

22 JUNE WORKSHOP REPORT

1. Given the foreseen future security environment, characterized by a wide variety of threats, a purely defensive posture similar to the Cold War era seems to be too rigid and unaffordable to the Alliance. A mentality of a defensive alliance without enemies is ill suited to respond to new ways of war. Additionally, new areas like cyber, space and artificial intelligence (AI) increasingly become more influential in already contested battle-space. In order to be successful, the Alliance requires conducting deep analysis and this workshop could be seen as a starting point.
2. In this context, the aim of the workshop was to stimulate critical thinking among Allies with a view towards building a common understanding of the challenges related to offence/defence convergence and how the resultant mix of capabilities can contribute to the fulfilment of NATO's political and military-strategic objectives. The findings of the workshop will help inform the Chiefs' of Defence (CHODs') conversation on offence/defence convergence and inform follow-on military advice on the development of future joint forces knowledgeable and capable of conducting Multi Domain Operations (MDO) operations.
3. In order to stimulate attendees' critical thinking, a read ahead package was distributed before workshop execution containing various viewpoints of the notable academics Dr. David Kilcullen, Dr. Brad Roberts, and Mr. Stephan de Spiegeleire. Their papers highlighted key considerations and some of the balances and potential trade-offs that need to be examined in an era of strategic competition and offence-defence convergence. The papers also considered the impacts of emerging technologies and capabilities, in particular advanced strike capabilities, on 'blue' and 'red' decision calculus.
4. The 22 June workshop opened with a plenary session keynoted by retired USAF General Frank Gorenc and moderated by Mr. Bruno Tertrais. Subject matter experts (SMEs) shared and freely discussed their views on the topic. Subsequently, the audience was kindly requested to join different working groups where specific areas related to the topic were discussed. Appendices 1 and 2 to this Annex aim to capture the main findings of the plenary and working group sessions.

22 JUNE WORKSHOP - PLENARY SESSION

1. During the plenary session, experts highlighted the most pressing issues to the Alliance and offered some potential solutions. Among the issues identified were the inappropriate mix of Offence and Defence; NATO's predictability, mind-set and lengthy decision-making process; budget constraints; escalation management; deterrence strategy and integration of Emerging Disruptive Technologies (EDTs) in deterrence.

2. The following paragraphs aim to present the various viewpoints on the aforementioned issues including some recommendations of the audience to mitigate them with the ultimate aim of better positioning NATO within an uncertain future.

Inappropriate mix of Offense and Defence

3. It is generally accepted that, in view of the evolving security environment, the current balance of offence and defence is becoming increasingly inappropriate and inefficient. The current mix of offence and defence favours a traditional defence and responsive posture before an Article 5 declaration, shifting to more offensive posture after its declaration. In addition, and focusing on the Alliance's capabilities, some of the experts stated that NATO's conventional / nuclear strike and missile defence capabilities are not appropriate for defence and deterrence and become less appropriate moving into the future.

4. Questioning the suitability of the current offence and defence mix, some suggested to invest more in offensive capabilities so that the Alliance could demonstrate its ability to "Kill the Archer," believing that the best defence is a good offense ("Peace through Strength"). Based on the fact that demonstrated offensive capabilities bolster greater credibility and communicates willingness, a strong offence provides more options to Alliance leaders than a strong defence. Some others proposed a change in the way NATO sees deterrence, gravitating not just on traditional kinetic military means, but also investigating cost-efficient alternatives involving all Instruments of Power (IoPs) in a common effort.

Predictability

5. It is widely accepted that adversaries like Russia create and benefit from a well-calculated strategic ambiguity, rapidly escalating and de-escalating through information measures and fait accompli practices that translate into diplomatic successes.

6. On the contrary, NATO is intrinsically in a disadvantaged position since it is perceived as a highly predictable organization. Agreed use and synchronization of all IoPs in a sequential

NATO UNCLASSIFIED

Publicly Disclosed

way involving diplomacy first, economics second, information along the way, and the military as the last resort makes the Alliance predictable.

7. In consequence, while NATO still communicates its defensive nature, threats and challenges emanate from all directions and adversaries and competitors have adapted their approaches to the way NATO operates. It is highly likely that NATO's predictability will be increasingly exploited by adversaries and competitors through the use of hybrid warfare tactics below the Article 5 threshold, activities in domains where attribution is problematic, information operations and other soft-power techniques.

8. NATO needs to incorporate unpredictability, in an intent to portray itself as a non-linear organization. The pursuit of 'out of the box' thinking along with an ability to project ambiguity definitely would help. In a complementary fashion, the ability to prevent adversaries from taking advantage of ambiguity cannot be disregarded and NATO's ability to impose costs to an adversary who is deliberately creating strategic ambiguity will be key. In this regard, the use of sanctions perfectly exemplifies some measures that could be taken along with exploiting vulnerabilities exposed by the adversaries' use of proxies to create strategic ambiguity.

Consensus/slow decision-making process

9. The Alliance's nature imposes a complex decision-making process characterized by an over-reliance on lengthy bureaucratic processes. Furthermore, due to the increasing confrontation in space and cyber domains, where complexity makes attribution more difficult, decision-making processes may become even more difficult and slower. Still, an attack on the Alliance, bringing fear and anger, may bring greater resolve to the Alliance to act and overcome the 'slow pace of decision-making' witnessed in the Alliance during peacetime. As an example, while NATO is likely to pause and ensure attribution if a cyber-attack occurs out of the blue, it should not necessarily be the same threshold of attribution and response if cyber is in concert with other actions that have lethal consequences.

10. Adversaries like Russia exploit this weakness and fully take advantage of it by incorporating political warfare and cognitive techniques, targeting the Alliance's decision making process.

11. This "new" operating environment demands that NATO be equipped with a more agile and faster decision-making process. NATO needs to adapt its operating concepts and decide sooner. Pre-delegation and the acceptance of national actions could be seen as a solution to mitigate a slow decision-making process, even if it is likely to be constrained in the 21st century.

Mind-set

12. The increasing complexity of modern warfare may not be compatible with NATO's current mind-set. It is a fact that adversaries are capitalizing on NATO's discomfort with ambiguity and

NATO UNCLASSIFIED

Publicly Disclosed

its reluctance to accept a larger role for offensive capabilities, to weaponize space, and to conduct offensive actions in cyber-space.

13. After the Cold War, the perception of threat inevitably decreased and any possibility of escalation seemed remote. The Alliance's mindset of thinking about escalation, viewing it as an anathema, or perceived reluctance to escalate, is empowering NATO's adversaries who may perceive that escalation on their Military Instruments of Power (MloP) may be sobering, but not enraging to NATO. Efforts to gain understanding on potential adversaries and competitors decreased, impacting the Alliance's deterrence, strategic planning, and in fact constraining the potential of the Alliance. The annexation of Crimea in 2014 was an eye-opener to NATO, bringing back the need for a "North Star" approach focused on adversaries.

14. In a nuclear context, where it is likely to see a greater number of nuclear armed powers in sub-regions, deterrence is not likely to be any less important in the future. Probably, NATO's deterrence mind-set needs a shift to retain effectiveness. While NATO is focused on a retaliation centric deterrence by assuring survivability of second strike capability; adversaries' approaches, like the Russian's, remain holistic across all domains and encompass the entire spectrum of crisis, being not purely defensive but including a combination nuclear/non-nuclear and military/non-military.

15. Based on aforementioned reasons, NATO's mind-set seems not well suited to the emerging operating environment. NATO needs to be able to think and to be prepared for the worst to come, in order to prevent or mitigate it. In other words, NATO needs to shift from an outdated, reactive stance to a more agile mind-set where deterrence, defence, competition and cooperation would be re-designed.

Budget

16. Progressively, and under the framework provided by the Defence Investment Pledge, the Alliance will be more and more challenged to deliver deterrence with the means that the Nations have agreed to. It is worthwhile to recall that the United States needed to invest around 10% of its GDP to effectively deter the former Soviet Union.

17. In light of future global competition where EDTs and strike capabilities across all domains will have a greater emphasis, only a future force fit to operate in a MDO environment is an effective deterrent. To be fit for purpose, adaptation will be key, requiring the incorporation of EDTs, dual capable systems and long range strike capabilities among others. It will be an enormous challenge for NATO to undertake.

18. Acknowledging the limitations imposed by the Defence Investment Pledge and its attainment, it is of utmost importance to analyse the different alternatives.

NATO UNCLASSIFIED

Publicly Disclosed

19. From an out-think and economically constrained perspective, it is useful to envision different ways to achieve deterrence. Synchronization of all IoPs resulting in a comprehensive approach will contribute to a more effective and efficient NATO approach.

20. In seeking a common understanding of the MDO environment, including adversaries, NATO should conduct rigorous analysis on the following trade-offs: defensive capabilities vs offensive intent, stability vs freedom of action, capacity vs capability, convergence vs integration, and layered resilience vs assurance retaliation.

21. Value for investment deserves special attention since the incorporation of certain capabilities/advances like AI, which in general terms and in comparison with kinetic capabilities acquisition are less expensive, could benefit an Alliance already economically constrained. Data analysis enhanced by AI could better position the Alliance to operate at increasing tempo.

Escalation management / deterrence

22. Escalation management justifies special consideration under the perspective of providing deterrence. With the significance of adversarial escalatory capabilities, NATO needs to be ready/willing to escalate in a manner consistent with NATO's stake in assuring a politically acceptable outcome.

23. NATO's escalation management, associated decision making process and utilization of tempo will be increasingly targeted by adversaries like Russia who focus on early disruption during the shaping phase, involving minimal combat actions before the initiation of active measures by NATO.

24. This dynamic clearly requires NATO to rethink escalation management. A set of solutions might include pre-agreed escalation measures involving kinetic and non-kinetic effects across domains, emphasizing layered-resilience in line with Article 3 so that NATO would be able to absorb and rapidly recover from a shock and strike if necessary. Key operational implications further involve C2, course of action planning, targeting and kill chain execution (trade-off between kinetic & non-kinetic effects).

Comprehensive deterrence strategy (all IoPs strategy)

25. It is a fact that, in terms of its deterrence strategy, NATO's approach differs from its adversaries. While NATO has been traditionally focused on a retaliation centric deterrence, adversaries' approaches, such as the Russian's, remain holistic across all domains and throughout the entire spectrum of conflict. Adversaries integrate multiple IoPs in their deterrence schema, targeting NATO and its Nations at all levels below Article 5, and incorporating political warfare and cognitive techniques.

26. Only a comprehensive approach could effectively deter our adversaries. A comprehensive approach must be orchestrated and synchronized under political leadership where the MloP is part of a larger plan. The MloP, on its own, does not provide the deterrence

to cover all security challenges faced by the Alliance. NATO needs to check its Strategic Defence concept validity and ensure political commitment to participate in strategic defence planning.

EDTs and deterrence

27. New domains/areas such as cyber, space and AI have important implications on deterrence. The Alliance cannot be limited to its defence and there is a need to incorporate the ability to retaliate immediately in these new realms. In this regard, EDTs will play a key role. Incorporation of EDTs and blockchain on layered resilience is fundamental, as well as human machine integration and teaming will be decisive in the future battle space. In any case, experts advocated a “backwards” planning from foreseen needs, describing requirements rather than prescribing specific technological solutions.

28. Historical levers to apply innovation must be blended into a new playbook that will give NATO future advantages such as: technologies that provide overmatch, new operational concepts (with high degrees of interoperability and C2), new organizational constructs, and frequently demonstrating the Alliance’s technology integration and operational integration. Together, adjusting these levers as needed will maximize the promise of the five Warfare Development Imperatives most quickly and effectively.

NATO UNCLASSIFIED

Publicly Disclosed

APPENDIX 2 TO ANNEX A
ACT/SPP/SF/TT-4386/Ser:NS0678
DATED 27JUL 21

22 JUNE WORKSHOP – WORKING-GROUP SESSION

1. Finalizing the plenary session, attendees were assigned to different working-groups tailored to explore and capture their perspectives on the following set of guiding questions.

a. Question 1: Acknowledging the increasing emphasis on asymmetric approaches by NATO's adversaries, could a 'defensive' Alliance accept the notion of the convergence of offence and defence?

b. Question 2: How should offence and defence be considered? Should it be in terms of increasing convergence, in terms of both strategic thinking and capability development, in terms of an appropriate balance between offensive and defensive approaches and capabilities, or in an additional context?

c. Question 3: With potential adversaries increasingly integrating offensive and defensive systems, in a system of systems (e.g., A2/AD), and employing hybrid approaches in asymmetric ways, how can the Alliance's MloP adapt without compromising our defensive spirit?

d. Question 4: How should the changing character of competition and warfare (including non-physical domains, increasing engagement speed, and strategic reach making 'strategic depth' obsolete) affect our offence-defence thinking?

e. Question 5: How should new domains (space and cyber) and a pervasive information environment shape our approach to offence and defence convergence? How can we better synchronize the MloP with the other Instruments of Power in pursuit of NATO's political and military-strategic objectives?

f. Question 6: Specifically, what emerging technologies and capabilities may affect 'red' and 'blue' decision calculus?

g. Question 7: Is offence and defence convergence different in shaping, contesting and fighting contexts, and if so, how are they different?

2. This document consolidates the discussions and comments of these multiple working groups in response to the aforementioned questions.

NATO UNCLASSIFIED

Publicly Disclosed

Question 1: With the increasing emphasis on asymmetric approaches by NATO's adversaries, could a defensive Alliance accept the notion of the convergence of offence and defence? (Offence does not equate to pre-emptive strikes, but rather resilient and robust offensive capabilities that hold sufficient targets at risks to deter adversaries.)

3. In responding to the question of NATO transitioning from a strictly defensive to a more offensive posture, several attendees challenged the very distinction between offensive and defensive. Russia does not distinguish between NATO's offense and defence, but simply characterizes NATO itself as a threat. At the same time, NATO's focus has always been on deterrence or "active defence" rather than merely viewing itself as a defensive Alliance. Deterrence requires both the shield and spear, and any defensive strategy demands the training and equipment necessary to support offensive actions. A purely defensive mind-set only invites adversaries to exploit or circumvent the defensive measures (i.e., the Maginot Line problem).

4. No comments advocated for a strictly defensive Alliance, but several participants cautioned against an overreliance on military forces in response to threats. A more offensive approach would be a political decision involving multiple IoPs. The majority of threats to NATO will occur below the threshold of armed conflict, and responding only after that threshold is crossed may be too late. Early engagement will both deter an escalation to armed conflict and place NATO members in a better position if forced to respond militarily. As either a leading or supporting organization, NATO can develop and coordinate military and non-military response efforts against adversarial threats below that threshold.

5. Some participants emphasized that for many or most of the future battlespaces, like cyber or information warfare, the concept of defensive or offensive is meaningless. Adversaries will increasingly employ asymmetric approaches without regard to conventional rules or national borders, potentially leaving NATO defenceless. NATO must continue to employ successful measures across multiple domains, and NATO's allocation of time and resources will be essential to countering asymmetric approaches by adversaries. A consolidated NATO prioritization list would be helpful, as well as the alignment of political, military and economic strategies.

6. Some others addressed problems with the predictability of NATO's defensive approach. Russia and China rely on and regularly exploit that predictability, and they adapt their operations (information, financial, technological, etc.) based upon it while operating primarily in the grey zone. NATO needs new ideas that will lead to rapid and effective solutions for both offensive and defensive strategies. NATO must create ambiguity in Russia's assumptions about NATO's decision-making being predictable. NATO needs to pursue diplomatic, economic and informational approaches first, resorting to the MloP if those others should fail. NATO should achieve technological supremacy and develop new operational concepts to demonstrate Alliance technological strength and operational integration.

NATO UNCLASSIFIED

Publicly Disclosed

7. The issue of escalation was discussed. One participant raised issues with China as an example of vertical versus horizontal escalation, questioning whether Chinese actions could lead to an increase in armed conflict and/or an international expansion of conflict. Early NATO engagement could act as a deterrent, but they questioned whether deterrence in that case could be purely military or economic, or both. Russia may not be NATO's primary focus in 2040, but NATO should address Russia now, focusing on early disruption to their activities in ways that influence the thinking of all adversaries. The Alliance must develop pre-agreed escalation actions, involving both kinetic and non-kinetic means and all IoPs.

Question # 2: How should offence and defence be considered? Should it be in terms of increasing convergence, in terms of both strategic thinking and capability development, in terms of an appropriate balance between offensive and defensive approaches and capabilities, or in an additional context?

8. Discussion on this question focused on NATO's future posture. The popular and politically-motivated reputation of NATO as a "defensive Alliance" should not be misunderstood with its actual capabilities as the Alliance can quickly adapt to an offensive posture. Political planners are slow to make decisions or changes related to NATO, absent a major military event, but there needs to be an increased emphasis on manning and resources during peacetime. NATO currently focuses too much on present issues without sufficient preparation for future challenges. NATO needs to look ahead to 2040 and potential scenarios that may arise, including the increasing use of information warfare (e.g., "fake news"). One question asked was whether adversaries are working primarily in the grey zone because deterrence is working, or because it is the best strategy for exploiting NATO's weakness.

Question #3: With potential adversaries increasingly integrating offensive and defensive systems, in a system of systems (e.g., A2/AD), and employing hybrid approaches in asymmetric ways, how can the Alliance's MloP adapt without compromising our defensive spirit?

9. Attendees discussed NATO's global messaging. A strength of NATO is the ability to send a cohesive message backed by 30 nations. As a historically adversary-centric defensive alliance, redefining NATO with a look towards 2040 will require a new and deliberate message. One participant raised the need for that message to include mindfulness of China's passive strategies, like acquiring ownership of portions of European ports. NATO needs to better understand and acknowledge how its adversaries are thinking (e.g., grey zone tactics) and project a message of NATO disapproval and resistance.

10. In support of its messaging, NATO should politically telegraph a strategic intent to remain defensive despite building the capability to quickly undertake offensive operations. In this regard, STRATCOM would play a key role. NATO must engage at political levels to improve cross-domain warfare and cannot rely solely upon military means. This also requires "value for money"

NATO UNCLASSIFIED

Publicly Disclosed

considerations, such as whether a \$100 million expenditure to improve a NATO capability is best spent on a diplomatic effort rather than a military system.

11. Some participants discussed NATO's need to increase its operations in the information domain. Since NATO operates on consensus, NATO's effectiveness is particularly threatened by adversaries' attempts to undermine public support for NATO in Member Nations through informational means. Dramatic technological advances have given adversaries unprecedented access to influence Allies' populations and public opinions. A contrarian argument was made that public opinion has always represented a vulnerability for democracies, and military intervention in the information environment could present dangers.

12. One discussion questioned the use of the terms "offensive" and "defensive" in the context of this question, as it focused too much on military approaches. A better framework might be "proactive" versus "reactive," which acknowledges the need for political and civilian solutions.

13. Another discussion revolved around comparisons between Russian and NATO approaches in the information environment. A participant noted that NATO's military actions have produced unintended consequences (e.g. abuse and unethical practice claims during the war on terror) that allow Russia to portray itself as morally equal. NATO separates its political and military concerns, while Russia considers strategies that incorporate all of its IoPs over time. NATO should better coordinate an integration of political and military instruments throughout the spectrum below Article 5, military or crisis situations, which would include diplomatic and economic measures and focus on China as well as Russia.

Question #4: How should the changing character of competition and warfare (including non-physical domains, increasing engagement speed, and strategic reach making 'strategic depth' obsolete) affect our offence-defence thinking?

14. One discussion addressed how NATO departed from Cold War thinking after 9/11 and the War on Terror. NATO now must refocus on new emerging future challenges and avoid becoming the "boiling frog" that only recognizes the situation too late. A more agile NATO creates strategic uncertainty that greatly enhances its deterrence. It requires addressing the lack of speed of its decision-making in an increasingly fast-paced competitive space. It also requires acknowledging the weakness of an overly defensive deterrence posture. NATO needs to deliberately establish the appropriate measures of deterrence and a political strategy. NATO must proactively prepare for and take advantage of EDTs (e.g., hypersonics) and make plans to stay ahead of adversaries in those areas.

15. The impact of artificial intelligence (AI) on NATO's offensive-defensive balance was discussed. China may likely spend more on AI than all NATO members combined, leading to sophisticated capabilities. The impact of adversaries' AI capabilities should be addressed in NATO forums, and NATO must consider how to minimize the impacts of adversarial AI while taking advantage of it as a disruptive technology.

Question #5: How should new domains (space and cyber) and a pervasive information environment shape our approach to offence and defence convergence? How can we better synchronize the MloP with the other Instruments of Power in pursuit of NATO's political and military-strategic objectives?

16. Attendees discussed the importance of a NATO focus on the cyber domain. Cyber operations must be considered from both offensive and defensive aspects. Cyber tools are used against NATO and can be de-stabilizing, so network security is paramount. When networks are breached, NATO must be able to respond quickly, isolate the incident and get back to operations as usual. NATO should use subject matter experts (SMEs) to evaluate and create resistance against cyber-attacks. NATO should also explore measures that will deter adversaries from engaging in cyber-attacks.

17. NATO should develop a strategy in the space and cyber domains. For example, how will NATO respond to non-traditional attempts to interfere with the Alliance, like disrupting frequencies or grey-zone operations in space short of weaponization. A cyber-attacked Member Nation will likely respond individually, but the concentrated power of a coordinated NATO strategy potentially could deter adversaries' cyber or space-based attacks against any NATO member. NATO's strategy could also recognize the need to understand and rely on private-sector capabilities and acknowledge that many members cannot afford comprehensive cyber defence. A strategy must consider not its response to today's cyber and space challenges and responses, but also the challenges that may arise in the next 20 years.

Question #6: Specifically, what emerging technologies and capabilities may affect 'red' and 'blue' decision calculus?

18. One discussion focused on emerging space-based and AI technologies. NATO must rethink the definition of "weaponization" related to space, understanding the grey areas where adversaries may operate and capabilities NATO can develop short of weaponization. Adversaries, notably Russia, will increasingly rely upon AI due to a decreasing population (and reduced workforce). NATO must recognize AI as an enhancing capability and incorporate AI into its strategic considerations. Hypersonics and nanotechnologies were also noted as changing the strategic landscape.

19. Attendees stressed the importance of interoperability, particularly at the strategic levels. Technology has made many aspects of traditional warfare less relevant, and responses to state and non-state actors employing these technologies will be different. The abilities for rapid decision-making and response are paramount. NATO must incorporate new technologies not only for its own capabilities but also to understand its adversaries' capabilities. The employment of technologies by NATO demands interoperability not just between NATO nations, but also within their own military forces.

Question #7: Is offence and defence convergence different in shaping, contesting and fighting contexts, and if so, how are they different?

20. The few comments focused on NATO's limited ability to shape the battlespace. Limited funding, resources and political will makes unclear any vision for deterring adversaries beyond a conventional military response. NATO effectiveness requires overall capabilities across multiple domains to prove its deterrence is meaningful.