



尊敬的叔叔同志

你妹妹好嗎？聽說她又住院了，我感到很沮喪。我感激地記得她個人的興趣和鼓勵，這無疑引導我學習工程學

我非常感謝您向我詢問我對烏克蘭戰爭重大問題的看法。如果說我的思考對你們和黨有任何價值的話，那就反映了人們對我的信任，允許我將我的大部分服務時間花在與野蠻人一起生活並向他們學習。

我在沒有解釋目的的情況下，徵求了包括阿納克·阿貢在內的幾位工作人員的意見，我可以向你保證，阿納克·阿貢正在為他的讚助商帶來很大的榮譽。我希望我的一點小小的貢獻能夠對您的思考有所幫助。

我不得不首先說，總的來說，當我們看到雙方的優勢和劣勢時，我們可以感到很大的安慰。我軍領導人的英明決策再次暴露在革命的陽光下。過去幾十年 奧爾瓦南人民軍 的大部分舉措和發展都得到了證實。烏克蘭的反應肯定借鑒了我們的適應性戰爭概念，他們專注於打擊俄羅斯指揮中心和後勤中心，這正是我們的同志十多年前在系統戰中所寫的！

這場戰爭凸顯了一些挑戰，例如 奧爾瓦南人民軍 缺乏戰鬥經驗的後果，但這些擔憂並不新鮮，而且已經受到了很多關注——事實上，我記得你在《軍事展望》雜誌上發表的關於這個主題的論

文。您會注意到，我對您的某些標題的評論比其他標題更全面。我試圖將自己僅限於觀察，我不僅受益於我們的俄羅斯盟友的簡報，而且受益於與烏克蘭航空業高級管理人員進行的更謹慎的討論。

親愛的叔叔，您一直是我的指導者和導師，並且在黨的高級圈子中肯定代表了我的支持。如你所知，我經常發言支持採用俄羅斯的思想。我相信它們對我們仍然有價值。然而，我滿懷熱情地描繪了一幅俄羅斯執行這些任務的能力的輝煌圖景。這種熱情現在可能會讓人懷疑我的判斷。請允許我告訴你，我在這件事上是最自我批評的。

我冒昧地稍微偏離了您的指導，而是使用您在《巴基斯坦陸軍雜誌》上發表的優秀文章中使用的標題風格。

和

此致

馬希特



Respectable Comrade Uncle,

How is your sister? I was dismayed to hear that she was in hospital again. I remember with gratitude her personal interest and encouragement which undoubtedly directed me to study engineering.

I thank you deeply for the great compliment you pay me in asking my thoughts on the significant questions of the war in the Ukraine. If my musings have any value to you and the Party, it reflects the trust that was shown in permitting me to spend such a significant proportion of my service living amongst and learning from the barbarians.

I have, without explaining the purpose, sought the observations of several of my staff including Anak Agung, who I can reassure you, is doing his sponsor much honour. I hope my small contribution will assist your deliberations.

I feel compelled to start by saying that overall, we can take great comfort when we look at the strengths and weaknesses of both sides. The perspicacious decision-making by our military leaders is again shown in revolutionary sunlight. The greater part of the initiatives and developments of the OPA for the last several decades have been vindicated. The Ukrainian response surely has borrowed from our concept of **adaptive warfare** and their focus on striking Russian command centres and logistic hubs is precisely what our comrades wrote in **systems warfare** more than a decade ago!

The war highlights challenges such as the consequences of OPA lack of combat experience, but these concerns are not new and have received much attention – indeed I recall your paper in 'Military Prospect' journal on that very topic. You will notice that I have commented more fully on some of your headings than others. I have sought to confine myself to observations where I am the beneficiary of briefings not only from our Russian ally, but also more discreet discussions with senior Ukrainian aviation industry executives.

You dear uncle, have been my guide and mentor, and surely have represented in my favour in senior Party circles. As you know, I have spoken often for the adoption of Russian ideas. I believe they remain valuable to us. Yet, in my enthusiasm I painted a glorious picture of Russian ability to execute them. This exuberance might now place doubt on my judgement. May I beg you to share that I am most self-critical in the matter.

I have taken the liberty of departing slightly from your guidance and instead use the style of headings you used in your excellent article published in the Pakistan Army Journal.

With

Best regards

*Translated from original document*

*Mahit*



## OLVANAN PEOPLE'S NAVY MARINE CORPS SOUTHERN MILITARY FLEET



### NOTES FROM COMD 1ST MARINE DIVISION FOR SOUTHERN FLEET - SHORT REPORT INTO THE SPECIAL MILITARY OPERATION IN UKRAINE

1. The current war in the Ukraine area may be a guiding flame as we survey Chairman Zang's decade of reforms. Truly, the conflict casts shadows where we must redouble our efforts for the *strong army dream*. Yet, we also see bright reflections from our improved methods especially *adaptive warfare*, *systems warfare* and *functional tactics*. It is manifest also that the fruits of Olvanan industry have changed war. Drones allow a sea of people to see the battlefield and electronic speech technology shapes what that sea of peoples thinks of the conflict. Precision weapons destroy what can be seen. Yet it is not yet clear whether this means the defensive is much stronger: neither side has conducted a skilled and well-equipped joint offensive.
2. Most of the weapons and munitions delivered by Western nations to Ukraine thus far have been older and less sophisticated. Nevertheless, the gifting of niche high-technology weapons systems, especially anti-armour weapons and precision artillery munitions, has had very great battlefield effect. While it is obvious that the Westerners propagandists have carefully picked videos to exaggerate system effectiveness and disguise problems such as expired batteries or lack of spares, the result has still been decisive. It is also clear that the simpler the systems to operate and maintain the more effective they have been. Thus, sealed disposable anti-armour weapons have often proved more effective overall than sophisticated systems, while basic tools of long-standing design such as RPG launchers continue to be highly valuable. This provides irrefutable confirmation of the wisdom of our predecessors in directing that the OPA be equipped with such high-technology systems while retaining proven tools.
3. This document is cognisant that forthcoming discussions include Party comrades from beyond the OPA who frequently meet with other government departments and international representatives. There is a steadfast message for them. The Party has given us formal responsibility to hold high the moral standard and unceasingly explain the political importance of conducting military action righteously. It is not straying from a secular path to remind comrades that over 2000 years ago our Hindu forebears introduced humanitarianism in warfare. It is not revisionist to recall that even chairman Cheng Ze insisted on virtuous treatment of prisoners of war, including releasing them, gave moral supremacy. Most importantly, we must share the learnings of our scientists about how participating in combat without strong confidence in righteousness causes disabling psychological injury to healthy minds.
4. We should emphasise to comrade leaders inside and beyond the army that this depraved war is an important opportunity to educate both the practical battlefield and international political consequences of improper conduct of war. Obviously, this is a matter in which Olvanan civilisation differs greatly from the barbarian races. The guilty are not only Russians and Ukrainian nationalists, but also those who trumpet 'rules-based order' while invading other countries and creating extra-legal systems to avoid humanitarian law.

5. What can be said about this war is boundless. This paper curtails its discursiveness to observations that suggest where we might be shown to be correct in our policies, or where we might need to consider change. The classical headings used follow the requested logic, yet I have the added consideration of moral lessons and lessons of leading, for these are in my view very great matters. The writing follows convention, with matters for higher consideration addressed as reflections, matters within the authority of the OPA as recommendations and in matters of ground forces meriting change which can be delivered within Southern Army Command, I have made proposals.

### **Considering lessons of strategy**

6. Wise judgement of strategy must wait for history to reveal outcomes. Yet we can see faint traces of writing in the book of wisdom, commencing with two notions to be balanced by our leaders.

7. **Do not fear risk.** Beware fearful conclusions. Concluding a patient died because the doctor erred in diagnosis merely enables blame. Diagnosing why a doctor erred is a better path to wisdom. So let us not with shallow thoughts conclude the Russian failed decapitation operation was due to bad strategy. Such operations have succeeded before, a great payoff was possible, and the cost of failure was modest. The chance fortunes of war found more defenders in place. The errors were bad intelligence about the disposition of Ukrainian forces, especially air defences and poor assessment of the Zelensky government reaction. This same misjudgement it seems many foreign intelligence services made.

8. *My reflection is that we should reassure those voices who are suddenly fearful of landing troops from the air. We should also acknowledge with praise the efforts of our intelligence organisations as they establish Olvanan cultural institutes across the region, redouble the recruitment of human sources and their scientists to develop machine learning methods to better predict how adversary leaders may behave in crisis.*

9. **Hear cautious counsel.** In truth we cannot say the overall Russian plan for attacking was a mighty blow, a clever stratagem or conducted well. Choosing to concentrate forces on the borders of Ukraine, the Russian leadership gave up surprise. They yet had options. They had opportunity to properly posture, prepare and rehearse their formations, artillery, and air force for an attack. They could have then struck with full force. Alternatively, they might have deployed most of their forces arrayed in a manner consistent with preparing to counter a Ukrainian offensive. Then they might have started with the approach comparable to that used to recover the Crimea and escalated if required. Pronouncement after the fact is no wisdom, but wise counsel was rejected. We know that Senior Russian officers who made such suggestions or criticised the plan and warned of weaknesses were treated ill.

10. *I reflect that is that this is a fine example to illustrate the wisdom of chairman Zang's recent praise of loyal truth-telling to superiors and his warning against misunderstanding voluntarism<sup>1</sup>. If it feels indelicate to be critical of Confucian thinking, you can certainly observe a great benefit of our*

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<sup>1</sup> Explanatory note by translator: The belief that the Superior Man's purified moral will is capable of transforming both mental and physical reality and regulating the cosmic order. This is a virtue in Eastern thought but might be thought of as hubris in the West.

*tradition of sponsoring and assisting young officers of lesser rank is that it provides our most senior decision-makers with people who are deeply obligated to share unpleasant knowledge.*

11. **Logistics are the winning play.** The war in Ukraine has exposed a great weakness of the West: to sustain a fight. It is hard to comprehend how the politicians and bourgeois industrialists of the West are ready and permitted to naïvely confirm the quantities of munitions provided to Ukraine and the approximate numbers remaining in war stocks. The ideology of neoliberalism has become the ally of the progressive world. The pursuit of best price by consolidation of companies has had a consequence that should delight us. Most weapons are manufactured in one place by limited batches. Their factories depend in turn on components that have few suppliers. Visibly, the Western world military industrial complex is stumbling and even admitting it cannot correct this within the next several years. Highly importantly, we can notice that no matter how great these failings of industry and military logistics organisations no leader is ever held accountable.

12. *I recommend the peculiar matter of these Western military logistic dependencies and the vulnerabilities this creates for them be loudly emphasised to our most senior decision-makers.*

13. *I also recommend that we ask our psychologist comrades in the intelligence community to analyse the consequence of Western non-accountability. This is thoughtfully important. Does this normality make barbarians more willing to take risks?*

14. *I reflect that this topic also provides an opportunity for us to laud our most senior comrades for their wise direction that Olvanan manufacturing must continue to occur on multiple sites. Now we have the world's largest weapons manufacturing capability spread over many, many installations. I reflect that this contrast in logistic depth may amount to a window of opportunity. Yet, there must also be caution, as we depend on certain raw materials. The current programme of selected stockpiling should be urgently accelerated.*

### **The nature of struggle**

15. A forewarning aspect of the current conflict is how it has been fought not only between Russia and nationalist forces, but as a proxy war by the Americans and the Europeans and additionally by transnational business entities such as Starlink. The oligarch Elon Musk was able to provide an unassailable communication system to the Ukrainians. He could do this within a matter of days and without the need to seek approval. In many circumstances, business giants like him or Rupert Murdoch are more influential and less constrained than elected politicians and they and their dynasties tend to remain in place longer. While such individuals can be hostile to Olvana, the sweep of time shows that most are firmly loyal to avarice in the long term, and individuals are easier to coerce than nations.

16. *I reflect that our doctrine of expecting to fight American proxies in transitional warfare is validated and our national policy of pursuing influence by commercial engagement with such people is entirely upheld.*

17. Master Sun admonishes us that a wise General treats their opponent with respect. We should admire and learn from the success of the United States in executing an exemplary *three warfares* campaign to shape Ukraine to their own agenda. The encouragement and funding at arm's-length of non-governmental organisations to support several Ukrainian anti-Russian and pro-European political movements from 2014 was well calculated. We can observe that these organisations maintained excellent discipline by minimising their involvement with the extreme right

nationalists. This was cleverly combined with an official US government position that until the last moment was officially highly critical of Kiev, corruption and oligarch misbehaviour.

18. The US President's administration has been equally disciplined in carefully adjusting the nature and type of military support. They have prevented their proxy being overwhelmed, while avoiding Ukraine presenting such a great threat to Russia that the more aggressive voices in the Kremlin might prevail. The matter of the operation to sever the gas pipeline supplying Germany yields crystal-clear example of how successful American propaganda efforts have been in Europe. No Westerner dares to question why our Russian comrades destroyed their own pipe of gold because he will fear being branded as pro-Russian: this has been made a steep insult.

19. *I reflect that this great discipline of the US leadership is a most important lesson and should be shared with senior colleagues as well as being a suitable case study for our military academies. In a mirroring way their propaganda deserves examination.*

### **Considering moral leadership**

20. Since the OPA employs some Russian derived equipment and methods we should be thoughtful that their military did not quickly succeed. Many part explanations are discussed later in this document. Still, the greatest explanation is moral failing. The absence of social education and righteous discipline of the troops allowed the shameful behaviour that has burnt up the Russian political objective of a not hostile Ukraine. Moral failing also permitted the corruption that has been a worm eating the trunk of the Russian and Ukrainian armies.

### **Unrighteous leading**

21. Chairman Zeng Ze taught us that all war is political, and the conduct of armies must be a shining light to retain the support of the masses. Especially this will demonstrate enduring moral superiority and show Imperialist troops the deceptions of their leaders. Revolutionary self-discipline and the righteous actions of officers constrain a soldier from acting on hunger or passion. Without such discipline, there will be theft, murder and atrocity, as seen in Ukraine.

22. Some comrades will claim this has no relevance to Olvana because this is a civil war between barbarian tribes of the Slavic nation. I say Ukraine is a supreme 'world laboratory' example of poor moral leading on both sides causing descending into spinning barbarity. Most usefully for proper consideration there is no lack of fierceness: both sides conduct summary field execution. The fault is straying from the path of righteous and caring leadership.

*Regard your soldiers as your children, and they will follow you into the deepest valleys; look on them as your own beloved sons, and they will stand by you even unto death. - Master Sun*

23. The Russians officers offend greatly in abandoning subordinates to 'grandfathering' that gives authority and status to soldiers who have served longest. We can observe consequences. Many Russian troops were falsely briefed and expected to be welcomed as rescuers. Thus, when they crossed the border, they were first hesitating and gentle with the population. Yet the Ukrainians had rushed to give weapons to large numbers of civilians to defend their country, but their officers lacked the morality to educate them to wear uniform. This sprouting people's militia was a big part of very effective ambushes against disorganised Russian units. Without righteous officers, surviving Russians became vengeful, hunting down and executing civilians whom they believed had been fighting them illegally.



24. Ukrainians also encouraged civilians to report the locations of Russian troops and distributed a smartphone software program to help this. Western media ignored this breach of international law and then gave joyful examples of how “grandma successfully passed target coordinates to the artillery”. It cannot be surprising that this foolish destruction of the great rule of distinction resulted in unrestrained bombardment from Russian leaders of weak morality. At the same time, Russian Special forces and agents in civilian clothes had been part of the initial decapitation operation in Kiev. This triggered a great ‘hunt for traitors’ led by the Ukrainian security services, who failed to show righteous leadership and ignored gangs of Banderists ‘lamp posting’<sup>2</sup> any they suspected of disloyalty. It is greatly obvious that the results of lack of righteous leadership on both sides means that many amongst the people will have a terrible bitterness that will prevent reconciliation and sustain future conflict.

25. *I reflect that, when the Russians strayed from the guiding light of communism, and disestablished the political officer this was also regressive for the army. The Zampolit had diligently protected the common soldier by denouncing military commanders who tolerated reactionary behaviour such as unapproved hierarchies and bullying, as is clear from many Soviet courts-martial records. This history is another reason for us to value and laud the guidance and protection that political officers offer the OPA. When discussing this sometime sensitive matter with comrades, it may be helpful to highlight recent initiatives. I note especially that political officers have been given a special military task in urban operations and for educating soldiers in military decision-making and the ideas of system warfare. This ensures that their revolutionary zeal does not only protect us from straying from the path of righteousness but also supports modernisation.*

### **The matter of corruption**

26. Unrighteous leadership also allows corruption. Corruption has turned the weapons of both the fighters rusty, especially Russia. I have spoken to several classmates in Russia who are bitterly angry and ashamed that ‘iron rice bowls’ and corruption in their system concealed hollow units, unserviceable equipment and false bookkeeping. They were particularly anxious to highlight the heroism of brother officers who died because they chose to honourably lead from the front to accomplish impossible missions and spoke with satisfaction of the execution of corrupt senior officials.

27. These challenges are not limited to the Russians. Corruption is rife in both countries and parasitic oligarchs have amassed great power and wealth. Social media commentary by demoralised soldiers of both sides has revealed great shortfalls in what is necessary. In Russia military funding was diverted on a large-scale for personal gain by the politically well-connected. Weapons and equipment were then substandard or missing when needed. In contrast in Ukraine the challenge at the national scale was first political. Funding properly allocated to the military was diverted by interest groups for other apparently legitimate purposes like infrastructure development. This is the context within which some of their wealthiest oligarchs stepped in to provide the funding for militias like the AZOV battalion. Corruption of logistics in Ukraine gives more problems at a lower level within formations. Foreign volunteers report that there the chain of command tolerates or participates in diversion and theft, although this problem has been much reduced by NATO countries increasingly using agents to supervise supply.

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<sup>2</sup> Explanatory note by translator: the Ukrainian practice of using plastic wrap to fix victims to lamp posts and beating them, based on a traditional mistreatment of an itinerant peoples called “gypsies” who have a prejudicial reputation for thievery.

28. *I reflect that we must stand ready to be self-critical as the party looks more closely at the OPA and asks: is such corruption a problem for us? Your answer can be a resounding “in Southern command, no longer”. The far-seeing wisdom of Chairman Zang’s personal direction of the ‘do or die fight against corruption’ that began in the General Logistic Department in 2012 is now clear to all.*

### **The matter of senior leaders**

29. The whole world knows that Russia has changed its senior military leaders repeatedly during this war and many political and business figures have been killed. Ukraine has also removed a small number of military and political figures. In such a war, to deal with corruption or incompetence, these strong measures may be essential, but it is far better to correct matters in peace. I note that Chairman Zang has told us ‘we must overcome the weak links in combat power building’

30. *I reflect that the matter of assessing the revolutionary moral zeal of candidates for senior rank is the responsibility of the relevant party committee which is entirely proper and satisfactory. However, ensuring the capacity of more senior officers to deliver a good tactical performance is an OPA responsibility. Chairman Zang gave this task to higher formation commanders when he lamented that many suffer from the five cannots<sup>3</sup>. While implementing the chairman’s directive is a matter of grave national importance, the risk to harmony of comrades judging the highest-level and most exalted cohort is obvious.*

31. *I recommend that we use the championing and implementation of functional tactics<sup>4</sup> in their formations and units as a new measured virtue of senior officer performance.*

### **The matter of junior leaders**

32. The importance of having able leaders below officer rank is not a new discussion. The Ukraine war has however given us a very good example of why it is urgently important. In the early stages of the war, there is much recorded material of members of Russian units who did not obey basic hygiene rules, post sentries, deploy and move properly and other such things. Worse, they did not fight together as small teams. These matters are the responsibility of NCOs who were clearly failing. In contrast, in many cases the opposing Ukrainians were fighting in small groups being entirely navigated to the fight and led into battle by junior sergeants. This is a very significant difference that can often be observed between the two armies, and it is the result of foreign armies from NATO conducting training of the Ukrainian army. Remarkably, and we must puzzle this circumstance deeply, training courses that confect this change from soldier to independent leader are typically between six and fourteen weeks only.

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<sup>3</sup> Translators note. By this he meant that they cannot: analyze a situation, understand higher echelon intent, make a decision on a course of action, deploy forces or handle unexpected situations.

<sup>4</sup> Translators note: Olvanan Mission-focussed functional tactics are an improved and simpler version of Western so-called *mission tactics*. Under this system, formations and units are placed in groups according to the mission. An Olvanan superior commander can initiate an operation by simply giving the higher task, a mission, the resources (especially the different units assigned) and an area of operations. The ‘functional’ verbs used to describe the higher task and the mission tell the commander what he needs to know about his part in the plan and his freedom of action.

33. *I reflect that we must revisit the discussion of how junior leaders in the OPA do not hold up the sky. In truthfulness, they are fully unlike the Ukrainians. While our four-year specialist NCO course is successfully producing skilled technical people who can master the technology of war, few emerge suited to lead teams. The standard two-year pathway for volunteers who have completed national service does not produce many good type NCOs who can lead teams independently as the Ukrainians can. If we turn our eyes upon the citizens who collectively delivered superlative transformation of Olvanan society, we can see there no fault in the raw timber. Do we need different carpentry, or a different workshop? I also reflect that one matter of trouble is inclining superior social value individuals who are not officers to take the NCO pathway and then serve adequate time to gain deep experience, but separately we must wonder why our training is not delivering a similar result.*

34. *I recommend that a retired very senior officer study into encouraging superior soldiers to desire to serve as NCOs is begun in conjunction with the relevant party department. The options might involve identifying incentives for continued service including enhanced consideration for party membership or entitlements to serve in chosen geographic locations later in a career. This study might also consider a very different approach. This might be to create a new rank of very junior officer to command at section level or be the platoon second-in-command.*

35. *I also recommend that, wherever the winds blow, we should again examine with harsh self-criticism the weakness of NCO tactical leading performance. In the pursuit of superiority over them we cannot avert our eyes from the methods that the Westerners train their NCOs by. Yet this must be done with exceeding delicacy.*

36. *I propose that in my division I run a project to experiment with the very important question of junior leadership training. I think we should consider Western methods, but I am acutely conscious of the great shame that this might reflect on our training establishments if we carelessly acknowledged this. All are familiar that we normally select loyal and energetic best quality soldiers to volunteer for overseas deployments at the end of national service. For the next six months company rotation within my division, we will hire Westerners to conduct a three-month junior leaders training course while in the foreign country. This will easily be explained by the need to be able to integrate with the host nation army, which is also Western trained. They will all have previously agreed that when they return to Olvana, after a leave. When they return to Olvana, after their leave, I shall place them with a best-connected officer and have them provide an enemy training force. This will allow contemplation of Western methods. Should they be very successful I shall ensure that much credit flows to that commander who in turn will surely have mighty reason to ensure his web dilutes poisonous words.*

### **Considering three warfares**

"Hence to fight and win in all your battles is not the foremost excellence, to break the enemy's resistance without fighting is the foremost excellence". Master Sun: Chapter III - Verse 2

37. The matter of *three warfares* is another area where we can take pride and comfort in the wisdom of the party. The true value and importance of these matters is shown exceedingly clearly by the noteworthy success of the Ukrainian propaganda warfare in domestic circles and amongst their Western audience of potential supporters. However, we can discern that the preconditions for this success were excavated by a decade of Russian social media operations that created distrust in analysis and experts so allowing a simple Ukrainian narrative to prevail. This is one of several major lessons we can draw. Let us consider each of the *three warfares* in turn below.

38. *I reflect that the Ukraine war illustrates the great value of the integration of three warfares in OPA doctrine.*

### **Strategic psychological warfare<sup>5</sup>.**

39. In the vital matter of *strategic psychological warfare*<sup>6</sup>, preparatory to combat, I boldly say that the Russian long-term approach with the sugar of economic levers was excellent but their application of the vinegar of coercive military threat was poor. It antagonised but did not intimidate. Economically, we can see that the Russians were successful with their strategy of encouraging European businesses to cooperate with Russia. Especially the provision of cheap gas created not just dependency but also a benign perspective of Russians amongst important influencers, especially right-wing politicians and European oligarchs.

40. However, propaganda success slipped from the Russian grasp once they decided to attack. As discussed above, their strategy was neither pig nor dog, but even worse, they did not align their build-up of forces with suitable sustained psychological messages of justification. They might have; (as the Americans later did) shared intelligence on the disposition of Ukrainian forces saying that this presaged an attempt to attack the Donbass, they might have publicly demanded that NATO (or at least one member state) promise that it never allow Ukraine to join, or they might have demanded UN inspection of biological laboratories in the Ukraine. They might even have conducted a show trial and execution of individuals purported to be the crew that shot down Malaysia Airlines flight 17. To generate ambiguity, they should have conducted more high visibility humanitarian actions such as sending a military field hospital to Italy. Such psychological warfare actions would surely have distracted and confused Western observers and probably muted the European response to attack. Such innovative lies might also have intimidated the Ukrainian people and destabilised their government.

41. In contrast, the Ukrainians, (but perhaps we should credit their American and British special forces advisers), successfully used a psychological warfare approach in the tradition of Master Sun. It seems they, better than the Russians, carried on the Slavic tradition of maskirovka, when they used vulnerability and disorder, especially to the north of Kiev where they had cleverly planned to create big obstacles by flooding. This was aligned with NATO release of very detailed military intelligence on Russian intentions and preparations which shaped European populations, and especially Western media, for propaganda warfare.

42. *I reflect that Russian failure and Ukrainian success together illustrate the importance of the correct employment of all the levers of national power in an integrated way for effects before or without fighting. This also shows the immense potential of the orange jackets organisation<sup>7</sup>.*

43. *I recommend that a special high-level wargame be created to use the example of the Russian military operation to develop our concepts for strategic psychological warfare.*

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<sup>5</sup> Strategic Psychological Operations: The pre-conflict posturing of military/paramilitary forces or application of other national capabilities (diplomatic, economic, cultural) with the intention of intimidating adversaries and encouraging acquiescence to PRC-desired outcomes.

<sup>6</sup> Translator's note: focused on influencing with physical action and effects rather than information

<sup>7</sup> Translator's note: the Olvanan army's large, unarmed humanitarian relief organisation

## Propaganda warfare<sup>8</sup>

44. This is the first conflict where possession of electronic speech technology by fighting participants and observers has been widespread. This has enabled at the moment messaging from the battlefield to extend out to vast audiences across the planet. These tools have facilitated the use of drones, enabled new methods of engagement and above all seen a contest of narratives. While before the war Russian propaganda warfare capability was highly regarded and believed to be very influential in the West, once combat began the Ukrainians exceedingly remarkably quickly garnered giant dragon-like public support in key constituencies within Europe and the US. At this acute moment Russian propaganda failed in the West, while nevertheless maintaining support for President Putin at home in Russia, and keeping most of the world undecided. The sudden shift deserves study.

45. **Russian propaganda warfare.** In the last decade Russian propaganda warfare departments dealing with social media successfully made not-believing normal and created a blossoming growth of distrust in the lawless virtual domain beyond the safety of Olvana's firewall. Interference with matters such as US elections, the UK vote called Brexit and vaccination safety gained attention from many observers. Less well observed, they also ingenuously exploited algorithmic tools on mainstream platforms designed to polarise and stimulate engagement by provoking emotions. They also frequently shifted between topics, with carefully presented 'messengers' making claims and fading away. The effect was that messages of all kinds could increasingly be legitimately doubted, and expert opinion began to have less influence than, say, the pronouncements of a media celebrity. Distrust of governments statements was particularly high. Is this not to be regarded as particularly successful preconditioning of audiences? However, it appears that the Russians failed to appreciate that they had created the conditions under which only a simple narrative that an observer perceives as self-evident would be likely to be adopted. It would be the Ukrainian narrative of victimhood.

46. In the months before the attack, Russian propaganda continued to leap between topics, sometimes explaining and sometimes denying actions or intention. The Russian failure to set the media agenda with a few consistent messages was particularly serious, both because it would lead to the Ukrainians dominating the European media narrative, and because it was a large, missed opportunity. It was fully predictable that the news of the Russian invasion would be what scholars of reporting call *event led news phenomenon* that would break through pre-planned media agendas and framing.

47. Before the outbreak of conflict, the Western mainstream press paid little attention to Ukraine, but when it did it was often critical, emphasising corruption, low productivity and the problem of the linkage between right-wing extremism and nationalism. We can now discern that insufficient effort was made by the Russians to build up and spread reporting from respected Western media about such things as openly extremist groupings, or the challenges faced by residents in the Donbass. This meant there was no 'foundation stone of problematic truth' on which to build subsequent narratives. Russian propagandists also failed to prepare to internationally frame the possibility of military action in Ukraine by messaging about the concept of 'responsibility to protect' and the American doctrine of 'pre-emptive defence' and how these have been applied to justify Western invasions. Most notably, Russian propaganda efforts failed because

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<sup>8</sup> Propaganda Warfare Overt and Covert Media Manipulations: The use of materials delivered to public audiences through established news services, informal internet sites, and other social media to influence domestic and international perspectives associated with ongoing disputes involving the PRC's interests.

they were unable to penetrate the consciousness of the Western world once it had characterised Ukrainians as victims and Russians as evil. Everything critical of Ukraine was quickly dismissed as false Russian messages.

48. The failure of penetration is especially shown by the example of social media sharing of atrocities. On the Internet there were shared many examples of videos that portrayed victims of executions and torture of victims. Sometimes we saw the acts. This poisonous material showed victims from both sides, which was technically similar and usually equally hard to validate but in the Western world everything showing Russian victims was immediately treated as Russian propaganda.

49. Domestically however, Russian propaganda warfare has so far been effective in maintaining support, largely relying on the themes of patriotism, rescue and Nazi threat. It also appears that the failure to message successfully beyond Russia and aligned states is partly because of their reliance on state-sponsored media and a limited group of contractors. They do not have the capacity to counter the scale and scope of Ukrainian operations, nor, in contrast to their adversaries, do they appear to have effectively constructed messaging for Western audiences.

50. *I reflect that the OPA must learn from the above weaknesses of Russian propaganda warfare, with special consideration for how to build stories to reach those from non-Olvanan cultural backgrounds. Above all we must ensure that we have outlets for our messages that are not quickly discredited or closed down.*

51. *I recommend that the Department of Foreign Intelligence (DFI) should establish several novel social media platforms designed for Western consumption with attractive no cost features that give them high penetration. They should not be linked with Olvana and one might be positioned to appear to be offshore dissidents of Olvanan heritage. It is vitally important that they are not constructed for information collection purposes since this would make them matters of suspicion to adversary intelligence agencies. The singular purpose of these platforms would be to ensure the possibility of message distribution in an acute crisis.*

52. **Ukrainian propaganda warfare.** The humorous observation that the Ukraine is a country run by a public relations firm reflects their great success at propaganda warfare. The performance has been consummate, prevailing with a small number of key messages (such as emphasising a single Ukrainian identity) consistently pushed, and with carefully curated footage in support of this. Experienced operators carefully crafted stories and memes for different audiences leaning heavily on myths and cultural anchors but referencing contemporary culture. Examples include the construct of *St Javelin* or the *Ghost of Kyiv*. Ukrainians also produced a new social media application which allowed civilians to immediately provide information to the government and military. To reinforce rapid collection and dissemination of material the Ukrainians linked civilian and official social media and delegated release authority.

53. Unexpected assistance came in the form of spontaneous Western emergence of rapidly growing groups of pro-Ukrainian online activists who have weaponised Internet culture. Groups such as the NAFO<sup>9</sup> 'Fellas', who took as their symbol modified pictures of a Shiba Inu dog, created means and posts to ridicule and counter what they consider Russian propaganda and disinformation. Importantly, in doing so they effectively suppress any commentary that is critical of Ukraine regardless of whether the originator has a partisan position.

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<sup>9</sup> Translators note: NAFO is a play on NATO where the word 'Fella' replaces treaty.

54. *I reflect that the OPA should consider how it might match the kind of propaganda warfare success the Ukrainians have achieved. We have the great advantage that our population are very familiar with the tools of the online environment and there are people of Olvanan heritage living right across our region who are resourced to create an informational army. However, to influence effectively we will need to develop the necessary means.*

55. *I recommend that the Fused Operation Office (FOO) of the Strategic Integration Department (SID) establish permanent teams of propaganda warfare operators who have a native level of understanding of culture and language for the different countries in our region where we might be obliged to operate.*

### **Considering lawfare<sup>10</sup> and Orange Jackets**

56. The failure of either Russia or Ukraine to well exploit existing legal frameworks and processes before hostilities is most notable. While the Ukrainians benefited from a remarkable effect of immediate Western sympathy when they were attacked, this was a spontaneous phenomenon because a simple narrative of attacker and victim burst through the existing media agendas and framing. Their subsequent propaganda was excellent, but the groundwork was poor and chance played a big part in their success. It is of value to examine the failings of both sides

57. **Russian lawfare.** The Russians failed to take at least two major opportunities to shape the international environment for future possible military intervention. Their position was that they required Ukraine to be neutral, but they did not articulate this further. They might have used Finland as an example of what they proposed, since that country is very prosperous and has a desirable way of life. Public and political opinion in the West might have seen this as a reasonable proposition. The Russians had also earlier proposed a federal model for Ukraine. Since federalism is well understood within Europe and the United States as an effective model for governance, giving major publicity to the model would also have appeared constructive internationally. Other opportunities included, as previously mentioned, using fora such as the United Nations to be especially critical of invasion of Iraq and generate debate about the concept of the responsibility to protect. This approach would have been likely to have obligated American diplomats to provide justifications for the 2003 invasion, which would have allowed the Russians to, after this, position their attack as equivalent.

58. The Russians were particularly neglectful in missing the opportunity to criticise the Ukrainian provision of weapons to untrained civilians and encouraging them to participate in hostilities. This gave great scope to generate an international conversation about the proper boundaries between combatants and non-combatants. Similarly, the Russians failed seriously to highlight debates and legislation in the Ukrainian parliament legalising behaviours that would be very shocking to Western sympathisers. However, the Russian failure to ensure it had means of communication to the Western public meant that also failing to identify the above opportunities made no difference. The way that the Europeans blocked access to the Russian channel RT immediately removed a major source of alternative information.

59. **Ukrainian Lawfare.** There were fewer opportunities for the Ukrainians to conduct lawfare, but they did fail to draw attention to the treaty under which they gave up nuclear weapons and which obliged certain other nations to defend their interests. The Ukrainians have also been inept in

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<sup>10</sup> Exploitation of National and International Legal Systems: The leveraging of existing legal regimes and processes to constrain adversary behaviour, contest disadvantageous circumstances, confuse legal precedent, and maximize advantage in situations related to the PRC's core interests.

their dealings with some non-government organisations including the International Committee of the Red Cross, however Western hostility to Russia has been so great that this has not had obvious negative consequences.

60. *I reflect that Ukraine provides a fine learning example for the OPA and the party to show missed opportunities for effective lawfare as well as highlighting the importance of our moral approach. It especially provides a case to execute wargames to show how the integration of Orange Jacket operations during combat could be decisive in shaping international opinion.*

61. *I recommend the development of teaching wargames to allow OPA commanders to better understand the three warfares and fully understand the employment of Orange Jackets preceding and during combat.*

## **Considering technical warfare and deception**

"All warfare is based on deception". Master Sun, Chapter I - 18.

### **Cyber operations and EW**

62. It was expected by many thinkers that the war in Ukraine would see offensive cyber operations by the Russians to have major operational effects. In actuality, Ukrainian cyber defences proved relatively strong, which may be from their large pool of IT expertise. The combined Russian electronic warfare and cyber-attacks immediately prior to and during the early stages of the offensive suppressed many Ukrainian systems and most of their radio frequency communications in key areas. Yet, the Ukrainians had made provision for alternative messaging and decentralised command and control, so the impact of Russian attacks was mitigated. The combined efforts of Western countries to support Ukraine, and especially the delivery of Starlink terminals, managed to prevent the very substantial Russian cyber capability closing down the internet and critical communication links. This resilience allowed Ukrainian information operations to continue to exert positive decisive effects on Western public opinion.

63. In contrast to cyber operations, Russian defensive electronic warfare has been very effective, especially in countering Ukrainian UAS operations. The Russians report that on average each Ukrainian UAS platform conducts no more than three missions before being brought down.

64. Another astounding matter was that not only did the Russians not have effective secure communications at the tactical level, but they had also especially bad communications discipline. Russian soldiers at all levels carried their mobile phones, and in many cases used Ukrainian SIM cards to enable communications, giving the Ukrainians not only a clear picture of unit movement but often opportunities to strike. This has led to the death of several senior Russian commanders. From the other perspective, the Russian tactical locating and intercept capabilities have proven excellent, and because they are linked into the centralised artillery command system they were able to successfully identify Ukrainian positions by transmissions. Looking from the other view, the Ukrainians had different problems. They have a system of very secure radio nets for their artillery and commanders supplied by the West. The Russians were unable to decode the traffic, but they were quickly able to identify where these special radios were transmitting from, and began to focus on striking them. As a result, many Ukrainian units have stopped using secure radios instead relying on more traditional methods of code words and disguised speech.



*Translated from original document*

65. *I reflect that our operational concepts place great emphasis on cyber operations, and it will be very important to understand why Russian cyber capabilities fell short of what was expected, and the basis of their EW success. Given this success it seems very essential that EW systems will be required across the OPA down to at least company detachments. It is evidently important that we continue to train our officers in communication security, including keeping secure when technology is not providing protection, never forgetting the old methods of telephone line and messengers.*

66. *I recommend that the Olvanan programme for defensive EW systems be accelerated and expanded, with the immediate priority on counter UAS systems. I further recommend that special-purpose forces be directed to analyse whether our various capabilities for physical network penetration by advanced forces continue to be adequate. Additionally, the EW capabilities that have been developed within the Asymmetric Warfare Brigade should be reassessed for effectiveness, adequacy and scale. I recommend that because of the expertise developed in that brigade in both employing uncrewed systems and countering them, that the immediate investment in EW capability should be focused on that brigade.*

67. *I propose that I will direct one of my brigade commanders to commence a tactical innovation experiment of EW to counter uncrewed systems, conducted with off-the-shelf UAV and basic jamming technology. This will be focused on the questions of organisation and tactical employment rather than the technical issues.*

68. *I also propose to commence a trial of an expansion of the EW subunits in a different brigade in the division.*

### **Camouflage and Concealment**

69. The massive volume of drone footage from Ukraine and the detail revealed from combat has astounded observers all around the world. What has disconcerted me and my staff is the widespread failure of forces to adopt basic camouflage and concealment. Notwithstanding that the video material that is being chosen to be shown is going to be that which most clearly shows the matter that is the subject, it most surprisingly appears that it is entirely normal for both Russians and Ukrainians to construct defensive positions by day without erecting camouflage nets, concealing spoil or, in most cases providing overhead cover (excepting the overhead protection over sheltered bays). Positions constructed by both sides are often poorly made and badly maintained and very untidy with much litter and debris as well as ammunition stacked visibly. The result is that from overhead it is usually possible to quickly determine whether a position is occupied and the strength and likely competence of defenders determined. The extent of defensive positions is often obvious, and it seems that it is straightforward to use drones to drop munitions or adjust artillery or launched grenade fire. Similarly, vehicles are frequently parked in the open without even the most basic attempts at camouflage.

70. *I reflect that the development of the adaptive warfare doctrine and extensive exercising in this mode means that first line OPA troops should never make such gross errors. However, I recommend that an urgent review of the scaling and type of camouflage material be conducted across OPA. It appears that at least two complete systems of camouflage incorporating thermal screening are required at each section level grouping in order to conceal both vehicle and working personnel.*

71. *I propose that one of my brigades will conduct a trial of alternative defensive position designs more suitable for an environment with a persistent drone threat.*

## Deception

72. The initial Russian strikes on the Ukrainian Air Force, air defences and command posts were less effective than expected. This was because they effectively dispersed such key targets and then created a diverse range of deceptions varying from using old airframes or full-scale dummies of aircraft and vehicles through false constructions and excavations all the way to devices that generated spoofing electromagnetic or heat signals. Both sides, but especially the Russians, also employed sophisticated inflatable or pre-prepared dummy air defence systems. Notably, some deception measures have been particularly crude, indeed obviously so, yet have still contributed to uncertainty. All of these measures greatly diluted the potency of initial engagements and have continued to reduce strike effectiveness, although some of the more ingenious Ukrainian methods may have been wasted because of the Russian practice of indiscriminate bombardment of entire possible threat areas. It also seems that certain initiatives by low-level units to create dummy elements away from their actual positions still increased the overall signature of the formation. It is clearly a thing of great importance to ensure that deception planning is fully coordinated at brigade level or higher.

73. *I reflect that the current teaching of deception in the OPA is valid, however given the increasing likelihood of persistent surveillance, greater effort and investment in deception tools is justified. I recommend that deception for a persistent surveillance environment becomes an area of focus for brigade level engineer planners across the OPA, with a focus on methods that are simple and fast.*

74. *I recommend that a deception trials sub-unit be raised within the asymmetric warfare brigade, with a view to providing immediate capability in support of operations and developing a model for deception sub-unit for formations more widely.*

## Obscuration

75. Another astounding aspect of the war in Ukraine is that the use of obscurants has been the exception rather than the rule. Naturally the clearest recorded footage is what is chosen for publication, and sharing well obscured video would be pointless. Yet we can still deduce this problem by studying the great amounts of footage we have. We can see that movement is routinely occurring without attempts to blind known positions or screen areas of intended movement, much less the use of obscurants to deceive and dilute defensive firepower. There is little sign that troops on either side have been issued necessary smoke munitions and devices. Most noticeably above all else, both sides are using UAS to achieve continuous surveillance, adjust artillery and drop munitions, but almost all drones have cameras working in the visual spectrum. A thoughtful student could only conclude gross neglect on the part of both Ukrainian and Russian military that is seeing them wounded unnecessarily much by the threat from the sky.

76. *I reflect that the often-lamented fact that the OPA have had little operational experience in many decades has most serendipitously proved a great advantage. Unlike the Westerners and the Russians who have modernised greatly and forgotten things we have retained some important lessons from all the way back in the 1930s and the 1980s. The importance of obscuration in battle is one of these. The way in which we very normally use smoke to cover manoeuvre is quite obvious from television footage of our big exercises. However, we should not minimise that our wisdom appears even at the lowest level where we have smoke munitions for the families of infantry launchers and, most very importantly, hand smoke incendiary launchers are always routinely carried by leading dismounted infantry. Recently we have also introduced sky-smoke systems and the asymmetric*

*warfare brigade have trialled different smoke systems on UGS. The wisdom of our preceding senior commanders in this matter of both maintaining old systems and introducing new ones should be very publicly praised when we can see the price that Ukrainian and Russian soldiers are paying in Ukraine for lack of smoke. Yet we cannot be complacent, because increasingly UAS cameras will penetrate ordinary smoke, so new tools are needed. The trend towards the gigantic use of drones on the battlefield requires an immediate countermeasure response.*

77. *I recommend an increase in the scales of both smoke ammunition and smoke pots and especially smoke generating machinery to be able to emplace persistent obscurant screens over OPA operations. I also recommend the redoubling of our current efforts in developing sky-smoke technologies to provide obscuration over a wider range of the electromagnetic spectrum and that we should as a matter of urgency plan to mount sky-smoke systems on UGS.*

78. *I propose to conduct rapid introduction into service of an interim system of smoke generator systems mounted on UGS. I will unashamedly copy the simple approach that has proved effective in the asymmetric warfare brigade trials where standard smoke pots are mounted on low-cost platforms based on electric golf carts. This will provide a capability that can be remotely deployed around the battlefield to reduce the effectiveness of the current generation of visual spectrum drones.*

## **Considering the heavens**

79. Soldiers must look upwards to where the greatest changes in warfare have happened in this war, yet they may not see the actors. Satellites and UAS have caused a kind of revolution, and importantly for the OPA, missile systems have been used by both adversaries to execute an evolving method that increasingly conforms with our *systems warfare* doctrine.

80. *I reflect that our systems warfare is proven correct and we must redouble our effort.*

81. **The domain of space.** Satellites have provided images for intelligence purposes for many decades. What is new in this war is that common technology can now distinguish an object such as a tank and is available for any who will pay. Indeed, many sources are freely available on the Internet, which has given people all over the world the possibility of looking at the battlefield, geolocating equipment and soldiers, interpreting what they see and making military judgements. It proved impossible for the Russians to conceal their preparations for an attack, not just from the Americans but also the eyes of many commercial satellites. Indeed, a phenomenon was seen where the West people voluntarily gave money to crowdfund the use of the satellites to help Ukraine. These developments have transformed technical intelligence, making unseen deployments of large platforms or numbers of systems very difficult and so increasing the importance of deception, camouflage and concealment. Disputing interpretation of these images has become a key part of the propaganda fight.

82. Also, this war has seen the first use of large numbers of precision weapons in a conventional war between armies with similar technologies and therefore the first extensive use of technical means to interfere with the systems that enable them. Many of the precision weapons navigate from signals from satellites to achieve their accuracy. These signals are difficult to block but they can be falsely duplicated to cause error and there is a development race happening between

techniques to reduce munitions sensitivity to such deception, and sending more powerful spoofing signals.

83. *I reflect that the decision to make one of the national strategic priorities our anti-satellite capability is correct and I note the possible role of the OPA in both wide area ground-based obscuration and pseudo-satellite disruption technologies. I also commend the patriotic enthusiasm of the Olvanan technology company that is proposing to begin a worldwide very low-cost user-requests satellite imagery service. We can be sure that we will learn much from what the system is used to look at, and of course we will be able to modify the product in a crisis. I believe other comrades from the strategic rocket forces can provide some updates on our initiatives to prevent an enemy disrupting our precision munitions guidance.*

84. **Sanctuary surveillance.** A very great advantage for the Ukrainians is that they have had the benefit of the combined intelligence apparatus of the NATO countries. This includes many ground-based surveillance or listening stations, but most especially the intelligence gathered by very sophisticated surveillance aircraft that have been able to use both active and passive electronic systems to observe Russian activity in detail. This is not only a much greater total capability than the Russian equivalent, it is also able to operate with impunity in the airspace over NATO countries.

85. *I reflect that the capability of the Americans and NATO to conduct surveillance operations with impunity is intolerable, however it also relies on a modest number of aircraft and others that refuel them.*

86. *I recommend an urgent study to determine the best kinetic and non-kinetic means of ending this western advantage in airborne surveillance systems.*

87. **Air operations.** A great surprise at the beginning of this war was that the large Russian Air Force did not deliver the devastating blow against the Ukrainians that was expected from a force optimised for close air support of ground forces. There are several factors in this. First, the Russians were unable to achieve the suppression of the Ukrainian air defences that they had expected. Second, the number and quality of training of Russian pilots was inadequate. Third, the Ukrainians dispersed, concealed and duplicated with decoys many of their aircraft and systems. Fourth and finally the NATO reconnaissance and surveillance system was able to feed a detailed situation picture to the Ukrainians.

88. *I reflect that the Ukrainian capacity to disperse and conceal their Air Force is a prime example of adaptive warfare which deserves great study.*

89. **Air defence.** Air defence missile systems have proven that they can be potent and a deterrent if deployed and operated correctly. The helicopter airborne operation to seize Hostomel airport succeeded in delivering the assault force, despite losing several aircraft to shoulder launched systems. It is likely that the reason that the follow-on force in fixed wing transport aircraft was not launched took this into account, but the surprising strength of Ukrainian ground defence was probably also a factor. However, within a few days most air operations by both sides were conducted from behind the line of battle, and then usually by flying low. The capability of long-range air defence missiles on both sides to travel up to 200 km and strike from different aspects has greatly restricted crewed aircraft. Balancing this, it has also been observed that certain Russian systems such as TOR, PANTSIR S1 and S2 have fallen below what was expected of them. It is still clear that the Ukrainian distribution of basic short-range anti-aircraft systems, many provided by Western countries, has had the battlefield impact. Notably, there was extensive footage of the Russian Air Force armed helicopters flying low level missions to briefly rise to volley fire unguided

missiles before turning away. Similarly, Ukrainian Air Force missions for the insertion and supply of special forces helicopter have required detailed planning and extensive supporting countermeasures. Russian fixed wing aircraft have been increasingly used to deliver longer range missiles from over Russian or Belarusian territory. Behaviour like this suggests that the threat posed by substantial and effectively operated air defence systems may be prohibitive.

90. *I reflect that this trend in the ascendancy of air defence systems is excellent for our strategy of denying the Americans the use of their powerful Air Force to interfere in our affairs.*

91. **Interdiction by missile.** With reducing scope to employ aircraft to enter enemy airspace to conduct strikes, the available medium to long range guided missiles have increasingly become the key tools to interdict the enemy. Their importance has been shown by the way the Russians have adapted surface-to-air and long-range air to air missiles to attack ground targets. This improvisation has increased the number of munitions that have missed their intended targets. Generally, the Ukrainians, given the great advantage of being supplied with electronically collected target information from NATO, have used precise systems such as HIMARS to strike command posts and ammunition dumps. This has had the tactical effect of pushing the Russian logistic apparatus well to the rear, in some cases across the border. This has eroded Russian combat power, especially that of their mammoth artillery capability. In contrast to increasing Ukrainian precision, the Russians with an inferior technical capability to identify targets have adopted the American *effects-based targeting* approach proven in America's Middle East invasions to destroy the infrastructure which the Ukrainian military rely on. Technical limitations have also forced the Russians to rely more on human sources in cities reporting Ukrainian military locations. Because this information can quickly be out of date given Ukrainian practice of relocation, and because Russian missiles have proved far less precise, far more of these have been wasted by missing their intended targets, causing many terrible casualties among civilians. While we know from our Russian comrades that this was not deliberately intended, we can observe the malign consequences of failing to keep the standard of moral righteousness flying high. Their straying from this path has given the Ukrainians scope to generate very damaging propaganda material.

92. *I reflect that the great significance of missiles in striking deep targets in Ukraine is yet another example of the wisdom of the senior officers who preceded us and made missile development a priority.*

93. **UAS.** UAS have caused a most dramatic change on the battlefield. While this had been foreshadowed by insurgent use of them in the Middle East and the Philippines, neither side was prepared. Indeed, this is shown by the fact that the great majority of the systems on the battlefield are commercial ones that have been adapted for military use. The development and use of UAS and countermeasures is constantly evolving. Initially, apart from military systems already integrated into the *reconnaissance strike complex* approach of both armies, enthusiasts used their own drones. As their value became obvious, troops sang out for more and many kinds of national and international funding and supply arrangements sprang up. The real-time surveillance capability has been exploited by artillery using their own drones on both sides, but the centralised artillery planning system of the Russians has made their responsiveness to targets observed by the UAS of other kinds of units far less than the Ukrainians.

94. The other bulky change that UAS have brought is not military but political. The ability of drones to capture and propagate images of battle in real-time has transformed propaganda warfare as the battlefield can be seen like never before. This makes videos that are almost irresistible for users of social media, and which can be repackaged to deliver different political messages. Given the

significance of drones for the conflict Olvana quickly acted to seek to prevent its drone products reaching the Ukrainians, while the Russians gained increased supplies and also reached out to the Iranians for military systems.

95. In both armies drone enthusiasts began to be used as specialists and recently both have been forming special units. From early on soldiers began to improvise ways of dropping first conventional grenades and then better adapted munitions. Soldiers on both sides realised that the faint noise of a quadcopter might be the warning of an artillery bombardment, but rapidly the threat increased and hovering systems might manoeuvre to attack from above or dive onto a target and explode. The Ukrainians have been particularly successful at bringing new programming and design initiatives into wider service more quickly. One of the methods they have used is to establish close relationships between particular units and particular technology companies. Against the surging technology, countermeasures have raced to catch up. Initially the Russians employed a policy of all available weapons firing, but this has mostly stopped as their counter drone EW has become more effective with the majority of Ukrainian UAS being disrupted. The Ukrainians have been more successful in employing anti-aircraft cannon as well as overhead nets intended to reduce UAS munitions effectiveness.

96. *I reflect that Olvana has a great advantage in this new form of warfare partly because our country makes most UAS and leads the way with international development, but more important that the OPA and industry have been working together to experiment with many new designs and software packages. The Ukrainian method of building relationships between technology companies and units might be considered. We must note that the West are using Ukraine as a testing ground and should watch carefully for new capabilities.*

97. *I propose that I direct a trial within a chosen brigade of one soldier in every section trained as a drone operator able to use both reconnaissance and armed drones.*

### **Considering bombardment**

98. In Ukraine most casualties, human and vehicle, have been from artillery. This struggle has seen the biggest bombardments since the 1940s, with one side demolishing its opponent's defensive positions only to have its attack broken by the enemy artillery reply. Because of this, both sides have been in a learning struggle to find and strike enemy systems with counter-bombardment. Similarly, both employ a reconnaissance strike concept using drones. Russia has a very great advantage in artillery numbers and munitions, but this has been partly counterbalanced by Ukrainian better training and innovation, as well as more accurate and longer-range Western systems.

99. Generally speaking, Russian infantry commanders cannot react to a new target or threat by calling for fire from nearby artillery units, because their fire control is inflexible. For example, those units will normally be committed to a detailed fire plan specifying a given number of rounds onto other targets elsewhere which represent their priority. Even if a local infantry commander can make contact on the radio to the artillery unit, they will not normally be permitted to change their target, especially if they do not have enough ammunition for the original target. Furthermore, an infantry commander probably will not have the skills to adjust the fire. A focus on striking the Russian resupply system has been very productive, but the Russian artillery remains capable of destroying even well-prepared Ukrainian positions, with thermobaric munitions proving very lethal. It is also notable that both sides have employed tanks to deliver indirect fire, using small commercial drones to direct adjustments.

100. **Surveillance battle.** A persistent surveillance threat has transformed the use of artillery by both sides. The dominant threat is from UAS, both from systems that locate artillery for counter bombardment and those that attack by launching explosives or diving on their target. While urban terrain offers better cover and concealment, there may be hostile civilians who report movements and locations. Locating radar, sound locating and direction finding of characteristic radio transmissions are used by both sides to identify gun positions and Fire Direction Centres, and it appears that the Russians use these to guide searching UAS, while the Ukrainians, with more precise counter battery systems, often immediately engage a location 'fix'.

101. **Vulnerability.** The battlefield has changed. The surveillance threat is so great that both sides expect that any static position, even an artillery command post underground, will eventually be located. While in some cases systems are dug in to survive, increasingly artillery elements must immediately move after any engagement. Towed artillery systems have proved to be much more vulnerable because of the time required to bring them out of action and the crew vulnerability to munitions dropped by drones. Mortars located close behind defensive positions have also been quickly destroyed when they have remained static to maintain fire on multi-wave attacks. The Russian practice of moving their vastly greater artillery stocks by rail and distributing them from large centrally controlled dumps created the opportunities for the Ukrainians to do massive damage with one single strike. Compounding this vulnerability, almost all Russian gun artillery ammunition is supplied in wooden crates of two rounds must be slowly loaded and unloaded by hand at each exchange point making the whole system ponderous slow and static. Because the Ukrainians have smaller stocks, they have kept them in smaller quantities and more widely distributed. This combined with faster mechanical handling has reduced exposure to Russian strikes.

102. After suffering heavy losses from counter battery fire, both Ukrainian and Russian forces have moved to their *fires raid* doctrine where systems are advanced briefly to engage and then withdrawn. This demands a much greater effort in terms of planning, reconnaissance, deception, surveying and executing the insertion and withdrawal than traditional artillery tactics. Similarly, both sides employ *carousel tactics* where fire units rotate between multiple well camouflaged hides, different firing points and admin areas. Generally, we can observe that MBRL offer advantages in this high threat environment as they can deliver a high volume of fire and then immediately withdraw, however most systems in use are still unarmoured and so much more vulnerable to any drone strikes or engagements if they are located.

103. **New possibilities.** The control of artillery fire is rapidly changing. Mobile phones with every firing unit are now capable of doing all the calculations a fire control centre traditionally does so fire systems can easily be deployed and employed in ones and twos. Observers can pass target details directly to guns using phone applications. Both sides can do this technically however the Russians have shown little actual capacity because their centralisation of command means that the authority to fire on a target is not released to the low levels where the battle is occurring, or where targets can be seen. Additionally, the Ukrainian access to Starlink has proved adequately secure and given them a very great advantage.

104. This war has reinforced how precision munitions are proving able to destroy targets with single rounds when a much large number of conventional munitions would be needed. Much attention has been given to HIMARS and other long-range rocket systems, however the argument for guided munitions for conventional artillery cannot be refuted, because while the cost of a munitions is more, it is almost always less than the number of unguided munitions to achieve the same effect. At the same time a much smaller logistic systems is possible with obvious advantages. Currently, there do not appear to be effective countermeasures to precision guidance, but this can

be expected to change and we need to anticipate. The conflict is also demonstrating the utility of the new generation of wheeled self-propelled guns, as they typically have long effective ranges and, given road networks, can move rapidly between positions.

105. **Artillery Conclusions.** *I reflect that in the first consideration we can take great pride in the thinking of the OPA. The correctness of the switch to modern self-propelled guns and the big programme of provision of UAS to artillery units is obvious. Nevertheless, the vulnerability of close support artillery systems is now exceedingly obvious. We must make urgent changes review our methods to increase survivability including ensuring that all types of artillery can operate as single fire units or in very small groups and that tube artillery is able to move frequently between positions with low possibility of detection. Decentralisation is the key. Artillery officers also need to be better trained in understanding and overcoming electronic warfare methods that are used to disrupt guidance systems.*

106. *I recommend urgent provision of mobile phone-based artillery fire planning software to permit decentralisation, increased personnel and new equipment and stores for surveying and developing multiple prepared and camouflage positions as well as improving on our current use of wire cable with fibre-optic and directional communication systems. This includes new systems to not only camouflage vehicles to reduce detection but also, when possible, to disguise key systems as ordinary trucks.*

107. *I recommend that we consider more investment in the promising solution in the form of multi-barrelled rocket launchers on low-cost 'disposable' trailers and in the interim; we make use of a ready-made solution in the form of our great stocks of 107 mm launchers and rockets. The cleverness of mobile phone apps can give these proven weapons a refreshed life.*

108. *I propose to nominate several artillery units in the division to shift to decentralised operation and will shift resources in order to ensure that they can do this, accepting pain in other units to develop and improve the new capability. I similarly intend that decoy systems should now be employed at unit level rather than left with specialist engineer units, although coordination will of course continue to be a brigade level or higher. I will additionally create a trials 107 mm artillery battery.*

## **Considering ground combat**

### **Response to alarmism**

109. I am aware of a delicate matter. I understand that some OPA-Navy comrades have very wisely suggested that we learn from Russian operational and tactical battlefield failures including the disappointing performance of the Battalion Tactical Groups (BTG). Mistakenly, they seem to have suggested similarities with the OPA and become alarmist. Perhaps they have confused them with the Olvanan Brigade Tactical Groups (BTG), which are not only bigger fishes, but ones that we cook to a different recipe?

110. Our military force structure analysts strongly agree with the Russians, and for that matter the Americans, in the need for combined arms teams down to the tactical level. The Soviets showed this with successful trials at battalion level in the 1980s. However, the eventual introduction of BTG into the Russian army reflected expediency and compromise. It came from shrinking a large Red Army into a Russian understaffed one that was unable to field complete formations for the wars in Chechnya or Georgia. Initially, a BTG became simply what an understrength Regiment could typically



'deploy out the archway', but later in the Chechen war became highly effective fully equipped integrated teams of infantry, tanks, artillery, logistics and other specialist elements staffed with contract soldiers. Inspired by this success, between 2007 and 2012 Russian doctrine developed to require Regiments/Brigades maintain two or three semi-permanent BTG organised for specified tasks. They are intended to be deployable rapid reaction forces comprising mostly better trained 'contract' servicemen, not conscripts. Their role is to be flexibly assembled within flat simple command structures for simple short duration high-intensity operations on the periphery of the country that buy time for full mobilisation. Like us, they only have a handful of staff officers at battalion level and therefore very limited planning and coordination ability. Unlike the OPA they do not automatically have a permanent proper staff immediately above them at brigade level.

111. The advantage of deployment flexibility of the Russian system is clear from the way it assembled BTG from a variety of military regions into ad hoc task-based fighting formations directed by the highest command. However, the failures in Ukraine of this structure to fight in a coordinated way, exercise command and control or deliver adequate logistic support were serious. Without their traditional regiment/brigade and divisional headquarters, there was little capacity for changing plans and adapting to new situations, and without familiar command relationships there was little trust. This is one reason so many senior Russian officers became casualties as they went forwards to make personal assessments and give direction. We can observe that the Russian system was flexible for placing a force in position but unable to plan and coordinate after that.

112. In greatest review, the grassroots Russian army problem is that it looked impressive but was a hollow tree. They had rapidly expanded it into over 120 BTG, at the same time as recruiting of contract men fell short. There were insufficient conscripts available to compensate, and in any case they were not adequately trained. The result was that the Russians advanced with fighting vehicles short of crewmembers and without infantry to dismount from armoured personnel carriers. The same shortfall of staff crippled the ability of headquarters to even plan and communicate, and not begin to properly conceal their locations, remote their radio antenna and other such essential things. Their logistic system did not even have the personnel to handle the necessary quantities of combat supplies and certainly did not have the numbers to disperse or camouflage dumps or maintain proper security around them.

113. *I reflect that while there are logistics questions that are discussed later in matters of control and command the OPA stands in burnished contrast to our Russian friends. Our army maintains first-line formations at full-strength and the peacetime administrative organisation provides an enduring and familiar brigade and divisional framework. We also keep the same components together when we assign forces to Operational Strategic Commands (OSC) that are expected to command them in war. Furthermore, most of our OSC are kept fully staffed and regularly exercise with formations and units that may be assigned to them for operations. Because OSC staff officers are in a separate line of command they provide independent assessment of the troops assigned to them for exercise, which is another protection against wayward commanders and maladministration. We must yet note that it is not clear that we could form the number of OSC that might be required to achieve effective control if the OPA was required to conduct many offensive actions along a very extended front as the Russians attempted to do.*

114. *I recommend a senior level review of our command doctrine and the adequacy of OSC peacetime staffing, conducted using the example of the initial Russian deployment as a case study.*

## The conduct of ground battle

115. **Northern attacks.** The initial Russian advances from the North began to have difficulty when terrain forced advancing elements onto a limited number of routes. The plan had completely disregarded long-standing Russian doctrine that in every area there should be a primary axis and a parallel secondary axis and a sequence of main and secondary objectives (similar to OPA doctrine). Without this the Russians were unable to change their point of effort or redeploy resources, especially combat supplies.

116. Small groups of Ukrainian infantry and territorial forces using anti-armour weapons and a small number of armoured vehicles employing strike and withdraw tactics were able to inflict vehicle casualties and cause delay. Behind this Ukrainian engineers deliberately flooded wide areas and demolished bridges to channel the Russians even more. In many cases the Russians failed to dismount infantry to clear close country on the flanks of their routes and once halted by ambushes they suffered heavy casualties. While most destruction was inflicted by artillery, short-range anti-armour weapons provided by NATO proved very effective, frequently penetrating to inflict catastrophic kills on tanks. Eventually a Ukrainian defensive system that integrated dismounted troops with obstacles was able to stop the Russian advance. The Russian personnel shortfall and poor training meant that they proved unable to conduct the infantry clearing operations necessary to maintain energy of their advance.

117. *I reflect that shortfall in infantry and failure to conduct infantry led combined arms clearance has been disastrous for the Russians. I suggest this important lesson is emphasised at every level of the OPA and consideration be given to the most effective ways to remedy the problem. Maybe we should ponder that the gods may have blessed us with a warning as we transform our army to place nearly all soldiers inside fighting vehicles. Are we forgetting the great strength of Olvanan infantry in attack and defending on difficult ground? Is there not great danger that our excellent new mechanised infantry formations that are so potent in open country may be very limited in forests and urban areas? When soldiers have been assigned to protect those vehicles, are there enough remaining to conduct attacks or defend? I note that this problem has been considered before by the German army who carefully learned lessons of past wars. In their Tanker-Infantry battalions they had two companies equipped with IFV and one equipped with APCs. This last company carried out the most important attack or defence tasks in close country.*

118. *I recommend that OPA army level staff reconsider the allocations of types of formations and units with a view to allocating OSC that may have missions in more demanding or complicated terrain a higher proportion of motorised infantry. I further suggest that this may provide an opportunity to rapidly field low-level UAS/UGS capability at scale. We might most usefully designate some motorised units as 'close country support' and since they do not have the training burden of preparing to fight with sophisticated armoured vehicles, they have greater readiness to develop mastery in a new technology.*

119. *I reflect that we must be exceedingly hesitant to draw strong conclusions about the tank Arm from examples where they have been deployed in exact breach of all countries' doctrine. There is a small but growing number of cases where suitable combined arms tactics have been used by the Ukrainians with modest and tank casualties. Added to this, the Russians report that the small number of tanks equipped with properly functioning automatic protection systems have survived multiple attacks by the best Western guided weapons. Further, the public reports of Russian explosive reacting armour boxes being incapable are confirmed by our friends and they do not have the benefit of our laser dazzle protection systems. Yet ever, we must not avert our eyes to the great numbers of*

*vehicles with autoloader's totally destroyed by ammunition explosion after 'Monro munition' penetration. Open-source discussion of this has mostly covered tanks but such fate has also occurred to those BMP and BMD vehicles fitted with larger calibre guns.*

120. *I recommend that three OPA projects involving armoured vehicles survivability be given the highest priority. These are; the competition to develop a 125mm bustle auto-loader, the project to provide multispectral sky-smoke and the fitting of passive and active protection systems to infantry armoured vehicles be given the highest priority.*

121. *I propose that as a matter of urgency and testing my division will Institute a new type of exercise for small, combined arms combat teams. In the first instance these would be done at the platoon level. The greatest thing is to be able to master the art and procedures so that infantry can deploy in every direction around armoured vehicles to protect them and skilfully and confidently organise the destruction of enemy with powerful vehicle weapons rather than being excessively anxious and fearful about being crushed and big gun muzzle blast.*

122. **Eastern attacks.** In Donbass and the East, the Russians were advancing through well-prepared in-depth Ukrainian defences, which have substantial protective concrete bunkers and extensive minefields. These typically held back the Russians but at great cost. In general, the huge Russian advantage in artillery firepower enabled them to devastate the forwards positions and mount initially successful assaults, but with armoured losses to Ukrainian anti-tank guided weapon positions in depth. Since the Ukrainian artillery had their own forward positions preregistered they in turn were able to break up the assaulting Russian infantry which were sometimes then ejected by counter-attack. Wherever the defensive positions of either side were accurately located, if there was sufficient priority they could be destroyed, with the Russians mostly achieving this using massive, concentrated bombardments, and the Ukrainians with precision munitions. This shows a great truth that if a fixed position is found it can be destroyed. As a consequence to this much of the fighting turned to artillery counter battery duels with an associated counter-UAS battle in which Russian electronic warfare has played a big part.

123. *I reflect that the evidence from the Ukraine is that our concept of complex defensive positions in forest and urban areas, which makes the greatest importance of concealment and dispersal, shows great foresight. Because this method will reduce the combat power of the concealed force itself, it will depend upon the employment of uncrewed systems and artillery to degrade attacking enemies. This means that the control of fire support and uncrewed systems within concealed complex positions is completely critical. A linked issue is that, while infantry may be able to conceal themselves in difficult terrain positions, are being discovered because of co-located armoured vehicles. This represents a growing challenge as we increasingly mechanise the OPA*

124. *I recommend experimental studies to determine the best means of assuring self-defensive firepower for complex battle positions, considering what has been learned about the difficulty of guaranteeing artillery support and keeping reliable control of UAS. It seems likely that command cable remote operating for short range rocket systems (such as the 107 mm) offer one possibility.*

125. *I reflect that while the theory of complex defensive positions is sound, we have little experience of establishing them in practice. I recommend that we draw attention to the problem of complex battle position design by running a special edition of the Army magazine to encourage contributions from throughout the OPA to explore the best designs for complex systems in different types of urban terrain. There is a particular important function here for political officers to conduct*

*educational exercises in their nearest municipality, which derives from their recently allocated role of focusing on righteous operations amongst the population.*

126. *I propose the construction of example complex defensive positions in barracks throughout southern army.*

127. **Urban areas.** Urban areas particularly favoured the Ukrainian defenders, allowing small numbers of anti-tank guided weapon teams to engage from elevated positions and disrupt Russian attempts at mounted break-in manoeuvres. After heavy bombardment suppressed these defenders, the Russians could enter the urban area but small groups of Ukrainians fighting from in and around buildings were able to halt both mounted and dismounted attacks. Fighting then became unorganised push and pull, or at the best for the Russians, progress in short steps. Again, this was depending on heavy artillery fire, and then often being halted by defensive Ukrainian artillery fire and sometimes being pushed back by local counter-attacks. There were few examples of either side regrouping into combined arms teams organised for urban assault. The fighting was in this first year very often a contest of dismounted infiltration covered by sharpshooters, grenade launchers and sometimes the APCs. Tanks and APCs often *carousel* with one or more vehicle moving into a firing position for only enough time to fire several rounds and then moving away. In a variation of this idea, sometimes one or two tanks were seen to push forwards aggressively many hundreds of metres from secure positions, engage targets and then, moved back, usually by a different route.

128. *I reflect that the extreme difficulties that both Russian and Ukrainian forces have experienced in conducting urban operations highlights the great wisdom of predecessor senior commanders who authorised and implemented the asymmetric warfare brigade. The capabilities that it offers are exactly intended to evade problems that have been seen in Ukraine. However, while we can clearly survey the great value of this formation, it is also clear that there will be greater demand for its capabilities in future war. A further issue is that, as is discussed below, Ukraine has also shown that investment in logistics, especially technical maintenance and resupply has frequently been inadequate. This is especially so for novel technologies as are found in the asymmetric warfare brigade.*

129. *I recommend the significant expansion of the quantum of the capability of the asymmetric warfare brigade, noting that while this may make an already large formation unwieldy it is in effect a peacetime administrative organisation and units and subunits are assembled and allocated to Operational Support Commands as required. Splitting the brigade portends undermining the great advantage of fully integrated training that currently occurs. It would seem possible to separate the fire support, engineer construction and logistic support battalions into an asymmetric warfare support brigade. Of course, a second brigade or a divisional structure may be appropriate solutions, however the simplest and most cost-effective approach is probably to augment the brigade headquarters.*

130. *I reflect that the inability of the Russians to apply their excellent urban doctrine may reflect the difficulty of training for this. While our new enclosure warfare system clearly addresses the problems of urban combat, and the asymmetric warfare brigade offers the capabilities to wage enclosure warfare we must not be complacent about the difficulties of implementing it. We cannot be surprised that our new system might need refinement in the light of world events, which may be expected to include updates to that enclosure warfare doctrine and ongoing changes to the asymmetric warfare brigade.*

131. *I recommend that across the OPA we urgently conduct a series of training and development studies to use examples from the Ukraine war to explore and validate enclosure warfare methods and tools, especially the capabilities of the asymmetric warfare brigade.*

132. *I propose the construction of simple urban training facilities on live firing ranges where we exercise the employment of small combat teams as discussed above.*

133. **Forested areas.** Forested areas have seen more consistent integration of dismounted infantry and armoured vehicles because the threat from long-range anti-tank guided weapons is much reduced by the trees. Vehicles moving between trees or along narrow tracks where the forest canopy does not have large breaks are less vulnerable to the American Javelin. Both sides use woods and forests to conceal their artillery and armoured vehicles. As in urban areas much of the fighting occurs with small groups infiltrating and clashing. The cannon from APCs are a dominant weapon because some rounds in a burst of fire will punch through hundreds of metres of trees. The Russians have made particularly good use of their BMPT platforms in forested areas where one of the grenade launcher gunners operates a drone several hundred metres ahead of the vehicle and passes target indications to the other gunners in the vehicle.

134. *I reflect that we can learn from the effective use of vehicle mounted cannon in close country and recommend that training videos and similar materials are quickly created to illustrate this technique across the OPA. It may be necessary to exercise caution in live fire training of this kind lest enthusiastic commanders cause great environmental damage.*

135. *I propose that in southern army we make contact with those engineering companies involved in major road, bridge and dam construction where forests are to be cleared, with a view to conducting live firing exercises for vehicles where they engage targets concealed deeply in the forest and guided by the use of drones.*

136. **Pattern of ground combat.** It is most remarkable that the fighting in the Ukraine has often resembled that conducted 80 years before on the same terrain. Because the Russians initially attacked all along the border, both sides have their forces spread thinly occupying lightly held positions with many hundreds of metres between them, sometimes kilometres. Second-line positions behind these have several armoured vehicles dug in below ground and also small groups of reserves. Almost everywhere defensive positions use the standard Soviet design with zigzag trenches connected to a shelter bunker. In many areas positions may be occupied by barely trained troops with poor clothing, and insufficient ammunition or food. These are sometimes overcome by infiltrating enemy, but rarely without firing. More often, attacks are noisy and preceded by bombardments that typically destroy the forward positions and any troops that do not swiftly withdraw, allowing attackers to seize those trenches. In either case, the area of the forward defensive positions is then subject to defensive fires which holds the attack, while the defenders group for a counter-attack. It is particularly noticeable that troops on both sides are learning to cover sections of trench with protection to reduce the hazard from lethal drones and make it harder for their enemies to determine defensive strength.

137. *I reflect that these methods demonstrate the value of historical studies. It can be seen also that these extensive trench systems are rarely constructed with overhead cover or protection from the start, which is a great weakness of both Russian and Ukrainian forces.*

138. *I recommend that OPA historical branch issue a series of studies that compare World War II battles with recent battles in order to determine enduring lessons, especially regarding defensive methods and considering what changes the effect of new technology may or may not have made. I*

*also recommend that we emphasise the construction of defensive positions under adaptive warfare conditions, that is to say, emphasising overhead protection and with all construction happening under concealment or screening.*

139. **Wagner method.** The Russian Wagner troops have developed a distinctive and often successful infiltration type attack technique. Before an operation they use drones to map out the Ukrainian positions in detail and apply systematic artillery bombardment. This is followed up by a first echelon of assault consisting of assault groups made up of what the Russians call the *fresh meat* which are mostly groups of volunteers from Russian prisons. These assaults are planned and coordinated in detail using smartphones carried by the assault troops into which objectives and intermediate steps are pre-programmed as waypoints, and which are also trackers, show the exact location of the assault groups. Wagner commanders then use drones to coordinate the attack, using experienced and well-trained fighters to provide fire support from grenade launchers and armoured vehicles to the rear. The poorly trained assault groups simply have to advance to the next point shown on their phone when ordered and if and when they reach the level of the enemy position they dig in. If Ukrainian defensive fire eliminates assault groups, the Wagner commanders use drones to more fire onto located defensive positions and then repeat with further assault groups. Only when the Ukrainian defence has been eroded and exhausted, the well-trained component moves forward.

140. *I reflect that the evolution of this method of attacking is highly instructive but also relevant to our enclosure warfare methods. In particular, our use of uncrewed systems ahead of assaulting bodies is very similar to the Russian use of untrained troops.*

141. *I recommend that the infiltration style 'Wagner method' be explored with a series of simulation exercises to gain further insight, using uncrewed systems rather than expendable personnel.*

142. *A most serious matter and example is the absence of righteousness in the Wagner group. They have shown themselves to be completely depraved and beyond the boundaries of civilised behaviour, openly publicising their own torture and killing of prisoners. Such acts psychologically contaminate all that come into contact with them, with brutality completely obscuring the political purpose of combat and making a political problem for Russia in the future. Most obviously these things greatly aid Ukrainian propaganda, while undermining that of their own side. To a smaller part, Ukrainian groups such as the Azov unit have also committed outrages and shared media publicising them. This is undoubtedly also poisoning the moral strength of Ukrainian army, and even if Russian propaganda has not yet been able to reach Western audiences it remains an 'unexploded informational bomb'.*

143. *I recommend that the political directorate commence a 'righteousness in combat' political education program using Wagner and Azov as an example of the inferior culture of the barbarians and to show how righteousness has essential benefits in the material world as well as the moral one.*

## **Considering supply**

144. The events in the Ukraine remind us that Master Sun said logistics are the 'third factor of warfare'. Faults in their logistic systems have prevented the Russians from reinforcing success, while shortage of supplies forced the Ukrainians to make their systems better. The pattern of reducing

logistics units that can be seen right across the world is shown in a very unwise light. Also, methods and structures on which both sides depended are proven to be unworkable under modern conditions which will require a new thinking.

145. For example, both armies discovered within a few days that using helicopters towards the battle area involved a very high risk of them being destroyed, so they could only be used for the greatest priority tasks. As a case, most of the Ukrainian helicopters attempting to reach the isolated defenders in Mariupol were lost. The consequence of this is that most casualties must be evacuated by road, reducing chances of survival. Another example is that neither side has nearly sufficient deployable medical facilities, although Ukrainians are better able to make use of local civilian hospitals. Yet another example is that both sides have found that often the only adequate concealment for supply dumps is in urban areas, but these are observed by civilians and may be quickly compromised. There are more specific insights from the different armies.

**Russian logistics.** The deep systematic corruption which directly reduced the quantity and quality of equipment, how it was maintained as well as the supplies to sustain that equipment, also kept this situation hidden from the senior decision-makers. It can now be observed that Russian methods are faulty for the modern battle. Ammunition is distributed via large dumps that are not well hidden, and handling of munitions is by hand making it necessarily slow, worsened by the shortage of logistics troops. Above this, combat units are too short of soldiers to provide protection, so logistic troops must guard their own locations, especially since Ukrainian special forces have been operating in rear areas. Greatly compounding these faults in the logistic line of communication is the critical fact that the unit level Russian supply system at BTG level was completely inadequate for the purpose. A typical BTG had perhaps six logistic vehicles with at best two fuel trucks. The equivalent NATO force would have more than 20 vehicles including five fuel trucks. Many of the failures to manoeuvre appropriately in the first few days of combat would have been alleviated if the forward units had not run out of fuel.

146. The Russians are also dependent on using the railway system to bring stocks to battle which is vulnerable because its path is known and fixed. This is made worse because they only use a small number of routes forward from the railheads and do not change them very often. Logistics convoys are often dispatched on these routes without escorts. These bad methods have made it easier for Ukrainians to both estimate where good logistic target may be found, and they also mean that when Ukrainian civilian observers report Russian logistic locations they remain correct for long enough to plan attacks on them.

147. The Russian medical system is quite centralised and designed to be focused where there is a main effort. With their attack spread out all along the border of Ukraine the medics, surgical teams and hospitals have been inadequate. An even greater failing is that the Russians have deployed few if any mortuary soldiers and the removal of dead bodies has been a chance matter depending on local commanders and whether they have the capacity to attend to this. The quality of first-aid training and equipment has also been very different between the two armies as is illustrated by the much higher quality of the Ukrainian self-care kits and the more frequent footage of Russians abandoning wounded colleagues in battle while Ukrainians more often appear to treat them.

148. **Ukrainian logistics.** Ukrainians have been comparatively very short of supplies and rapidly exhausted most of the artillery ammunition they had in the country, and only have been saved by neighbouring NATO countries giving their stocks. Similarly, they have been given much equipment to replace what is lost and to expand their army. However, this has resulted in a great lack of standardisation, so they have many different systems which require not only different training in

their use but also in training to maintain them and different stocks of spares. It has been very surprising how this work to integrate all this new equipment has been continued. A big part of this success is the ability for much logistic works and training to be done in the sanctuary of NATO countries. It is also notable that they have logically concentrated particular types of equipment in different units. [Incidentally, in future analysis this will make it easier to compare how different types of systems perform.]

149. Another important factor for Ukraine is that as they have adopted NATO combat systems, they have also adopted their containerised logistic systems which have proved to need less soldiers to move supplies faster and more widely dispersed when static. They have also been better at camouflaging their supply dumps and using decoys as well as using multiple routes to make interdiction more difficult. Maintaining security of many smaller dumps is much easier for the Ukrainians because they are able to use local territorial elements to guard them.

150. **Mobilisation and training.** This conflict has provided an unexpected opportunity to understand minimum training levels and minimum training time. This is particularly true for the Ukrainian case, where different NATO armies have variously produced training packages that are greatly abridged from the time normal forms. Nevertheless, the performance of the troops trained this way initially appears to be adequate.

**Logistic conclusions.** It can be said after observing the conflict for a year that logistics were insufficient, they were not integrated, they were not hidden, and they were not protected. This is the biggest conclusion that can clearly be made from the conflict.

151. *I reflect that not all the logistic weaknesses will apply to the OPA. The doctrine of adaptive operations has further developed our long tradition of military camouflage, and logistics elements are no exception. However, the volumes of ammunition in this war used are far greater than our current supply system would be able to handle. It seems clear that an increase in the levels of ammunition and fuel stocks held at Brigade level must be considered.*

152. *I also reflect that spreading dumps into smaller dispersed locations is necessary in this time of high precision threat. This evidently will require a greater number of troops guarding, preparing camouflage and also making deception arrangements. Perhaps this is another suitable role for motorised infantry? Two things that may reduce this burden are to accelerate the current programme of containerisation and autonomous supply and a shift in the proportion of precision munitions for gun artillery, because smaller numbers will give same effects.*

153. *I reflect that the surprising efficiencies of training achieved by the Ukrainians not only has great relevance for our mobilisation planning, it should also offer a model with which to compare our routine training methods as an exercise in self-criticism.*

154. *I recommend that the army science laboratory urgently investigate both the efficiencies to be gained with containerisation, autonomous supply and a high proportion of precision munitions, as well as examining training efficiencies.*

155. *I recommend an urgent Army-wide review of logistic arrangements in the light of the Ukraine war. In the short-term there is a need for increased personnel, communications and camouflage and concealment equipment to allow greater dispersal. This is required both at brigade level and with the divisional structures. Greater stocks on wheels are required at the lower level, but in the short-term it may be more efficient to raise additional logistic battalions. The medium term arrangements must of course address the above problems, but this should not be attempted without consideration of the*



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*scope for reducing total volumes of artillery munitions by increasing the proportion of precision guided varieties.*

*156. I propose that under your authority I will prepare a series of tangible recommendations for my Division to restructure logistic components as a trial.*