are concerned that major con-
ventional wars may not be obsolete at all, and they see all the indicators of
more serious, high-intensity, extremely lethal struggles ahead.

The grammar of war, too, is difficult to nail down to a single essence or
character. In the case of extremist groups like IS, its atrocities suggested
an inclination for the application of overwhelming and unlimited force.
Western militaries, by contrast, relied on air supremacy, aerial surveillance
instruments, and precise weapon systems to limit their interventions to
the least destructive possible without jeopardising their objectives. Russia
and China have adopted different grammars of their own – using force as

leverage, intimidation, and the breaking of international norms, including the use of violent proxies. Which of these constitute the grammar or character of the early 21st century? The answer is surely that they all do: war is protean. Its form is certainly significant but so are its purpose and essence which in the end dictate its logic.

Change and continuity in the character of war

In the study of war, scholars tend to focus on the eternal and the constant, whereas futurists and technologists tend to focus on the transformational and the novel. The former tend to be of the opinion that the more changes, the more remains the same. The latter tend to find that radical change is always around the corner. The truth, perhaps, lies somewhere betwixt and between. Many overestimate the impact of the rate of change in the short term, but underestimate it in the longer term. However, when the future finally arrives, they quickly adjust, and accept the state of affairs as normative. This is simply because the many iterations and developments in war's conduct accumulate into the present. Philosophically, the future that was imagined back in the days of J.F.C. Fuller has happened. He maintained that the conduct of war could be understood as control, pressure, and resistance. Such a broad categorisation allowed him to incorporate a variety of developments, and yet still conceive of how a war could or would be conducted. We can be sure, as Fuller was, that wars will happen in the decades that lie ahead. Wars will be defined by setbacks and successes, by frustrating friction, by human failures, technological breakdowns as well as breakthroughs, and all that thousands of years of human history has informed us is unchanging in war's nature.

The conclusion of our volume is therefore that we should neither exaggerate the transformational changes in the character of war nor downplay the extent to which elements in the character of war have in fact changed, even if these were largely evolutionary rather than revolutionary. Certainly many aspects remain the same and endure: war continues to be about the organised use of violence in the pursuit of political objectives; it continues to generate the passions and emotions of people of flesh and blood; and it continues to be characterised by uncertainty and friction. The world of war, lest we forget, is expansive and diverse. Polities in different geographical regions find themselves along varying developmental trajectories which shapes why and how they wage their wars. Local level armed conflict over access to water and land in sub Sahara Africa contrasts with the internationalised intrastate conflicts over larger geopolitical interests in the Middle East. These are, in turn, distinct from Russia's war with Ukraine.

Our volume, we hope, has made clear that, over the past two decades, increased connectivity and the emergence of new synthetic elements have shaped old forms and created new forms of kinesis. This process has fundamentally impacted the way wars – both low tech and high tech and high

intensity and low intensity – are fought across the globe. In the context of these three elements our volume shows that war, in the first decades of the 21st century, continues to be a fundamentally political endeavour. Developments along the kinesis-connectivity-synthesis trinity provide a good baseline to understand likely future trajectories in how humans wage future wars.

Note

1 This is in line with the etymological origins of the term *arms* which strays back to the Proto-Indo-German root -Ar, which means 'to fit together', suggesting that *arms* can also be conceptualised as a way of joining the human with the artificial. That, in turn, can be etymologically associated with the roots of synthetic deriving from the Ancient Greek meaning of the term synthetikos (συνθετικός) which stands for a composition based on 'putting something together'. If nothing else, it illustrates that tools and technology depend on how they are put to use by humans.