Strategy and Geopolitics of Sea Power throughout History

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The great master of naval strategy and geopolitics Rear-Admiral Alfred Thayer Mahan famously stated: "Control of the sea by maritime commerce and naval supremacy means predominant influence in the world … (and) is the chief among the merely material elements in the power and prosperity of nations."[1] Some three centuries before Mahan, H. M.'s Servant Sir Walter Raleigh held that "he that commands the sea, commands the trade, and he that is lord of the trade of the world is lord of the wealth of the world."[2] Accordingly, it may be said that even the final collapse of the essentially un-maritime and land-bound Soviet empire at the end of the long 20th century was simply the latest illustration of the strategic advantages of sea power.

Like most realist strategists Mahan believed that international politics was mainly a struggle over who gets what, when and how. The struggle could be about territory, resources, political influence, economic advantage or normative interests (values). The contestants were the leaders of traditional nation-states; military and naval forces were their chief instrument of policy.

Obviously, sea power is about naval forces – and coastguards, marine or civil-maritime industries and, where relevant, the contribution of land and air forces. Still, it is more than that; it is about geography, geopolitics, geo-strategy, geo-economics and geo-culture; it is about the sea-based capacity of a state to determine or influence events, currents and developments both *at* sea and *on* land. Or, as Sir Julian Corbett never tired of saying, the real point of sea power is not so much what happens at sea, but how that influences the outcome of events on land.[3]

In recent years, indeed, there has been a marked shift in naval strategy and geopolitics' attention from power *at* sea to power *from* the sea. Hence, "there is more to sea power than grey-painted ships with numbers on the side"![4] Sea power also embraces the contribution that the other armed services can make to events at sea, and the contribution that navies can make to events on land or in the air. Further, sea power includes not only all non-military aspects of sea-use (merchant shipping, shipbuilding and

repair and so on) but also a broad spectrum of categories related to a nation's strategic culture, economy, political culture and political system.

This is a useful remark, since it provides a way out of dealing with questions such as whether, for example, the Soviet Union was a sea power or not. In a narrowly described sense it seems that it certainly was: In the Cold War era, under the astute guidance of Admiral Sergei Gorshkov, it had a first-class navy able to curtail the operations of the U.S. Navy; it had a large merchant marine, one of the leading fishing fleets of the earth, oceanographic and scientific knowledge about the sea of the first order and an impressive shipbuilding industry. Yet, the Soviet Union was not a sea power; quite on the contrary, it was a typical continental power, the very epitome of a *Kontinentalmacht* – not only, and not even firstly because of the relationship of the Red Navy to the other services, but because of its *Kontinentaldenken*, its continental thought characterizing its political system as well as its political and strategic culture.

Richard Harding has argued that, historically, sea power depended on a number of related factors, both inside and outside the navy: "The actual strength of a navy was heavily dependent upon finance, the capability of central administration, the quality and quantity of real maritime resources, the ships, seamen and officer corps, the maritime infrastructure and the quality of political and naval decision-making."[5]

Padfield deals with the virtues of the kind of community produced by a maritime economy.[6] He claims that it creates the conditions in which countries can be influential and in which navies will prosper. Specifically a maritime community:
- Encourages an awareness of the importance of maritime trade in society and government, helping thereby to produce the conditions in which that trade will flourish.
- Elevates the merchant class socially and politically, encouraging thereby the development of a value system and a style of government that fosters trade.
- Facilitates the development of naval power partly because it is simply more efficient at raising the resources navies need and partly because the merchant classes naturally see navies as a means of protecting maritime trade, both directly and indirectly.

Nicholas Rodger brilliantly and concisely summarizes the argument like this:

-    "Absolutist monarchy was essentially a system of government for mobilizing manpower rather than money. More efficient in its way than the medieval constitutions, it was poorly adapted to meet the much greater strains imposed on state and society by a modern navy.

-    For that, what was needed was a system of government which involved the participation by those interest groups whose money and skills were indispensable to sea power – not just the nobility and peasantry whom absolutism set to work, but the ship-owners and seafarers, the urban merchants and financiers, the industrial investors and managers, the skilled craftsmen; all the classes in short, which absolutist government least represented and least favored…"[7]

Hence, the famous quote by Lord Haversham: "Your Fleet and your trade have so near a relation and such mutual influence on each other, they cannot well be separated; your trade is the mother and nurse of your seamen: your seamen are the life of your fleet: and your fleet is the security and protection of your trade: and both together are the wealth, strength, security and glory of Britain."[8] Moreover, Britain's sea power did "lay not just in the navy or the battle fleet, but in the effective integration of her administration, political system, army, colonies and maritime economy towards the ends of the state."[9]

The observation deserves consideration that a military regime could sustain itself by force, but a navy had to earn public support. *Autocracy* was adequate for an army, but *navies* needed consensus.[10] For this reason, Spain and France finally failed the naval – and strategy – test, in the 16th and 17th century respectively, though they had been great naval powers for a long time; the Ottoman Empire as well. For this reason both Kaiser Wilhelm's *Deutsches Reich* and Hitler's *Drittes Reich* failed the naval – and strategy – test in the 20th century. And for the same reason, both Czarist and Soviet Russia failed in the 20th century as well.

Historians have drawn clear distinctions between organic sea power which develops naturally (ancient Greek or mediaeval Italian city-states, Britain, the Netherlands, Sweden, Norway) from the artificial variety that is the product of the edict of an *Emperor, Czar, Khan, Sultan* or *Capudan Pasha* (the Arch-Admiral of the Ottoman Fleet). The latter is often said to be shallow-rooted and unlikely to last; the former is seen as preferable.

In fact, effective navies through out history have emerged from authoritarian, or even despotic countries and regimes: the *Armada Real* of Spain, the French Navy of Louis XIV or that of the Napoleonic France, the galley fleets of the Sultans and Capudan Pashas of the Ottoman Turks, the Barbary pirates, the Soviet *Red Navy*, the *Kriegsmarine* of the *Third Reich*. Yet, as Mahan put it, "despotic power …has created at times a great sea commerce and a brilliant navy with greater directness than can be reached by the slower processes of a free people. The difficulty in (such a) a case is to ensure perseverance after the death of a particular despot."[11]

Indeed, the Czarist Navy was the product of an imperial *ukase* usually issued out of a particular dynastic will, and so lacked permanence when circumstances changed. Peter the Great, for example, built a navy specifically to attract trade and occidental ideas, and even moved his capital to St Petersburg in order to accommodate all this. His navy was full of foreigners; he personally learned about shipbuilding in Amsterdam and Deptford. He did everything in his power to turn the continental, Eurasian power Russia into a naval power and a sea trade nation. Nevertheless, for many of his subjects and his successors this was all too much. Despite its periodic *gloria* (for example, at the end of the 18th century under Catherine the Great and the brilliant Admiral Ushakov), the navy was considered by the ruling elites as essentially *un-Russian*, and a source of ideas dangerous to the existing authoritarian system as well – which, indeed, it was.

One irony of history can be noted, when Stalin shot most of his admirals in the late 1930s he was in one sense conforming to an ancient Russian tradition of eliminating possible sources of political, social and intellectual insurrection. It is not at all surprising that, under Stalin, the lethal effects of political incorrectness and the depressing impact of the political officers (the *zampolits*) forced Soviet naval personnel to "go by the book". Tactical and operational initiative was limited and performance uninspired. In general, the Soviet case provide us with strong evidence of the "disastrous effects of trying to impose land-oriented strategic and operational concepts on naval forces", according to Stuart Slade.[12]

To summarize, one could say that it is not liberalism and democratic principles in themselves that were, and are, decisive in the long-term development of sea power but rather administrative efficiency in raising money, and in spending it wisely. But, as a general rule, these qualities do

seem to have been particularly associated with a certain Aristotelian-Jeffersonian style of limited government and a liberal and anthropocentric style of society, based on a values system of Greek-Roman, Judeo-Christian, occidental origin.

On the other hand, it is true that navies were not the exclusive property or the invention of Europeans. After all, many of the navigational advances made towards the end of the European Middle Ages derived from contact with the Islamic world, even down to the use of the word "Admiral', which in Arabic once meant the "Prince at sea". Across the other side of the world, the Koreans deployed the first armored warship and, of course, China of the Song dynasty (from AD 1000-1500) boasted "the world's most powerful and technologically sophisticated navy."[13]

Still, what was distinctive about the European approach to sea power at this time was, first, the huge advantage derived from the close association between the military and the mercantile aspects of sea power; and second, the association of maritime supremacy with a certain system of beliefs and, consequently, a specific style of government.

The argument goes like this: "Seafaring and trade produce merchants. Merchants accumulate wealth, and then political power in order to defend and develop it. Often they will prevail in government, and enforce their ideas on others. These are the ideas that encourage trade in the first place: freedom of information and therefore of opinion, open and responsive government, fair taxation, social enterprise – all the liberal values so familiar today."[14]

In the 17th century, European diplomats marveled at the freedoms of the Dutch and reported on that "Strange freedom that all men took in boats and inns and all other common places, of talking openly whatever they thought upon all public affairs both of their own state, and their neighbors."[15] The use of words reminds us of the way in which politicians and writers of the ancient Greece used to report on Athens; remember, in particular, the famous words of Pericles, cited in Thucydides' *Epitaph*, praising the freedom of spirit then characterizing the predominant sea power (*Thalassocracy*) Athens. Pericles himself explained the supremacy of the Athenian sea power within the state system of that time in terms of political system and culture: the citizens of Athens used to fight to the end for their country, not because they were obliged to do so, nor because they

had been preparing themselves for this task during lifetime (as the citizens of the continental power Sparta had done, for example); they rather stood up and fought for Athens out of belief, being free men born and grown up in a free *polis*, in a liberal and democratic state.

Accordingly, in the 18th century, the famous French philosopher Montesquieu said much the same thing about England, calling it "the freest country in the world'. That freedom was both a product of naval, maritime enterprise and something that facilitated it. Nicholas Rodger makes the essential point:[16]

- Autocracies manage armies well enough, because that is primarily a matter of simply mobilizing manpower and the equipment it needs;
- On the other hand, Navies need consensus because they require the maximum involvement of seafarers, ship-owners, urban merchants, financiers and investors.

Hence the connections between sea power, liberalism, free markets and prosperity:
- To the extent that they could profit from the sea as a medium
of commercial transportation and trade, the economies of the sea powers would boom;
- To the extent that they could exploit the strategic advantages of deploying decisive military power at sea and then projecting it ashore against the land-bound, continental enemies, their strategies would succeed.
- Because, therefore, the sea powers would generally prosper in peace and prevail in war, they would inevitably become great.

That is the only reasonable explanation for the success of small countries with limited land areas, populations and resources such as the ancient Greek *polis* (city-states), the late mediaeval and early modern Italian city-states, the Netherlands, Sweden, England and quite a few others. In Sir Julian Corbett's view only sea power explained how it was "that a small country (like Britain) with a weak army should have been able to gather to herself the most desirable regions of the earth, and to gather them at the expense of the greatest military powers."[17]

Points to note: Some systems, in view of the risk inevitably associated with sea power, have deliberately pulled up the drawbridge against its apparent advantages and opportunities:

- One Chinese emperor did that quite consciously. After nearly 500 years of deeply impressive maritime endeavor, the construction of all sea-going ships and foreign travel were banned because China's rulers did not know where it would all end.

- A little later, in Japan during the *Tokugawa shogunate* (1603-1867) the *Shogun* (Fieldmarshall) achieved in depriving the *Tenno* (emperor) from his substantial powers, and went on to turn Japan's back upon the sea, basing the social and political system entirely on land economy and a severe feudalistic structure characterized by the five classes: *kuge, daimyo, samurai, heimin* and *eta/hinin*.[18] Thus, Japan fell further and further behind global developments until their self-imposed isolation was shattered by US Navy Commodore Perry in 1853/54.[19]

Besides, sea power is not, and never has been, the exclusive property of a handful of Great Powers. Nor is the capacity to operate decisively at sea necessarily a function of size as it has been demonstrated by the experience and the strategic functions of the nineteenth-century navy of Chile, first in dealing with a threat from Spain in the 1860s and then in the conduct of the War of the Pacific (1879-84) with Peru. Thank its brilliant victory at the sea battle of Antofagasta, which occurred in October 1879, Chile succeeded in achieving command of the sea in the region.[20] The Naval History of the American War of Independence, the British-American War of 1812 and the Civil War (see, in particular, the case USS Monitor vs. CSS Virginia) also provide us with strong evidence of the operational capabilities of relatively small fleets.[21]

In the case of the Baltic nations, it is, undoubtedly, noteworthy that, after winning their independence, they began developing naval forces in order to maintain their hard-won freedoms. Thus, "during 1919 the small Estonian Navy cooperated with the British naval forces, now under command of Rear-Admiral Walter Cowan, in operations against the Bolsheviks. The Estonian navy fought its first action in June 1919, when its ships destroyed Russian artillery positions at Dunamünde, then forced their way up the Daugava River to assist a Latvian counterattack against Riga. The British and Estonian naval forces cooperated to land Estonian troops behind Bolshevik lines on several occasions…"[22]

Representing a nation is often a principal justification for having a navy in the first place. In some cases, the mere existence of a navy is considered to safeguard, strengthen or renew the historical and cultural identity of a

nation. The emergence and manifestation of the U.S. Navy during the Berber Wars evidently contributed to "shaping a nation",[23] strengthening American national self-esteem.

Consequently, naval heroes like *Themistocles* or *Kimon* for Athens, Sir Francis Drake for England or Admiral Sir Horace Nelson for Britain, Admiral David Farragut or Commodore Oliver Perry for the United States, Constantine Canaris for the Greek War of Independence, Rear Admiral Paul Countouriotis commanding the Hellenic Royal Navy at the decisive sea battles of Helle (Straits) and Lemnos during the Balkan Wars (1912-13), Commodore Arturo Prat for Chile, or *el Caballero de los Mares* Miguel Grau for Peru, have contributed towards a country's sense of itself.

Yet, while Mahan used to put "maritime interests in the foreground" of his analysis and to correct the widely spread "tendency to slight the bearing of maritime power upon events",[24] John Mearsheimer and Paul Kennedy, on the other hand, insisted on defending the primacy of land power (and army) towards naval power and force.[25] Both arguments are undoubtedly well founded; nonetheless, it appears true to claim that, in modern times, sea or naval powers have persistently succeeded in solving the strategic problems posed by adversary continental powers.

The British case, in particular, virtually selects itself as the very epitome of geopolitics and strategy of a sea-based power. In the words of Sir Winston Churchill: "For four hundred years the foreign policy of England has been to oppose the strongest, most aggressive, most dominating Power on the Continent, and particularly to prevent the Low Countries falling into the hands of such a Power… Observe that the policy of England takes no account of which nation it is that seeks the overlordship of Europe. The question is not whether it is Spain, or the French Monarchy, or the French Empire, or the German Empire or the Hitler regime. It has nothing to do with rulers or nations; it is concerned solely with whoever is the strongest or the potentially dominant tyrant."[26]

Indeed, the British record in managing sea power – landpower relations is so instructive that it warrants particular attention. After having used France against the Dutch in the 1670s Britain now went on using France to accelerate the decline of Spanish naval power, gaining profit from the Peace of Utrecht in 1713. During the 18th century, Britain successively

allied with Austria in the 1740s in the War of Austrian Succession (1740-48), and with Prussia in the Seven Years War (1756-63).[27]

After having persistently resisted, for more than 20 years, the emergence of a strong, unified European continental power dominated by republican or Napoleonic France, Britain spent plenty of energy, mind and money (and – at least in one case, Crimea – blood) during the 18th century, dealing with the now major geopolitical rival, land power (and potential naval power) Russia. Yet, Bismarck's successfully accomplished "Reichsgründung" of 1871,[28] and the subsequent profound change of European geopolitical environment due to the emergence of a new, considerable geostrategic actor, and most significantly the intensified attempts of the German land power under Kaiser Wilhelm II to become a naval power by building up a fleet and seeking for colonies[29], made the hegemonic sea power of that age reconsider its priorities and approach its principal geopolitical rival of the past, Russia (as well as France) in order to face the new continental hegemonic aspirant, Germany.

Though presenting a beacon of liberalism, parliamentarism and civic culture according to its own self-perception, Britain went on to align herself with Russia, a country steadily accused by English opinion leaders and intellectuals of autocracy, despotism etc for the most part of the 19th century. Similarly, conservative Britain entered an alliance with Soviet Russia in 1941.

Certainly, it may be objected that the case of Britain was rather an extraordinary phenomenon than an exemplar. Yet, the objection seems to be beside the point. For, there are many and profound differences between Britain and America, to put just an example, the first being a continental-size naval power, not a small off shore island; yet, the practical continuities in geopolitics, strategy and statecraft are undoubtedly impressive: notably the theme of a *balance-of-power* policy towards *Eurasian* continental *hegemonic* aspirants entirely dominates the Anglo-American geopolitical and strategic experience.[30]

Being once a *continental* power which then succeeded in transforming itself into a *naval* power, the United States has acted three times during the 20th century to restore or sustain a balance of power in Eurasia and deter the supremacy of a continental power in the Eurasian *Heartland* – to put it in Sir Halford J. Mackinder's terms – when British sea power and balancing

seemed, for the same purpose, inadequate: 1917, 1941, 1947. Even NATO's eastwards expansion after the end of the Cold War as well as the build-up of American military presence in post-communist Balkans is perceived and being followed by the policy makers as a strategy of *preventive balancing* targeting post-Soviet Russia, though this shall never be officially declared.[31]

It seems that sea power, maritime supremacy, and strategic control of both the oceans and the *Rimland* (the Earth's Ring according to Sir Halford Mackinder and Nicholas Spykman) always remain the key of success for the occidental, Anglo-Saxon naval powers; airpower and nuclear weapons are just added to the stew.

Certainly the last observation may sound embarrassing ,since the strategic significance of particular features of geography has greatly varied through out history due to endless social, political, cultural and, most particularly, technological development of every kind. Yet, to put an example forward, the maritime defiles connecting the Aegean and the Black Seas, the Bosporhus and the Dardanelles, retained a strategic importance – and a pretty major one – which has defied time, technology, and changing polities and ideologies: Those defiles were critical to Hellenic security against Persia; vital for Athens' food supply from the Crimea; provided refuge for the "*basilikon ploimon*", the Royal Fleet of the Eastern Roman ("Byzantine") Empire, and served as the protected central hub from which the Byzantine Greeks flexibly could choose to concentrate in the Aegean or the Black Sea (Euxeinus Pontus). Thus, both mediaeval Greeks and, later, Ottoman Turks gained considerable geostrategic profit, one after the other, from maintaining a two-sea fleet on the cheap, thank geography. Besides, in late mediaeval and early modern times, the same maritime defiles were crucial to the security of Venetian and Genoese trade with Asia.

Through out modern history, notably since the emergence of Britain as a sea power, the famous Straits have proved to be the golden key to keeping Russia out of the Mediterranean, prohibiting Russian continental power from becoming a serious naval power, thus securing British maritime supremacy – and this meant, to some extent at least, global hegemony. Hence, the impressively persistent British support for maintaining the territorial integrity of the Ottoman Empire (*nota bene:* at cost of all Christian peoples of the Empire) as well as London's steadily strong

interest in institutional reforms and political "Europeanization" (or "Westernization") of Turkey through out the 19th century, which were perceived as the best means to secure Ottoman territorial integrity and avoid ethnopolitical partition alongside the wishes of the national liberation movements of Greeks, Serbs, Bulgarians, Romanians, Armenians and so on.[32]

Quite characteristically, when the "Sick Man at Bosporhus" was confronted with the most serious Russian threat against his very existence, in the early 1850, British sea power reacted energetically;[33] in spite of her traditional suspicion towards large-scale infantry expeditions, Britain went on to send a corps to Crimea, along with France – while at the same time entering the Baltic. The fall of the magnificent Russian naval fortress of Sebastopol on 8-9 September 1855 as well as the subsequent Treaty of Paris (1856) bear proof of Anglo-Saxon determination to prevent Czar's continental power from becoming a naval power, thus effecting the end of a four-hundred year long Columbian Era characterized by the preponderance of sea power over land power – the nightmare of strategists such as Sir Halford J. Mackinder, Nicholas Spykman, Henry Kissinger or Zbigniew Brzezinski.

Most recently, during the Cold War, the strategic significance of the maritime defiles has anything but disappeared – in spite of unconceivable technological development and strategic changes, including military technologies, nuclear strategies and so on. The Straits turned out, once again, to be crucial within the framework of the occidental, Anglo-Saxon sea power's strategy aiming at the confinement of the (Soviet) Russian Black Sea Fleet.

At this point, the objection might be registered that air power has greatly reduced the strategic importance of the guarding of Bosporhus and the Dardanelles; yet, under careful examination this objection appears to be no sound; one should remind of the acute power and influence antagonism between occidental sea powers and nations of the Rimland, on the one side, and Eurasian, Soviet continental power, on the other side, over the Straits and the Aegean Sea from the very beginning of the Cold War era to its end. Besides, from a strategic point of view, sea power and air power are "indivisible".[34]

In fact, a lesson learned from history and geopolitics, if any, is that, much to our own surprise, some factors were as relevant for occidental, Anglo-Saxon sea powers and nations of the Rimland dealing with Eurasian continental powers in the 20th century AD (and they still remain in the 21st century) as they were for Athenian sea power facing Spartan land power in the 5th century BC.

Albeit all impressive changes having occurred during the last twenty-five centuries regarding military, transportations and other technologies, ancient "Prussian" land power Sparta was not able to oppose effectively the system of war devised by sea power Athens, at least not until it began to think in terms of naval power and act as such, during the last phase of the *Peloponnesian War* (*Deceleian War*) – nor was the *Kontinentalmacht* German Reich capable of facing the threat posed by a hostile sea power guarding the Straits of Dover on the flanks of its *Kontinentalblock* (*Festung Europa*).

The fact that Sparta finally prevailed in the Peloponnesian War could not be considered as a strong argument in favor of continental power supremacy since Sparta was able to solve its strategic problem only after the Athenian rival had widely overreached himself with the fateful *Sicilian Expedition* (415-413 BC) – and after Sparta began to think, plan and operate as a naval power, building an impressive fleet under the brilliant command of Admiral *Lysander* and applying such "classic" sea power strategies as naval blockade of Attica, forward defense inside the enemy's own territory and so on.

To put an analogy forward, one should not blame land power for Germany's defeat in the Eastern Front. Andreas Hillgruber has made an essential point proving that the "*Unternehmen Barbarossa*" was actually the desperate attempt of a strategically baffled Germany to deal with the fact (not expected by Hitler) that England persistently went on rejecting all his famous "generous offers" of summer 1940, even after France had collapsed.[35] In fact, the fatal "*Flucht nach vorne*" eastwards was undertaken by the German Reich -actually, by Hitler himself- in order to escape its coming strategic encirclement (*strategische Einkreisung*), though not few responsible officials within the military and the administration were aware of the fact that this adventure was going far beyond the logistic reach of both the *Wehrmacht* and the *Reichsindustrie*. Thus, the strategic situation with no exit that the German Reich faced in 1941 could rather be considered as additional evidence of the long-term strategic advantages of Anglo-Saxon

sea power. To put it with the words of Field-Marshal Viscount Montgomery: "From the days when humans first began to use the seas, the great lesson of history is that the enemy who is confined to a land strategy is in the end defeated."[36]

All this should not be taken to mean that the maritime powers always prevail – for they do not. Being maritime brings vulnerabilities as well as opportunities. Many argued at the time of the Cold War that the North Atlantic Treaty Organization (NATO) had such dangerous vulnerabilities too. As its name suggests, it was an alliance of sea nations and nations of the *Rimland* as much separated by the ocean as it was joined by it. Its strategic coherence and economic survival depended on sea-based transportation, which sometimes seemed dangerously exposed to the Soviet Navy and land-based air-forces.

It has been well said that "historically, maritime forces have tended to be associated with state power, competitive security concepts and the pursuit of national interests".[37] As a realist strategist, Mahan was skeptical about the capacity of most states to cooperate peacefully with each other, but none the less concluded that a transnational maritime consortium ("a community of commercial interests and righteous ideals"),[38] in this case comprising the United States and Britain, would be needed to defend the security of a large and expanding system of international trade. Neither country, he thought, had the resources to perform the task on their own, but together they could do the job. Moreover, because, by definition, particularly maritime countries are the most vulnerable to disruptions to the system, they will tend to be at the forefront of global consortia attempting to supply security to the regions that need it.

Whether a "*Reluctant Hegemon*" or not, the United States is, for the time being, the most likely leader of any coalition dealing with rogue states, failed or failing states, and international outlaws. In the United States itself, sea power is sometimes considered as an almost de-nationalized, common and public good – the United States being, in the internet phrase, a kind of "*systems administrator*" for the global trading system. Its function is to defend the system against maritime crime, local disorders and wars, as threats to the common maritime interest of all. It is noteworthy that the origin of such ideas goes back to Theodore Roosevelt (by the way: Th. Roosevelt had met Mahan as a fellow scholar during his time as a Visiting

Speaker at the Naval War College in Newport, long before he was elected a President of the United States).[39]

The NATO concept of a "*framework nation*" is a variant of the same idea. This is a country which its allies agree should set the agenda regarding a regional security issue and then be responsible for driving the process forward by securing political agreement as to the threat, and what should be done about it. It will only be possible to locate the leader and to engage in effective maritime cooperation if there is general agreement on the political aims of the exercise; differences of opinion at the level of grand strategy will tend to filter down, finding expression in such things as different rules of engagement which complicate and confuse coalition operation and tactics. One already had plenty of these things in the past; and it is well known that so called coalition interoperability problems are often essentially political in origin.

It has been said by Professor Donald Stoker that "collective security arrangements do not inevitably produce peace. No system of security is successful if its members are not willing to support it. Their will to participate in defense must exist; intention is never enough."[40] Moreover, here are needed highly qualified leadership, confidence, trust, experience and well defined, rational and pragmatic political goals.

It must be assumed as a plain fact that the international system will continue to be characterized by what the great Hans J. Morgenthau once called *Machttrieb* (power instinct). Conflicts are to be expected – conflicts of interests with emerging continental powers and conflicts of values and identities, particularly in view of ongoing *Islamo-fascism*.

Hence, for the foreseeable future, it will be an imperative necessity to maintain an efficient coalition of great, middle and small sea powers, maritime nations and nations of the *Rimland* defending international order and the core values of the occidental, Aristotelian-Jeffersonian heritage – in particular because the EU is not (and will never become) a great strategic power.

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[20] Kinder / Hilgemann, ibid. II, 371.

[21] Ilias Iliopoulos, *Introduction to Naval History: Sea Power, Naval Strategy, Maritime Geography, Command of the Sea*, (officially accepted as a Hellenic Naval Academy's textbook on Naval History), Athens: Dounias, 2008), 97. Further see Bern Anderson, *By Sea and by River: The Naval History of the Civil War*, (New York: De Capo, 1989).

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Future Battlespace and the US Response[*]

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In predicting future threats and problems for the United States I should begin with the bad news. Understanding future trends in conflicts and future threats is not rocket science—which is why we're in deep trouble. As a military we can do rocket science. It's in basic strategic thinking where we tend to go very wrong.

What we have seen since 9-11 is just how wrong the military and national political leadership can be in predicting and understanding future battlespace. In the 1990s the meaning of the 1991 Gulf War was largely misunderstood and misinterpreted by the US military leadership. After the First Gulf War the accepted lessons learned from that war were: 1. Technology is decisive in war; 2. War is about state on state conflict. It was a very comforting construct—if war is all about technology and the US armed forces are the undoubted maters of technology, then it follows that we would be set to dominate the future.

Of course, there were numerous events at the time that should have forced our military leadership to question the received lessons. The idea that state on state conflict was the norm was quickly refuted by reality. In 1993 we intervened in Somalia and in a battle against Somali factions later that year we lost 18 Americans killed in Mogadishu. Placed in the middle of a confusing, multi-sided conflict the US Congress and public had little interest in continuing operations against an irregular enemy. A few months later the US forces were withdrawn form the country, leaving the field to the enemy. In 1995 Haiti imploded, and a US invasion replaced one dictator with another. But the post invasion effort to help stabilize Haiti failed and today that unfortunate island is as poor, violent and unstable as before. All of the US technological advantages could not deal with the actual requirements of Somalia or Haiti.

Through the 1990s the US was also drawn into the internal conflicts of the former Yugoslavia. Beginning in 1995 the US and its European allies

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intervened to force a peace settlement and begin a peace enforcement operation in Bosnia that shows no sigh of ending in my lifetime or my son's lifetime. A few years later the US and NATO again intervened in an internal conflict in the Serbian province of Kosovo and began another open-ended peace enforcement operation to separate and control violent factions.

Yet, even as the US military had to contend with one non-state enemy after another, the study of counterinsurgency and conflict with non-state forces languished. These weren't the kinds of conflicts we liked to fight. By the time we had to deal with insurgencies in Afghanistan and Iraq the US military was intellectually unprepared, doctrinally unprepared and without an adequate strategy.

In this paper I will first discuss some of reasons why the US military has been unprepared to fight non-conventional wars in the last decade, discuss the likely battlespace that the US military will have to deal with in the next decades and finally discuss some of the means by which we ought to adapt to meet the challenges of future battlespace.

1. How did we get in such a mess?

One of the major reasons why the US military has had such difficulty in adapting to non-state warfare is the culture of groupthink within the military. This is not something that is particular to the US military, or to our own era, but remains a primary cause of military and strategic failure.

Colonel General Hans von Seeckt, Commander of the German Army from 1920 to 1926 and one of the most influential military thinkers of the twentieth century, wrote about the problem of groupthink in his era. Something had clearly gone wrong for the German General Staff in World War I and the General Staff, while tactically and operationally brilliant, had failed badly at strategic thinking. In an essay of the 1920s called "On Buzzwords" ("Slagworte") Hans von Seeckt pointed out that the tendency of military men to uncritically accept flawed and simplistic theories of war was one of the major dangers of his time, and remained the greatest obstacle to developing sound doctrine and strategy. Seeckt concluded that "Thousands of human lives are sacrificed to military buzzwords— assuredly not from evil intention, but simply from lack of independent thought."[1]

As in Seeckt's era, we have a strong tendency towards groupthink in the US military tradition. Many of our military leaders make their decision to go to a service academy at seventeen and view the institution of the military as a vocation. This strong emotional connection with the profession has advantages and also disadvantages. Educated in military schools, steeped in the culture of their own service as young officers, there is a strong tendency – especially among bright officers who are eager to advance their careers – to identify completely with their service or even their particular branch of service. This identification with the institution often goes to the point where they will completely internalize the institutional agenda. After a few years the institutional agenda, with all its particular assumptions and cultural traits, becomes the overriding world view of the officer. As von Seeckt noted, officers locked in their worldview have a great deal of trouble thinking beyond it.

We can see examples of how military groupthink pushed American military leaders to poor analysis and to ignore clear trends—all at a very high cost to our forces.

A good example of how groupthink can undermine sound strategic analysis is the reaction of the US military to the lessons of the Spanish Civil War. During the Spanish Civil War from 1936-1936 the latest weapons and techniques of several major military powers (Germany, Russia, Italy) were employed in a large scale conventional war. Many American officers studied the war in Spain intensely and wrote about the lessons from the major battles in Spain. Most of the American officers who studied and wrote about the Spanish War drew very accurate implications for US doctrine, equipment, and force structure. Some of the predictions made about how the new weapons and tactics demonstrated in Spain might feature in the next major conventional war, which happened to be World War II, were precisely correct.[2] Indeed, the examination of the Spanish Civil War literature proves that officers who are well trained in their profession can make very accurate predictions of the future by means of a thorough evaluation of recent trends and following those trends to logical conclusions.

However, it is notable that in the articles by US officer from the period that the higher the author's rank the less accurate were the conclusions about the lessons of the war.[3] Indeed, the accuracy of the predictions of

future operations and technological developments tend to be directly proportionate to the rank of the officers—with the mid-ranking officers being the most accurate and the high ranking officers being the least.

General Hap Arnold, first chief of staff of the Air Force, is the prime example of getting it wrong. In an editorial to the unoffical journal of the Air Corps, U.S. Air Services, published in May 1938—a time when a great deal was known about the military operations in Spain -- Brigadier General Hap Arnold, then Assistant Chief of the Air Corps, dismissed the relevance of the Spanish War operations because they did not feature strategic bombing. Because strategic bombing was the core of Air Corps doctrine, and airpower in Spain had been used primarily in support of ground forces, Arnold believed that there was little that could be learned by the US military.[4] In contrast, a lowly Coast Artillery major disputed the Air Corps notion that little could be learned from the war in Spain. In an article in his branch journal he noted that there had been a considerable amount of strategic bombing in Spain and that some important conclusions could be drawn. He noted that city bombing had not broken civilian morale, and that bombing had generally been inaccurate and not delivered the effects the airmen had predicted. [5] This completely accurate analysis struck right at the heart of the Air Corps' doctrine, which emphasized the destruction of small, specific industrial targets such as power and transformer stations in order to paralyze and opponent and shut down his war industries. Other army officers made further accurate predictions about future operations in army journals. One officer noted the effectiveness of the new German 88mm anti-aircraft gun in Spain. That gun, coupled with the latest monoplane fighters used in Spain, such as the Me 109, most likely meant that the bomber would not necessarily get through enemy defenses in a future conflict.[6] Unfortunately, the Air Corps steadfastly refused to listen to this analysis until the disastrous Regensburg and Schweinfurt raids of 1943 dramatically demonstrated the vulnerability of the unescorted bomber in the face of modern defenses.

I would not argue that Hap Arnold was dumb. Indeed, Hap Arnold was a brilliant and talented officer and he made an enormous contribution to the development of American airpower. But on the issue of strategic bombing effectiveness he had been so locked into the Air Corps ideology for so long that he had internalized the Mitchell/Douhet views as dogma and found himself unable to accept hard data that conflicted with the Air Corps agenda.

In the post-1991 analysis of the lesson of the Gulf War we saw perhaps the high point of groupthink in the modern US military thinking. The first problem was in the broadly held assumption that technology was the decisive factor in warfare. It was commonly asserted in the US military journals and doctrine that the Gulf War signified a "RMA" (Revolution in Military Affairs) and that the RMA was all about technology. One of the most popular definitions of RMA came from the Pentagon's Office of Net Assessment which defined a RMA as "'…a major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and organizational concepts, fundamentally alters the character and conduct of military operations'." Note that the Pentagon's definition of RMA emphasized technology as the driving force for change.

Indeed, the most widely-held view in the US military in the 1990s was the belief that technology had revolutionized warfare. One of the most surprising assertions made by many senior leaders is that technology would eliminate the fog and friction of war from the future battlespace.[7] In the mid-1990s, in the full rush of enthusiasm after the Gulf War, senior officers and top think tanks predicted in the sure that the future "the MTR (Military Technological Revolution) promises… to imbue the information loop with near-perfect clarity and accuracy, to reduce its operation to a matter of minutes or seconds and, perhaps most important of all, to deny it in its entirety to the enemy. "[8]

In the period before 9-11 Alvin and Heidi Toffler, authors of War and Anti-War and other books, provided some of the most popular reading in the US military staff colleges and senior service schools. The Tofflers offered a simplistic general theory of politics and history that argued that society was organized by its technology. The Tofflers maintained that there had been three waves of technological development and the third wave, and one that we are in today, is the "information age." According to the Tofflers, nations that mastered the technology of their "wave" could be expected to be highly successful. Nations that failed to master the technology of their era would fall disastrously behind.[9] The Tofflers' theories were closely related to fundamental Marxist theory with one essential difference. Instead of Marx's belief that society was organized by economics, and that economics mattered above all other possible factors, the Tofflers substituted technology as the driving force for society and

history.[10] In our staff colleges and senior service schools in the 1990s and our field grade officer students commonly bandied about the "three wave" construct of history and politics as if this were accepted truth.[11] The idea that society was organized by technology was very comforting—and very untrue. Just like Karl Marx, the Toffler's theory ignored the significance of the intangible aspects of human nature such as the power of religion and ethnic nationalism. Indeed, it was these factors, and not technology, that were the driving force behind most of the conflicts after 1991.

Another essential element of the US military groupthink of the 1990s was the belief that war meant conflicts between established states, and that such conflicts between state and non-state forces, or conflicts between non-state factions, were the exception to warfare and not the norm. As already noted, this belief failed to meet the reality test even at the time of its greatest popularity. Yet, after the First Gulf War, the US military was afflicted with a serious case of victory disease and the primary service efforts in studying future wars tended to ignore the rising tide of non-state conflicts and violent movements. The officially-sponsored studies, of which there were many, instead focused on a wide variety of theoretical threats by peer competitors or other state threats. Almost all the probable scenarios studied at the time were about conventional, state on state wars in which one could county on technology being decisive.[12]

2. An ahistorical armed forces

Another common obstacle to clear analysis in the US military culture is a tendency for military leaders to know little about history. Senior leaders have often top leaders often exhibited an amazing level of ignorance about operations even in the recent past. For example, in 1965 the USAF chief of Staff, General McConnell, described the use of airpower in South Vietnam as "truly unique in the annals of aerial warfare." [13] In fact, counterinsurgency was nothing new for the US Air Force. The Air Force had contributed aid and advisors to the very successful counterinsurgency campaigns in Greece from 1947 to1949 and in the Philippines from 1946 to1955. Yet, it is no surprise that McConnell could not recall such operations by his own service. There had been little mention in any of the service journals at the time about the US Army and US Air Force experience and lessons from these counterinsurgency campaigns. After the campaigns in Greece and the Philippines there was almost no effort by any of the services to write an official military history of the US experience in

these campaigns and learn lessons.[14] Because only a few personnel had been involved in those conflicts there was little awareness of the many lessons that had been learned about fighting irregular enemies. Thus, the US military entered the Vietnam War with a senior leadership and an officer corps that was generally clueless about the conduct of a counterinsurgency campaign.

Following Vietnam the US military supported a highly successful counterinsurgency campaign in El Salvador from 1981 to 1992. The war ended very successfully—with El Salvador a stable democratic nation and an ally. Again, almost nothing was written about the conflict in the US military journals and, just as in the successful campaigns in Greece and the Philippines, no effort whatsoever was made to write an official history of the El Salvador operation.[15]

The trend of historical ignorance about non-state conflicts among the military officer corps continues. As the insurgency in Iraq was becoming serious in the summer of 2003 General Richard Myers, the Chairman of the Joint Chiefs, remarked, "This enemy is not like any enemy we've fought before."[16] Having been trained in the post-Vietnam era, General Myers only understood conventional war and was apparently unaware that the US military had contended against irregular forces in Somalia in the 1990s and in Lebanon in the 1980s, or that the US military had helped El Salvador defeat a major insurgency from 1980-1992.

3. Politically correct language

One of the major legacies of the Boomer Generation has been the mandating of politically correct language throughout the institutions of government. The Boomer Generation tends to avoid clear and direct language, preferring euphemisms, indirect, and even deliberately confusing language. The culture of "politically correct" language has become so pervasive in the last thirty years that it now serves to inhibit our ability to state problems or analysis clearly. Today a vast amount of intellectual energy is employed simply to avoid clarity or to make any reference to a matter that might possibly offend someone.

A recent memo published by the Department of Homeland Security for its employees the department's leaders cautioned American government personnel not to use the term "Islamist" or "Jihadist" --despite the very

long historical use of both terms and the clear meaning that both terms convey. The intention of the decree was to ensure that no Moslem could possibly be offended by linking terrorism and violence to any group espousing an Islamic justification for their actions. The problem is that such an approach forces us to ignore history and the reality of many millions of Moslems who, albeit a minority, firmly believe in an Islamic justification for violence. (Note: The term Jihadist was used in the 1850s in the Indian Mutiny by Moslems fighting to restore the Mogul Emperor to India's throne). To further confuse the issue, the Department of Homeland Security's action led them to provide us with a new term for the fight against radical Islam-- "The Global Struggle for Security and Progress" – a term so Orwellian and devoid of meaning that it truly makes me wonder whether we won the Cold War—at least intellectually.[17]

The spirit of politically correct language has also become the norm in our service schools and staff colleges. Recently at the Army Command and General Staff College a student proposed that we not use the term "fascist" in referring to any Moslem movement. Rather, we should just declare that we are at war with 'fascism." This sounds very nice and fits in beautifully with the Boomer mindset-- until one realizes that a clear and literal interpretation of the term would now mean that the United States was at war with a small northern Italian political party run by Mussolini's granddaughter, a peaceful organization that operates within the rule of law and has done nothing to bother America.

The use of euphemistic and unclear language has also slipped into US military doctrine and threatens to muddy our most basic military thinking. When the small team of authors of FM 3-24 Counterinsurgency was writing the doctrine in 2006 there were senior officers in the Pentagon who had serious problems in dealing with the straightforward language of the early published drafts of the field manual. For example, Chapter 6 of the manual dealt with training and developing the host nation security forces and spoke of the need to first evaluate the security forces and identify the dysfunctional aspects of the forces. With this understanding, the US planners would have to work with the host nation leadership to formulate a plan to correct the worst dysfunctions. Some senior officers in the Pentagon strongly objected to the use of the term "dysfunctional" and noted that a third world power reading the American field manual might be offended --a very serious offences for a member of the Boomer Generation. In the final published version the very clear term

"dysfunctional" was reduced to "biases." This means that rampant corruption in the security forces, participation in ethnic cleansing, running death squads, or even carrying out genocide now counts as a "bias" in our official doctrine. The new official wording, while inoffensive, also undermines a clear understanding of one of degree of urgency and seriousness that we face in helping third world nations to address their most serious problems.

Such an approach to language might prevent hurt sensibilities, but one wonders whether the loss of the ability to communicate clearly on essential strategic and operational issues is a price worth paying. If it is, then someone in the top leadership ought to make the case to explain why obscure language is preferable to clear language.

4. Future battlespace

Drawing a reasonably accurate picture of the likely conflicts of the next twenty years is not very difficult if we look at the current trends and likely behaviors of hostile nations. The events several troubled regions, as well as the actions of competitors and enemies over the last twenty years provides some clear indications of the threats that the US and allied nations will have to contend with.

First of all, there will be A LOT of internal conflicts in regions such as Africa, Latin America, the Middle East, Central Asia, and parts of the Far East. These conflicts will be sometimes primarily motivated by economic and ideological concerns, but more often the case of conflict will be ethnicity and religion. The various groups and factions will attempt to seize the power of the government by force. Some groups will use violence to carve out a position as an autonomous state or region. Groups carrying out an insurgency against the government, or simply contending for power as a faction in an imploded state, will use whatever technology is available. A wide variety of basic and very sophisticated weapons can be bought on the international market for groups that have money. Some of the warring groups will turn to crime to raise the funds for weapons. Others will have their weapons supplied by outside powers, perhaps covertly. Some groups will be very astute and well-financed and very capable and will be very tough opponents. Others will be poorly financed and equipped and incompetently led and somewhat easier to defeat.

These violent groups, factions, militias, and so on will threaten the governments of nations friendly to the United States. Some groups and movements will threaten the security and stability of whole regions. However, it should be noted that the violence will be driven overwhelmingly by local concerns. Yet, despite the local nature of the conflicts, we will be drawn into many of them. If our allies are threatened, or the stability of strategic regions is threatened, or if t is likely that a group will take control and create a sanctuary for anti-American terrorists, then the US will have to get involved. The most likely American response will not be an outright invasion. After the experience in Iraq the American public will not be inclined to support any direct US military action unless the provocation is absolutely clear and a convincing threat is posed to American interests.

The most likely American response to a threat to an ally, or a threat to US national interests, will be to provide economic and military aid, advice and support for friendly governments, regional organizations, and interests that are threatened by internal and external forces. Al Qaeda and various related and spin-off organizations will not cause these local conflicts, but they will use such conflicts to their advantage much as the Soviet Union used local conflicts to undermine the Western powers during the Cold War. Even though the conflicts will not be about us --meaning America-- our involvement in the support of a government or faction will undoubtedly change the dynamics of the conflict. Local forces can be expected to quickly gang up against a US supported government or faction, and most local forces in opposition will readily accept outside help, be it trained fighters, money, or weapons. In every case the hostile factions will try to paint the US as the instigator of the conflict and cause of the problem and as a brutal and murderous aggressor. They will have considerable success in doing so.

We can predict that nations hostile to us will find it to their advantage to sell arms to insurgents and rebel factions, or supply them with money. Why should any nation directly attack the United States, and risk a terrible defeat, when they can invest relatively small amount of money and effort in supporting a campaign to see the US weakened and bankrupted? If we do not intervene in local and regional conflicts where our friends and interests are directly threatened, then American allies will fail and our influence in the world and in some vital regions will diminish. If we intervene and then fail, then we again lose and pay a stiff price in loss of

national credibility. Therefore, if I were a nation hostile to the US it would certainly be in my strategic interest to covertly support internal groups in other countries that are acting against the interests of America's allies and interests. If my proxy group fails, then I have not lost much. If they succeed, then the US has sustained yet another blow. An enemy might believe that time is on their side and that a campaign to slowly wear down the United States has a high chance of success.

Given this reasoning, the threat over the next two decades is not the conventional state threat we would like to fight— but rather the unconventional threat that we have so much trouble understanding. Why should any group target our strengths directly when they can use the indirect approach and target our national will with minimal risk to themselves?

5. How we should meet the threat

Although technology is an important thing for our military to have, it will not be the main requirement to defeat the likely future threats. In fighting unconventional, non-state enemies nation building is not an option—it is a necessity. Equipping and supporting the local forces and training them to fight their own wars are very old concepts— and such concepts are still central to success today. If we ought to have learned any lesson from Vietnam it is that we cannot fight and win another nation's internal conflict for them. Success in defeating irregular groups depends on building and developing local institutions. Our failure in Vietnam was that we failed to help the South Vietnamese to build strong institutions as we took over their war.

We are currently not organized for the mission of nation building. Today there exists a huge gap between our official doctrine and our strategy. There are the two sides to nation building, the military and the civilians. The civilian side of nation building is just as important, often more important, than the military side. Helping a nation under stress develop its economy and helping a government build sound institutions are vital counterinsurgency tasks. Our doctrine and published national strategies say that economic development and institutional development is vitally important. Yet, if economic development is as important as the military operations, why is the US today trying to develop a Rube Goldberg-like system of civilian volunteers who will train and prepare themselves on a

part-time basis and then commit themselves to being called up on short notice? Such a system might be dirt cheap—but sometimes you get just what you pay for. A civilian reserve system will not ensure that enough people with the right skills and experience and language background will be ready and fully prepared to leave their civilian professions and devote years or months to a risky endeavor overseas.

If nation building is important then we need a cadre of full time experts with the right kind of training and preparations. Increasing the USAID is the obvious solution. Supplementing them with some kind of civilian reserve force would be nice, but dependence upon a volunteer force that has yet to be trained and organized makes little sense. In the matter of contingency operations rapid deploy ability is important—for civilians, too. It would make little sense to eliminate most of the regular military forces and carry out contingency and intervention operations with the National Guard. It ought to be a scandal seven years after 9-11 that the State Department is still woefully short of the right number and type of personnel to man provincial reconstruction teams in Afghanistan or to supervise aid and development programs in unstable areas.

Recruiting and educating the right kind of people for USAID could be easily accomplished through a scholarship program in America's universities. The State Department can provide generous scholarships for engineering students, or business and economics majors, as well as other fields most necessary in nation building operations. In return, such students would, upon graduating, have to be ready to undergo eighteen months of training, to include language training and self defense training, and then face an eighteen month deployment to support aid operations in a country such as Afghanistan. With the right incentives, and a strong career program, I believe that we could recruit some very high caliber personnel to perform the vital civilian side of the nation building mission.

Ensuring that the civilian side and the military side of nation building operations are coordinated requires establishing an organization such as CORDS in Vietnam. It is precisely in the lack of proper organization where we have our most serious problems in meeting the current and future threats. Today, as in Vietnam from 1961-1967, the government efforts in countering insurgencies, supporting allies, and nation building are hampered by a confusing array of competing organizations and chains of command. Unity of effort needs to be more than a buzzword or

convenient slogan. Unless it becomes a reality we will not be able to employ our considerable resources effectively. The mistake being made today is an emphasis on elaborate committee-type structures and excruciatingly detailed interservice and interagency agreements designed to coordinate efforts-- but actually result in adding to the confusion. Every agency, military and civilian, works as if by instinct to protect its own turf. CORDS was highly effective because it created a single command structure and made one individual fully responsible for the effort. There was considerable resistance to the CORDS concept because it placed military and civilians together in the same chain if command – with the CORDS chief being a civilian. Reviving such an organization to coordinate reconstruction and advisory efforts in Afghanistan and Iraq would be a huge step forwards. One of the problems that we face, however, is simple lack of historical perspective. Little was ever written about the CORDS program. As with so many other successful programs and campaigns, some of the most important counterinsurgency lessons from past campaigns were never learned.

The changes the military need to effectively deal with the unconventional threats of the next twenty years are partly organizational and partly cultural. Again one sees a large gap between official doctrine and stated policy and the reality. The US National Security Strategy, the joint doctrine of the military, and the individual service doctrines all pay considerable lip service to the importance of Foreign Internal Defense (FID), namely training, advising, and equipping allied nations. For example, the traditional FID approach of supporting the legitimacy of the host nation government is stressed throughout the new Army/Marine counterinsurgency doctrine. A long chapter, Chapter 6, is devoted to discussing the training and advising of the host nation security forces. The doctrine stresses a comprehensive approach to training and discusses not only the training of the host nation military forces, but also of the police and the civilian staff of the defense ministry.[18] Taken as a whole, the doctrine is strongly oriented towards nation building and emphasizes building both military and social institutions. If the host nation can establish strong institutions with our help, then it will be able to defeat the forces of insurgency and terrorism.

Unfortunately, our FID effort has been lagging in Afghanistan and Iraq. Major changes will be needed to face the challenges of those insurgencies and of other nation building operations in the future. From 2003 to 2005 the US and Coalition partners largely ignored the need for a coordinated

program to train and advise the Iraqi security forces. What emerged was an ad hoc program developed largely on the initiative of local commanders without dedicated resources or a master plan. The US military was slow to provide adequate personnel and resources to the mission although things began to slowly improve after 2005. Yet even in late 2006 the teams sent out to train and mentor the Iraqi forces were often reservists who were selected for the mission at the last moment and sent to carry out an exceptionally difficult mission without special training or preparation.[19] The Army is not the only service where the FID effort has lagged. Seven years after 9-11 the US Air Force still has fewer than 300 personnel who are specialists in the mission of training foreign air forces. It is but a fraction of the FID specialist capability that is needed today. Yet members of AFSOC have been arguing their case for expansion for years-- with apparently little effect. In this case we are not talking about a huge and expensive program, but a small increase in personnel with special and urgently needed capabilities.[20] The lack of resources and personnel to perform a mission officially recognized as essential remains one of the greatest gaps between doctrine and the actual practice of out leadership.

While the lacks of funds and personnel have limited America's ability to perform one of the most important counterinsurgency/counterterrorism missions, the American military culture is also a prime culprit. The general perception throughout the US Army and US Air Force officer ranks is that serving as an advisor or trainer for a foreign force will serve as a "career killer" and barrier to advancement. When an officer's records are reviewed by superior officers who only understand and value service with US units in conventional operations their service as trainers and advisors will be given less value. This is a very legitimate fear. Indeed, this is generally what happened to the officers who served as trainers and advisors with the South Vietnamese forces in the 1960s. Time spent doing this arduous and difficult task was counted as time wasted by the clever careerists in top positions in the Pentagon who invariably preferred officers who had only served with US units. [21] As someone who has been teaching US field grade officers since 1991 I believe that the prejudice that prevailed against the advisory mission is pervasive in our services today—and for the same reasons as in the Vietnam era.

Lieutenant Colonel John Nagl has proposed that the US Army establish a separate "Advisor Corps" that would manage the careers of officers and NCOs in this field and allow officers and NCOs who show talent in this

mission to advance in rank.[22] John Nagl's proposed solution has great merit. We may have to implement some major organizational changes to the armed forces is we are to see the nation-building and advisory mission successfully carried out. A model for how an Advisory Corps might be set up is in the Army's recent creation of an Acquisition Corps, in which qualified field grade officers with full branch qualifications and 10-15 years of service in their original branch are allowed to transfer into the small and specialist Acquisition Corps.

We have armed forces that are still organized around conventional war. That is not necessarily a bad thing. I would certainly not argue for a complete makeover of the armed forces. Instead, we need to add specialized niche forces to carry out the nation-building and advisory missions. Like the Special Forces, these forces need not be large. But the personnel needed for the nation building and unconventional warfare and advisory missions require unique expertise in many fields considered arcane by the conventionally-oriented force. Yet one cannot succeed in unconventional conflicts with unconventional enemies without such expertise. The officers involved in nation building/advisory operations will require a depth of knowledge of unconventional warfare and the ability to easily operate with NGOs, coalition forces, and State Department personnel. Additional niche units need to be added to the US armed forces, and the armed forces of our allies. Such specialized forces will include human intelligence units, Military Police units, units that specialize in the FID mission, civil affairs units, psychological operations units and individual foreign n area officers. It will take time and effort to grow these kinds of specialist units and individuals. Yet it is a far better alternative than relying on contract personnel who may not be qualified or available for rapid deployment in a crisis.

On the civilian side of nation building and unconventional warfare our organizational response ought to look to past programs and organizations that worked well. One area of major concern in every nation-building operation has been the training and development of effective civilian police forces. When there was high interest in counterinsurgency the US State Department established the International Police Academy in Washington in 1963. The International Police Academy was intended to provide a thorough professional education to police leaders of third world countries. An estimated 5,000 police officers graduated from the full course during the eleven years of its existence. A further 3,600 foreign

police officers attended the shorter courses offered by the school. The International Police Academy was practical response to one of the most urgent requirements of nation-building. Unfortunately, in the aftermath of Vietnam the US Congress abolished the International Police Academy in 1974. Today there is no coherent program for the training of third world police or security forces. The effort is split among the State Department and the armed forces and has resulted in small and poorly supported efforts. A very good first step to straightening out the current mess would be to revive the International Police Academy and begin a large scale program to train third world police commanders.[23]

Conclusion

The threat in the next two decades will be primarily unconventional. The real threat lies not in a conventional military defeat of US forces but in the loss of our influence in the world, the coercion of our allies, a weakening of our international alliance to fight terrorist supporting states, and the consequent acceleration of the destabilization process in several regions. Those destabilized regions are likely to become sanctuaries for terrorism and anti-American forces.

Much of the solution lies in better organization. We need to remake our organizations for nation building, for military civil affairs operations, and we need to provide the military and civilian organizations devoted to nation building and alliance support equal status with the fighting forces. We need to simplify our organization charts—much in the way that CORDS in South Vietnam successfully unified a large number of uncoordinated and disparate efforts.

Despite all the high technology and talk of a revolution in military affairs, success in counterinsurgency still requires helping the host nation to fight its own war. Given the historical record, few American efforts of the last 60 years that have paid off more handsomely in strategic terms, and at relatively little expense in manpower and equipment. FM 3-24 states in its opening chapter on the principles of counterinsurgency that "many of the best weapons don't shoot." Weapons will be highly skilled units and organizations. Training for our allies is a weapon. Information is a weapon. In short—the future battlespace for the US military will be the training centers for third world armies. The battlespace for the State Department

will be training civilian government workers and conducting economic and infrastructure development.

Organizational and cultural change is much tougher than bringing in new technology. Within the military and the civilian government agencies the natural response has been, and will be, a strong tendency to resist any simplification of the organizational chart. The armed forces leadership will mightily resist giving a small corps of area and intelligence specialist and nation building experts equal status to the combat soldiers. Meeting the security challenges of the future will require a drastic change in the way we train and educate leaders. And it will cost some money. However, personnel such as area experts, human intelligence and civil affairs specialists cannot be created through quickie "shake and bake" programs or programs designed to keep cost low as their primary criteria. To do the mission right we need to be prepared to spend the money to train and educate people properly. The good news is that training the right people for unconventional warfare is not nearly as expensive as developing new high tech weapons. We are talking about millions, not billions, to teach people languages and provide area expertise. The downside is that it takes as long to develop a truly competent area specialist as it does to develop a new weapons system— more than a decade of hard work, likely longer.

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[1] Hans von Seeckt, Essay on "Schlagworte (Buzzwords)," *Gedanken eines Soldaten* (Leipzig: K. F. Koehler, 1935), 7–18.

[2] James S. Corum, "The Spanish Civil War: Lessons Learned and Not Learned by the Major Powers." *Journal of Military History*. Spring 1998. Also selected for publication as a chapter in *The Second World War*, Vol. VI. Ed Jeremy Black (London: Ashgate, 2008)

[3] A sampling of the major articles on Spain—by no means a complete list—includes Captain Wendell Johnson's articles in the *Infantry Journal*: "Deadlock in Spain" (Nov.-Dec. 1938),

494-503; "The Spanish War: A Review of the Best Foreign Opinion" (July- Aug. 1938),

351-56; "Franco's Spring Offensive: Zaragoza to the Sea" (May-June 1938), 242-50; Colonel Conrad Lanza's articles in the *Field Artillery Journal*: "Lessons from Spain" (May-June 1938), 183-96, "Open Warfare" (Nov.-Dec. 1939), 533-45, "Some Lessons from the Spanish War" (July-Aug. 1938), 406-16; Brigadier General Henry Reilly's articles, "Attack in Spain," *Field Artillery Journal* (Sept.-Oct. 1939), pp. 331-35, and "Proving Ground in Spain," *Army Ordnance* (May-June 1939), 333-36; Emilio Caneveri, "Forecasts from the War in Spain," *Army Ordnance*

(March-April 1939), 273-80; Major General J. F. C. Fuller's articles," The Spanish War," *Army Ordnance* (Nov.-Dec. 1938), p.139, "The Tank in Spain," *Army Ordnance* (July-Aug. 1938), 24-27, and "Guns in Spain," *The Coast Artillery Journal* (Nov.-Dec. 1937), 453-57; Maj. Robert Mackin, "Airplanes Can Be Stopped," *The Coast Artillery Journal* (Sept.-Oct. 1937), 396-401; Maj. Thomas Phillips, "Air Power and Troop Movement," *The Coast Artillery Journal* (May-June 1938), 179-83; Brigadier General H. S. Hawkins, "Imagination Gone Wild," *The Cavalry Journal* (Nov.-Dec. 1938), 491-97; and Fred Mertin, "Cavalry in the War in Spain," *The Cavalry Journal* (Nov.-Dec. 1938).

4 Brig. Gen. Hap Arnold, "Air Lesson from Current Wars," *U.S. Air Services* (May 1938), 17.

5 Maj. Robert Mackin, "Airplanes Can Be Stopped," 398-399.

6 Ibid. 397-99. See also Capt. Wendell Johnson, "The Spanish War: A Review of the Best Foreign Opinion," *The Coast Artillery Journal* (July-Aug. 1938), pp. 299-300 and Cpt. Wendell Johnson, "Spain: A Year and a Half of Modern War," *Infantry Journal* (March-April 1938), 137-38.

7 For some examples of the statements common in the 1990s, see Barry Watts, *Clausewitzian Friction and Future War*, (Collingdale, PA: Diane Publishing Co.) 1996.

8 Ibid. 3.

9 See Alvin and Heidi Toffler, *War and Anti-War* (New York: Little Brown and Co, 1993). Also *The Third Wave* (New York, Bantam, 1980).

10 For an excellent critique of Toffler thought see R.L. DiNardo and Daniel J. Hughes, "Some Cautionary Thoughts on Information Warfare," *Airpower Journal -* Winter 1995.

11 The author can claim a broad knowledge of the US military service schools of the era. The author taught US filed grade officers in the USAF School of Advance Air and Space Studies at Air University from 1991 to 2004. The author also served part-time on the faculty of the Army War College 2002-2004 and attended the Air War College in residence in 1997-1998.

12 For some examples of Air Force thinking in the period see Jeffrey Barnett, *Future War: An Assessment of Aerospace Campaigns in 2010* (Air University Press, Maxwell AFB, 1995). See also *The world of 2020 and Alternative Futures*,(Air University Study, June 1994). The preface by Gen Merrill McPeak was a celebration of the US military's Global Reach, Global Presence, Global Power. For an army view see Gordon Sullivan and Col. James Dubik, *Envisioning Future Warfare* (US Army Command and Staff College, 1995).

13 "The Role of Airpower in Viet-Nam," Address by General John. P. McConnell, Chief of Staff, U.S. Air Force, before the Dallas Council on World Affairs, Dallas, Texas, 16 September 1965.

[14] The only official military history of the US effort in the Philippines was a short monograph published by the US Army Center for Military History in 1987—more than three decades after the events. See Major Lawrence Greenberg, *The Hukbalahap Insurrection*, CMH Pub 93-88 (Washington: US Army Center for Military History, 1987)

[15] The very ahistoical and high tech bias of Air force culture was expressed in a recent article by USAF major General Charles Dunlap of the Air Staff. Dunlap points out, "the Air Force identifies the past with obsolescence and for the air weapon, obsolescence equates to defeat. This is why, for example, FM 3-24's heavy reliance on experiences in long-past counterinsurgency efforts does not always resonate with Airmen the same way it does with Soldiers." Major General Charles Dunlap, "Understanding Airmen: A Primer for Soldiers," *Military Review*, September-October, 2007. 126-130. See 127.

[16] Rowan Scarborough, "US Miscalculates Security for Iraq," *Washington Times*, August 23, 2003. 1.

[17] See Bret Stephens, "Homeland Security Newspeak", *Wall Street Journal*, 27 May 2008, p. A 19

[18] FM 3-24 *Counterinsurgency* (December, 2006) para 6-22.

[19] Greg Jaffe, "Problems Afflict U.S. Army Program to Advise Iraqis," *Wall Street Journal*, 18 October, 2006, p. 1.

[20] See Jerome Klingaman, "Transforming CAA: Issues and Initiatives" pp. 80-112 in USAF Checkmate, Vantage Points: the Use of Air and Space Power in counterinsurgency Operations and the Global War on Terrorism proceedings of the 2005 Air and Space Power Strategy conference. AFSOC has been arguing for years that we need more effort for FID. See also Michael Koster, *Foreign Internal Defense: Does Air Force Special Operations Have What it Takes*. (Air University Press, 1993).

[21] For the best study of US advisors in Vietnam see James Wilbanks, Abandoning *Vietnam* (Lawrence: University Press of Kansas 2005).

[22] See John A. Nagl, Institutionalizing Adaptation: It's Time for a Permanent Army Advisor Corps, Center for a New American Security, June 2007.

[23] On the International Police Academy and the state of our current police training efforts see Walter Ladwig, "Training Foreign Police: A Missing Aspect of U.S. Security Assistance to Counterinsurgency," *Comparative Strategy*, October 2007, 285-293.

IAF's Small Wars: Israeli Air Force Experience in Low Intensity Conflicts, 1982 – 2006

By Tamir Libel, just completed his PhD in Israel [1]

The Israeli Air Force (IAF) is reputedly one of the most effective of its kind due to its contribution to Israel's defeat of Arab armed forces in High Intensity Conflicts (HIC) in the second half of the twentieth century. Whilst its exploits in these campaigns have been well documented, less is known about its adaptation to the Low Intensity Conflict operational environment that has emerged over the past two decades. This article will analyze this process of adaptation, focusing primarily on operational and organizational ramifications. In the period under review, 1982 - 2006, the IDF was involved in five campaigns: the First Lebanon War (1982 - 1985); The occupation of the Southern Lebanese 'Security Zone' (1985 - 2000); the First Intifada (1987- 1993);[2] the Second Intifada (2000 - 2005); and the Second Lebanon War (2006). A number of phases in each of these prolonged campaigns took the form of Low Intensity Conflicts. In contrast to its earlier experience with counter-terrorism and guerrilla operations, these campaigns forced the IAF to change.[3]

The article will first examine the development of the role of the IAF and its doctrine, especially in regard to air-ground cooperation. Subsequently, the article will analyze four aspects of IAF activity during the relevant conflicts: use of fighter-bombers; development of transport and attack helicopter arrays; development of the UAV array; air-ground coordination mechanisms; and doctrine. The article will conclude with an appraisal of IAF adaptation to the new challenges posed by Low Intensity Conflicts.

1. Historical background

The disparity between Israel and its enemies, the desire to minimize the cost of war (both in terms of human and resource cost), and the fear of superpower intervention forced the Israel Defense Force (IDF) to seek means of achieving quick decisive victories. In addition, Israel hoped that decisive victories would persuade the Arabs to choose the path of peace.[4] The IDF adopted an offensive military doctrine and a ground forces-based force structure.[5] Within this scheme, airpower served in a supporting role.[6] Having achieved air superiority over the battlefield, the IAF was expected

to support ground operations, screen the mobilization of the reserve and then participate in the counter offensive.[7] Thus, it played a central role in High Intensity Conflicts.[8] However, until the Six Day War (1967) the IAF was excluded from LIC counter-terrorism activities. One reason was the lack of capabilities, especially reliable helicopters. Additionally, IAF senior command was preoccupied with planning and training for high intensity combat (HIC). They hardly considered the possibility of employing airpower for any other end. IAF involvement in counter-terrorism operations began after the occupation of the West Bank and the Gaza strip (1967).

Though the IAF focused on LIC scenarios, it encountered difficulties in fulfilling the primary task of assisting ground operations.[9] Such was the case during the acclaimed Six Day War campaigns. Although it had destroyed the Egyptian, Syrian and Jordanian air forces during the first two days, it proved unable to support the ground forces effectively. The difficulty lay in the inadequate coordination mechanisms and a lack of understanding of IAF capabilities, needs, and procedures by the ground forces.

Similar problems reappeared during the 1973 and the 1982 Wars. The circumstances of the former forced the IAF to support ground forces before having achieved air superiority. During the latter conflict, though, the IAF had gained air superiority early on. The air support of the land campaign remained insufficient.[10] The IAF was unable to offer close air support on the tactical level, and its operational and strategic campaigns were not coordinated with ground forces. Still, by 1982 close air support capabilities had improved through the deployment of attack helicopters acquired as a result of lessons learned from the Yom Kippur War.[11] Helicopters were adopted as a response to the harrowing casualties suffered during the war rather than as a result of careful long-term planning. The decision to involve the IAF in counter-terrorism operations followed a similar course.

After the 1967 War, the IDF fought a successful but protracted and bloody campaign to stem the flow of terrorists across the Jordan River. IAF helicopters were used to increase infantry and paratrooper mobility while its fighter-bombers attacked terrorist bases in Jordan.[12] Over the following decades the IAF broadened and improved these capabilities.

2. The security zone: 1985 - 2000

2.1. Background

The 'Security Zone' in Southern Lebanon was formally established in 1985 following the IDF retreat from the areas captured during the First Lebanon War (1982).[13] The tenets of the Security Zone were decided in light of a study of the local social, political, economic, and military conditions: First, the Security Zone was to serve as a buffer between the guerrilla fighters and Israel, hence the IDF would maintain operational freedom within its borders. Second, it was decided that civilian mobilization efforts would center on Christian and Druze villagers rather than on the Shia majority. Third, Israel armed and trained a local militia, the South Lebanon Army (SLA), to assist in policing the area and preventing terrorist activity. Fourth, planners sought to minimize the number of civilians within the Security Zone.[14]

2.2. Fighter-bombers

During the First Lebanon War, especially from 1982 through 1983, Israel conducted air strikes against terrorist targets in order to develop a measure of deterrence. This simplistic policy of coercive diplomacy failed miserably, forcing the IAF to re-evaluate its methods.[15] These efforts culminated in the issuing of new guidelines in 1987. According to the new procedures, air raids would be conducted only on the basis of precise intelligence and following a risk-assessment. Senior command would determine appropriate risk-value ratios; as a rule, they were willing to pay much for high value targets. The raids were still hampered by the lengthily process of translating real-time intelligence into sortie mission orders.[16] The new guidelines were driven by the decision of then Minister of Defense Yitzhak Rabin who stipulated that terrorism was to be fought with minimum risk because it did not pose a fundamental threat to Israel's national security.[17]

The decision to rely on IAF raids was met with much opposition within the ranks of the IDF. Some officers held that ground forces special operations offered better means of combating terrorist activity in the Security Zone.[18] The controversy persisted until the IDF retreated unilaterally from the Security Zone in the year 2000. Nevertheless, the number of air raids into Southern Lebanon increased significantly from 1997 through 2000. The reasons cited for this activity were similar to those

expressed during the 1980s. Thus, the head of the IAF operations branch (G-3) argued in 1998 that the IAF was a more effective and flexible operational tool. He added that the IAF offered precise and destructive capabilities with minimal danger to Israeli forces. The IAF was able to maintain a high-level of offensive operations using precision guided munitions.[19]

2.3. Transport and attack helicopters

Beginning in the early 1990s, the IAF deployed transport and attack helicopters in forward bases near the Israel-Lebanon border. During that period, helicopters were deployed primarily in small-scale operations with the exception of operations 'Accountability' (July 1993) and 'Grapes of Wrath' (April 1996). Transport helicopters were used routinely for evacuation and transport of ground forces personnel.[20] Relying on helicopter enabled mobility, the troops were able to cut off retreating Hezbollah guerrillas operating within the Security Zone.[21] Attack helicopters also operated routinely in the Security Zone during the 1980s and 1990s. Averaging two missions weekly outside the Security Zone, the Cobras constituted the primary IAF tool for combating terrorist activity from Lebanon.[22] Their capabilities (continuously improved) enabled provision of close air support and minimal collateral damage surgical strike attacks against terrorist targets.[23] Consequently, pilots won considerable operational experience, though in limited small-scale operations.

All this activity notwithstanding, the IDF was unable to realize the full potential of the helicopters. This was due in part to IAF's refusal to assign helicopters to Northern Command. The IAF even maintained operational control over the helicopters deployed in forward bases within Northern Command. Helicopters were allocated to the ground forces only for individual missions and through an officer of the Unit for Cooperation. During peace-time the latter were charged with planning and conducting joint training; in combat situations they served as air-ground liaison officers.[24] The IAF also put severe restrictions on the use of the helicopters, as it considered the loss of one to Hezbollah fire as a major blow to Israeli airpower deterrence.[25] The helicopter squadrons were also hampered by doctrine, resources, safety and training shortcomings. First, they lacked doctrinal publications for all-weather flying. Second, flight procedures required upgrading and formalization. Third, a lack of joint training with the ground forces curtailed operational cooperation. These

shortcomings were a contributing factor in the 1997 mid-air collision between two CH-53s flying a routine reinforcement mission into the Security Zone resulting in the loss of all 72 souls aboard. Consequently, the IAF established the position of Deputy Head of the IAF Operations for Helicopters, responsible for addressing these very issues.[26]

2.4. UAVs

One of the primary lessons the IAF derived from the 1982 War was the need to reorganize the Visual Intelligence (VISINT) gathering assets. As a result, the IAF established a central UAV unit,[27] which proved invaluable in the Security Zone.

2.5. Doctrine

Due to doctrinal and organizational difficulties, the IAF declined to assign helicopters to Northern Command. Consequently, the full potential of Israeli air power was not realized against the Hezbollah. In order to rectify this situation, both headquarters began to develop new tactics, techniques and procedures. However, due to the basic disagreements, they chose to focus on specific issues such as special operations rather than on a new comprehensive concept.[28]

In spite of the limited scope of the original initiative, this cooperation gradually spread to other realms, dramatically improving the accuracy and effectiveness of air strikes against the Hezbollah bases.[29] Much attention was devoted to the development of counter rocket-launching capabilities. The methods finally devised (1995) required a significant change in the employment of the IAF. They include making connections between artillery detection radar, ground observation posts, UAVs, helicopters, and fixed-wing aircraft. In contrast to its traditional practice of centralization, the IAF now assigned command and control responsibilities to a forward command position within Northern Command. The IDF put much stock in these methods; yet, operation 'Grapes of Wrath' proved them lacking.[30] The increasing cooperation between Northern Command and IAF headquarters benefited from the establishment of Joint Cells within the territorial commands. These cells were responsible for planning and supervising helicopter attacks, transport, and special operations. They also functioned as professional advisers for the territorial commanders.

However, a review of these Cells, conduct by the Unit for Cooperation in August 1995, found them falling short of the mark.[31] In addition to the increasing cooperation with the ground forces, the IAF focused on the development of capabilities that increasing its adaptability to Low Intensity Conflicts. These included improvement of all-weather and night flight capabilities. Concurrently, the IAF upgraded its intelligence capabilities and increased the number of flight crews in order to enable continuous operations. It developed and practiced new doctrine for these kinds of activities.[32]

3. The Second Intifada

3.1. Background

The type of missions conducted by the IAF, as well as the degree of its involvement, changed several times during the Second Intifada (2000 - 2006). Initially, helicopters provided close air support and conducted surgical strikes. The latter were designed to deter the Palestinian Authority (PA) from persisting in the path of violence. In addition the IAF platforms gathered intelligence for the IDF and other intelligence organizations. During operation 'Defensive Shield' (2002) the IAF intensified its offensive operations against terror infrastructure in the Gaza Strip. It also became involved in the controversial 'Targeted Killing' missions. The increasing reliance on the unique capabilities of the IAF led its senior command to conclude that the service must adapt more fully to the demands of the Low intensity Conflict environment.[33]

3.2. Fighter-bombers

General Dan Halutz, who commanded the IAF at the beginning of the Intifada, stated that fighter-bombers would not be deployed in the developing conflict. He felt that the danger of errant missions leading to international condemnation far outweighed the operational value of such employment.[34] The rare occasions when the IAF did in fact utilize fighter-bombers during the conflict proved the wisdom of this position. Thus, the use of a one ton bomb by an F-16 for the targeted killing of a high ranking Hamas member resulted in 18 civilian deaths and severe international condemnation.[35]

3.3. Attack and transport helicopters

Helicopters and intelligence gathering assets bore the brunt of IAF activity at the beginning of the Second Intifada.[36] Surgical strikes executed by the Helicopters enabled Israel to escalate its response and tailor it to circumstances. Dan Halutz argued that this form of operation had already been practiced successfully in Southern Lebanon.[37] The attack helicopters were sent to attack buildings and unarmored vehicles instead of tanks and military formations for which they were designed. Nevertheless, the helicopters adapted successfully to the changing needs of the IDF.[38]

Changes also occurred within the attack helicopter array. While the Cobra helicopters bore the brunt of operations at the outset of the conflict, the complicated missions were gradually assigned to the Apaches. Enjoying a heavier payload and guided precision strike capabilities, they carried out 1500 sorties, logged 3500 flight hours and fired hundreds of missiles during the first two years of the conflict. These missions were conceived in an ad-hoc fashion rather than through methodological doctrinal development. Indeed, as one Apache Wing commander noted, helicopter employment in the Occupied Territories prior to the Second Intifada was almost unimaginable.[39] The intensive operational routine also dictated changes in personnel. Junior pilots were assigned missions normally reserved to experienced flyers and reserve pilots shared an ever increasing share of the combat missions.[40] This arrangement lightened the burden of the career and conscript pilots; it also allowed junior pilots to learn from the operational experience of older pilots.[41]

3.4. UAVs

The UAV array became one of the busiest in the IAF during the first five years of the conflict. Due to increased demands for real-time intelligence in the densely populated urban environment of the Occupied Territories,[42] the IAF decided to develop its VISINT capabilities in general and the UAV array in particular. Additional platforms and equipment were purchased and its personnel increased.[43] Consequently, the array was soon logging thousands rather than hundreds of flight hours over a tri-monthly period.[44] Their ability to provide pinpoint real-time intelligence facilitated the execution of surgical operations and minimized collateral damage. Since the information gathered contributed significantly to diplomatic and intelligence activities (e.g. footage supporting Israeli claims in the international arena), it was recorded for later analysis.[45] Deputy

Commander of the first UAV squadron Major Nathan described its unique contribution as: "identifying the short time-frame when the guy qualifies as a target, that's what UAVs are all about… many flight hours and resources have been expended in order to ensure that we hit only the people we mean to".[46]

Though satisfied with the results achieved by the UAVs, and in contrast to some recognized expertise in favor, the IAF was reluctant to assign core missions to unmanned platforms. Halutz stated that: "Contrary to many academics, I don't think UAVs are going to replace manned aircraft in the next 15 years, or even a significant part of the manned force… Saying UAVs are less expensive is an oversimplification".[47] Despite this cautious attitude, the IAF gained extensive experience devising cooperation techniques for helicopters, fixed wing aircrafts and UAVs. Coordination between the UAVs and ground forces was developed later.[48]

3.5. Doctrine

Soon after the beginning of the Intifada, IAF commander Halutz ordered the development of a new type of ordnance which would minimize collateral damage in the conflict's urban environment.[49] The developmental efforts of the IAF bore fruit.[50] This 'lesson learned' reflected the Halutz's opinion that the IAF could offer unique support to IDF operations in the form of stand off precise specific guided weapons.[51] It was during this time that the IAF senior command came to realize that the service should be able to fully participate in non HIC operations. Hence, instead of relying on specific HIC capabilities relevant also to LIC situations, the whole force should develop capabilities relevant to the spectrum of operations.

An important aspect of this change was increased cooperation with Territorial Commands.[52] This was reflected in Halutz's early guidance, that the IAF prepare for the conflict together with Southern and Central Commands.[53] In the spirit of cooperation the IAF was willing to share operational control over some of its assets. Thus, Territorial Commands were given control over IAF assets when warranted by mission parameters. This development was facilitated through the earlier establishment of Joint Cells in Territorial divisions by the IAF's Unit for Cooperation and the Territorial Commands in anticipation of the Second Intifada. The IAF officer assigned to these cells was responsible for air activity within the

division's field of operations and served as professional adviser to the divisional commander. Prior to the Second Intifada, only Northern Command had a permanent IAF liaison officer in order to coordinate air operations in the Security Zone. The new arrangement significantly increased air-land cooperation.[54] However, despite the new spirit of cooperation, the IAF maintained control over pre-planned strikes.[55] Eliezer Shkedy, who succeeded IAF commander Dan Halutz, stated in 2005 that: "This is truly a joint battle… and the [IAF] is not truly integrated with the ground forces. We have finally managed to stop thinking emotionally about our differences and to think intellectually. The relationship has been revolutionized".[56]

This budding cooperation came about within the context of a general reorganization. From 2000 through 2003 the IAF underwent a learning process in conjecture with the IDF effort to revise its operational concepts, doctrine and organization. IAF research teams developed concepts for the employment of airpower as part of the IDF strategy. They believed that the IAF plays a significant role in the pursuit of battlefield decision.[57] This understanding was formalized in a comprehensive document which later became the IDF operational concept. The new concept emphasized firepower over maneuver and required greater air-land cooperation and flexibility.[58] They created an Israeli variant of the Effects Based Operations concept. These reforms necessitated cultural change as demonstrated by a joint IAF and Ground Forces Command study which found deep cultural differences between the services. Claims regarding a lack of understanding and cooperation were voiced by officers from both services.[59] Concurrently, the IAF developed greater interagency cooperation with several intelligence organizations such as the General Security Service (GSS). This cooperation was made possible through the shortening of sortie planning and execution cycles.[60] Without this interagency cooperation the targeted killing missions might not have been possible.

In order to support the introduction of these reforms, the IAF established the "Air Campaign Planning Department". Its mission was to: "deliver new forms of airpower more relevant to low-intensity conflict (LIC) and effects-based planning and operations".[61] The department was divided into Operations and Doctrine. The operations section was connected to IAF and IDF Operations branches (G-3). The doctrine section was connected to IAF intelligence branch, Military Intelligence, IDF Doctrine and

Instruction branch and Communication and Psychology units. This operations-force structure combination was unique in the history of the IAF. The department enjoyed interdisciplinary experience as it drew personnel from Intelligence, Operations, Operations Research, System Operations, and Systematic Thought. It was responsible for developing doctrines and concepts for air campaigns, analyzing future operational environments and interpreting the IAF strategic objectives assigned by the General Staff.[64] The department's commanded officer remarked that:

"The air force realized it was prepared for symmetric war… [but] the new business of asymmetric war presents a different set of challenges. We did not build ourselves for LIC. We had to develop everything, almost from scratch. The goal right from the beginning was to be able to hit the target, any target, and only the target… [minimizing] things like collateral damage and the killing of innocent civilians. In the beginning we were not very successful. But if one could graph the progress, he could see that that we have reached a level of interoperability with the ground troops, the aircraft [including] helis and UAVs… [and] that we have almost reached 100 percent of the goal. But it is not over yet, and this will be the goal for many [years] ahead. We have made very significant steps. Today, targets emerge real time, and you have to hit them quick… and create [for yourself] air firepower that is accurate and available… this depends on intelligence data in real time. We are quite close with the technologies here in Israel. If we're there and they know it, they can't move, they can't do anything, and sometimes that's okay with us. We don't want to kill for the sake of killing… if we can get them to give up".[62]

4. The Second Lebanon War

4.1. Background

During the Second Lebanon War the IAF was charged with two primary tasks. First, and for the first time in Israeli history, it was assigned a theatre of operations - north of the Litani River. However unprepared for the responsibility, IAF commanders resorted to their traditional modus operandi, albeit on a wider scale.[63] Additionally, the IAF was charged with destroying long and mid-range rocket launchers; destroying Hezbollah organizational and operational infrastructure; sealing off the ground forces combat zone through the destruction of the lines of transportation and Lebanese national infrastructure (the latter was cancelled due to American

pressure).[64] Its second primary task was to support Northern Command's ground campaign. This included supervision of the air element of the Command's operations and provision of close air support. The supervision was conducted by the IAF forward headquarters at Northern Command. Though Northern Command was responsible for target selection and prioritization, the IAF enjoyed significant influence over the process.[65]

4.2. Fighter-bombers

Due to the intensity of the violence during the Second Lebanon War, the IAF employed fighter-bomber squadrons. They enjoyed precise strike capabilities which limited collateral damage even in strikes against targets in urban centers. Their inclusion in the fighting force fielded by the IDF was also due to the fact that Hezbollah was relying on firepower capabilities akin to those of a small state. Among these were long range missile launchers capable of reaching the center of Israel. These launchers were located near civilian populations in the Southern Lebanese Shia villages. The IAF had prepared detailed plans and conducted training sorties against mock-up models. Based on highly detailed and reliable intelligence, IAF fighter-bombers destroyed most of these launchers during the night between the 12 – 13 July 2006. [66] Less successful was the IAF's attempt to provide close air support utilizing the fighter-bombers, primarily because of the aforementioned shortage of air-land liaison officers.[67]

4.3. Transport and attack helicopters

The attack helicopter pilots had gained vast experience in air-land cooperation during the Second Intifada. However, they found that the Lebanese environment required a different modus operandi.[68] While this cooperation had been regularized by the Territorial Division's Joint Cells in the Occupied Territories, the number of brigades and divisions deployed during the war required reliance on liaison officers. Centralization had been effective for the attritional warfare in the Occupied Territories where the IDF was able to determine the number and size of engagements. The IAF could thus reduce the number of liaison officers, so necessary for maneuver warfare but expensive in terms of manpower. Consequently, the IAF was unable to provide sufficient numbers of liaison officers to the fighting units during the war and deprived them of effective close air support.[69] The shortage of liaison officers may also affect the ability of the transport helicopters to support the ground forces. The squadrons were

deployed to forward bases near the border immediately after the kidnapping of the soldiers by Hezbollah. As a precautionary measure the IAF called up reserve transport helicopter pilots; this decision later proved invaluable.[70] During the war, the transport helicopters performed primarily resupply and evacuation missions. The two medium-size transport helicopter squadrons received unit citations for daring evacuation missions.[71] By and large, helicopters were not used as an offensive tool though they did participate in some special operations (such as the highly publicized incursion in Ba'al Beck, deep in the Hezbollah-held territory).[72] Furthermore, a large-scale conventional helicopter-born air mobility operation was cancelled prematurely after one of the Helicopters was shot down.[73]

Even before the war, the IAF recognized the need to increase the level of protection for its helicopters. However, protecting them from low-signature ground-to-air missiles proved a daunting challenge, and one CH-53 was lost during the war.[74] CEO of the Elisra Group Danni Biran provided some insight concerning the protective systems utilized when he stated the following concerning the company's civilian product: "Protection depends on advance warning. The IR- Technology Missile Warning System that we have developed, and are supplying, incorporates the decades of experience our Group has accumulated as an electronic warfare systems house. This civil aviation project is an extension of our position as the supplier of Missile Warning Systems for Israel Air Force F16 I fighters and combat helicopters".[75]

4.4. UAVs

The UAVs provided the ground forces in Lebanon with much needed real-time intelligence. According to Colonel Tamir Yadaai, wartime commander of the Golani Infantry Brigade, previous experience with the UAVs gained in the Gaza Strip had served them well during the war.[76] The UAVs also participated in the effort to locate and destroy Hezbollah rocket launchers.

4.5. Doctrine

The Second Lebanon War marked the culmination of some of the long-term processes initiated by the IAF. First, the establishment of the Air Campaign Planning Department provided the IAF with enhanced operational planning capabilities. During the war, the department held

several significant responsibilities. Its staff processed General Staff orders into operational orders for the IAF. They also provided the IDF with estimated consequences of various actions.[77] In addition, the department maintained the IAF intranet website providing summaries of daily operations.[78] Thus, in contrast to previous conflicts, the IAF focused not only on successfully completing its missions but also endeavored to contribute its share to the overall campaign plan. This was a result of the developments discussed earlier in the section devoted to the Second Intifada.

During the war the IAF also implemented the first viable solution to the Hezbollah rocket launchers. The IDF developed no less than seven types of launch detecting systems. The IAF developed a communications network capable of transmitting launch-site targeting information to a number of attack squadrons simultaniously.[66] Indeed, some of the systems that proved successful during the war were not even operational prior to it.[79] It is noteworthy that senior IAF officers had warned prior to the war that the service possessed no effective means of targeting short range rockets.[80] This prediction proved correct. The IDF's inability to stem or even limit the firing of short range rockets on Israel was harshly criticized during and following the war. The war also demonstrated the shortfalls of the air-land cooperation mechanism developed in the Second Intifada. Nevertheless, considerable success was enjoyed in several areas. For example, relying on a new doctrine, the IAF supplied forward forces by air.[81]

Conclusions

The five long conflicts which took place over the past two decades significantly influenced the very character of the IAF. The service allocated a considerable share of its resources to the prolonged intensive operational activity; it shortened periods of qualification for junior pilots in operational squadrons; it decreased the number of joint training exercises. As a partial solution to these changes, the IAF began to combine training flight-time and operational sorties. In terms of personnel, the IAF underwent three developments. First, there was a significant increase in UAV personnel and changes were introduced to its operator training. Previously reserved for failed flight cadets, the IAF now accepts male and female trainees with no flight background to the "School for UAVs". Second, the IAF increased its reliance on reserve pilots in order to lighten the burden. Third, the

operational environment of the Second Intifada defined the operational reality for a generation of pilots. The sudden outbreak of the 2006 War forced a rapid adaptation to a very different operational reality. It demonstrated the need to increase the familiarity with a larger range of terrains and scenarios. In terms of status, attack helicopters have become more dominant within the IAF. Their surgical strike capabilities ensured them a central role both in Lebanon and in the Occupied Territories, while the fixed-wing squadrons were less relevant for LIC missions. Senior IAF and IDF commanders understood that employing fighter-bombers would most likely result in international condemnation. Similarly, operational success afforded the UAVs unprecedented prestige and resources. The result was a kind of 'division of labor' in which the attack helicopter squadrons are responsible for the operational routine in LICs while the fixed wing squadrons train for HICs and special missions against long distance targets (e.g., the attack on the Iraqi Nuclear Installation in 1981).

In conclusion, the IAF was generally successful in adapting to the LIC conflicts fought from 1982 through 2006. However, this adaptation may have limited its capability to operate in other kinds of conflicts. The fighter-bomber's difficulty to provide close air support, brings to question their ability to do so in the future against regular forces. One main reason is that the IAF failed to fully realize the long-term effects of the adaptations and has been neglecting capabilities which may be missed in HIC. In order to counter these tendencies it should perhaps invest more in war gaming, military education programs and research centers such as those employed by the US Army Training and Doctrine Command. Finally, despite improved air-land cooperation, the IDF services still operate and develop their force structure independently. Without greater integration and coordination in the areas of education, procurement, research and development, and operational planning the IDF and IAF will continue to fall short of realizing the full potential of the Israeli air power.

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[1] The author thank Dov Glazer and Davis Lewin for their useful comments on previous drafts of the article. Unless mentioned otherwise all translations from Hebrew to English are by the author. The author holds full responsibility for any mistake which was made in the article.

[2] The First Intifada was essentially a civil resistance campaign; the IDF was confined to policing activities and the IAF's participation was consequently minimal. Therefore it will not be analyzed in the current article.

[3] "Low intensity conflict is a political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states. It frequently involves protracted struggles of competing principles and ideologies. Low intensity conflict ranges from subversion to the use of armed force. It is waged by a combination of means, employing political, economic, informational, and military instruments. Low intensity conflicts are often localized, generally in the Third World, but contain regional and global security implications ", United States Department of Defense, *Field Manual 100-20/ Air Force Publication 3- 20. Military Operations in Low Intensity Conflict,* 12 May 1990. Available at: http://www.globalsecurity.org/military/library/policy/army/fm/100-20/index.html. Access date: 16.9.2008.

[4] Eliot A. Cohen, Michael J. Eisenstadt and Andrew J. Bacevich, *Knives, Tanks and Missiles: Israel's Security Revolution,* (Washington, D.C: The Washington Institute for Near East Policy, 2008) p. 20.

[5] Ibid, pp. 21- 23.

[6] The Israeli Security doctrine was never officially formalized but is rather a collection of assumptions, guidelines and predictions which direct the decision making process of political and military leaders since the 1950s. One such assumption has been that battlefield decision would require employing the various elements of the IDF as a joint force. For a comprehsnvie discussion of Israeli Security Doctrine see: Israel Tal, *National Security: The Israeli Experience*, (Westport, Conn: Prager, 2000).

[7] Eliot A. Cohen, Michael J. Eisenstadt and Andrew J. Bacevich, op. cit, pp. 23-24.

[8] For a comprehensive analysis of the historical development of IAF force structure and doctrine see: David Roodman, *Defense and Diplomacy in Israel's National Security Experience*, (Brighton, UK: Sussex Academic Press, 2005) 40- 54.

[9] The IAF's original missions included: securing Israeli airspace, gaining air superiority, supporting land operations, strategic bombing, transporting forces and material and collecting activities. Eyal Ahikar (Los), *The Air Force's role, missions and strategic bombings*, available at: http://www.fisherinstitute.org.il/_Articles/Article.asp?ArticleID=122&CategoryID=22&Page=1. [Heb].

[10] Alex Fishman, "Fighting Spirit is Not Enough", Migvan, 81- 82, 1983, p. 31. [Heb].

[11] *20 Years of the Cobra Array.* [Heb]. This is an internal IAF publication, date of publication unknown.

[12] Eliezer Cohen and Zvi Lavi, *The Sky is Not the Limit*, Tel- Aviv: Maariv, 1990, p. 343- 349. [Heb]

[13] Shlomo Eliah, "Late Withdrawal and Unsatisfying Leadership", *Shiryon,* 9, 2000, p. 19. [Heb]

[14] Alex, "The Security Zone- an Internal Look", *Maarachot*, 311, 1988, p. 36. [Heb]

[15] Kenneth C. Schow Jr., *Falcon's Against the Jihad: Israeli Airpower and Coercive Diplomacy in Lebanon*, (Maxwell Air Force Base, Alabama: School of Advanced Airpower Studies, 1994). Available at: http://www.fas.org/man/eprint/schow.htm . Accessed: 7.9.2008.

[16] Immanuel Rozen, "When the Airplanes are Sent to Bomb", *Maariv* (23 October 1987), p. B5. [Heb]

[17] Ibid, ibid.

[18] Ibid, ibid. Concerning IDF special operations prior to the 1982 War see: Mike Eldar, *Flotilla 13: The Story of Israel's Naval Commandos* (Israel: Maariv, 1993), 517- 593. [Heb]

[19] Lior Shlein and Dror Gloverman, "G-3 Yossi: Due to Ground-to-Ground Threats we Developed new fields and long-range operations capability", *IAF Journal*, 123, 1998. [Heb]

[20] Oded Marom (ed.), *40 Years for the First Helicopter Wing* (Palmachim: Ministry of Defense Publishing House), 14-15. [Heb]

[21] Moshe Tamir, *Undeclared War*, Tel Aviv: Ministry of Defense, 2005, p. 125. [Heb]

[22] *20 Years for the Cobra Sector*, p. 8. [Heb], Hagar Shapira, "Ode to the Cobra", *IAF Journal*, 166, 2005. [Heb]

[23] Ibid, p. 3.

[24] Aanat Weshler, "18 Years of Experience in Lebanon", *IAF Journal*, 136, 2000. [Heb]

[25] Tamir, op. cit, p. 124.

[26] Lior Shlein and Dror Gloverman, "Deputy G- 3 for Helicopters Begins his Tenure", *IAF Journal,* 123, 1998. [Heb]

[27] Giliah Segev, *The UAV and Its Operational Applications*, (MA Thesis, Tel- Aviv: Faculty of Social Science, the Department of Political Science, Security Studies Program, 2000), 54. [Heb]

[28] Tamir, op. cit, p. 125.

[29] Ibid, ibid.

[30] Ibid, pp. 131- 132.

[31] Israel State Comptroller (1997). "Transport Helicopter: Air and Ground Cooperation", Annual *Report 47*, Jerusalem: Governmental Printing, p. 1007. [Heb]

[32] Lior Shlein and Dror Gloverman, op. cit. These developments brought several Israeli military and airpower thinkers to call for a greater reliance on the IAF and even for a restructuring of the IDF in order to make the IAF into the leading service. Their influences will be discussed in the following pages. For a comprehsnvie study by the one of leading airpower thinker , which was written during the last years of the Security Zone see: Shmuel Gordon, *The Vulture and the Snake: Counter- Guerilla Air Warfare- the War in Southern Lebanon*, (Ramat- Gan: Begin- Sadat Center for Strategic Studies, Bar Ilan University, 1998).

[33] For a general review of Israeli military policy during the Second Intifada see: Yoram Peri, *Generals in the Cabinet Room*, (Washington: United States Institute of Peace Press, 2006).

[34] Lior Shlein and Noam Ofir, "IAF Commander Dan Halutz: Employing the Air Force is a difficult dilemma", *IAF Journal*, 136, 12/ 2000. [Heb]

[35] Amos Harel and Avi Isacharoff, *The Seventh War* (Israel: Miskal, 196- 197. [Heb]

[36] Noam Ofir and Lior Shlein, "Air Force Commander Dan Halutz: If the situation in the territories escalates, the air force will operate differently", *IAF Journal*, 135, 2000. [Heb]**.**

[37] Ibid.

[38] Anat Washler, "We hoped for combat missions", *IAF Journal*, 138, 2001. [Heb].

[39] Ran Rosenberg and Roni Winkler, "Attack Helicopters should be used whenever feasible", *IAF Journal,* 146, 2002. [Heb]**.**

[40] Ibid.

[41] Liad Bareket, "The missiles were targeted against the windows from which the Soldiers were hurled out", *IAF Journal*, 135, 2000. [Heb]**.**

[42] David A. Fulghum and Robert Wall, "Israel's future includes armed, long- range UAVs", *Aviation Week and Space Technology*, 156, 25, 24.6.2002, p. 83.

[43] Yakir Elkariv and Lior Shlian, "IAF Commander Major General Danni Halutz: the IAF VISINT sector has grown significantly since the beginning of the conflict with the Palestinians", *IAF Journal*, 145, 2002. [Heb]**.**

[44] Sivan Gazit, "Big Brother Sees All", *IAF Journal*, 170, 2006. [Heb]

[45] Fulgham and Wall. See also: Moria Diamont, "A Broader Perspective", *IAF Journal*, 180, April 2008. For a comprehensive discussion of the quality of real-time intelligence analysis see: Chen, "Real Time Intelligence Analysis from Unmanned Aerial Vehicles", *Maarachot,* 395, 2004, pp. 44- 46.

[46] David A. Fulghum and Robert Wall. "UAVs Validated In West Bank Flight", *Aviation Week and Space Technology*, 156, 19, 2002, 13.5.2002, p. 26.

[47] Ibid, ibid.

[48] Ibid, ibid.

[49] Lior Shlein and Noam Ofir, op. cit. [Heb]

[50] Eliezer Shkedi, "The IAF Campaign in the Intifada", in: Oded Marom (ed.), Air Power Counter Terrorism, (Herzelia: The Fisher Institute for Air and Space Strategic Studies, 2005) pp. 31- 32.

[51] Lior Shlein and Noam Ofir, op. cit.

[52] Shkedi, op. cit, 33- 34.

[53] Noam Ofir and Lior Shlein, op. cit.

[54] Anat Weshler, "Battalion Commander: This is Six*", IAF Journal*, 136, 12/2000. [Heb]

[55] Noam Ofir and Lior Shlein, op. cit.

[56] B. C. Kessner, "Terrorism Fight Drawing Air and Ground Forces Closer Together", *Defense Daily International*, 6, 22, 2005 (3 June 2005).

[57] Dan Halutz, "The Conflict from the Aerial Dimension", in: Anonymous (ed.). *Defense Strategies in Light of the the Israeli- Palestinian Conflict Seminar* (Herzelia: The Fisher Institute For Air and Space Strategic Studies, 2003) pp. 18-19. Available at:

http://www.fisherinstitute.org.il/_Articles/Article.asp?ArticleID=61&CategoryID=23&Page=1 [Heb]

[58] Ibid, pp. 19- 20.

[59] Ande Mesler, "New study identifies deep fissures between the IAF and the ground forces", *IAF Journal,* 132, 5, 2000. [Heb]

[60] Shkedi, op. cit, pp. 31- 32.

[61] B. C. Kessner, "New Department Transforming IAF for LIC Success", *Defense Daily International* (11 March 2005).

[62] Ibid

[63] Gabriel Siboni, "The Military Campaign In Lebanon", in Meir Elran and Shlomo Brom (eds.), *The Second Lebanon War: Strategic Dimensions*, (Tel- Aviv: Miskal, 2007) 61- 62. [Heb]

[64] Ibid, p. 61.

[65] Ibid, p. 62.

[66] Amir Rapaport, *Friendly Fire*, (Tel- Aviv: Maariv, 2007, pp. 113- 116. [Heb]

[67] This argument was presented by a wartime infantry commander: "Golani Commaner, Col. Tamir Yadaai: Part of operational planning should be conducted jointly*", IAF Journal*, 171, 2006. [Heb]

[68] Sivan Gazit and Elazar Ben Lolo, "In the aftermath of the war: A significant increasing of joint air-land training", *IAF Journal*, 173, 2, 2007. [Heb]

[69] Siboni, op. cit p. 62. See also the testimony of Col. Yaddai, Yael Bar and Lior Estlain, op. cit [Heb]

[70] Sivan Gazit and Nina Mindrol, "The Rescuers", *IAF Journal*, 170, 2006. [Heb]

[71] For example see the reasons for the citation for bravery to Black Hawk helicopter 'Desert Birds' squadron available at: http://www.gvura.org/?l=he&a=5064. Accessed: 27.5.2008. [Heb]

[72] See for example Rappaport, pp. 217- 225.

[73] Ibid, pp. 303- 304, 323- 325. According to Amir Rappaort, CH- 53s continuously supported special operations missions and also this large-scale air mobility operation. Ibid, p. 340.

[74] Amir Eshel, "The Israeli Air Force and the Asymmetric Conflict", in Oded Marom (ed.), *Airpower and the Asymmetric Conflict*, (Herzelia: the Fisher Institute for Air and Space Strategic Studies, 2007), p. 41. [Heb]

[75] Anonymous, "Elisra Group Selected to Provide Protection Systems for Passenger Aircraft", *PR Newswire US* (12 October 2004).

[76] Yael Bar and Lior Estlain, op. cit. [Heb]

[77] Noam Gutman, "Establishing the Rules of the Game", *IAF Journal*, 172, 2006. [Heb]

[78] Ibid.

[79] Yael Baar and Lior Estlain, "Lieutenant General Amir Eshel: the 'sensors to shooters' capabilities we used to hunt launchers were singular in the history of military aviation", *IAF Journal*, 171, 10/2006. [Heb].

[80] Eshel, op. cit, pp. 43- 44.

[81] Yael Baar and Lior Estlain, op. cit.

The Naval War in Baltic: November 1939 – March 1940

By Donald Stoker PhD, Professor, US Naval War College[1]

In September and October 1939 the Nazis and Communists quickly dismembered Poland, but this, of course, hardly brought the sudden descent of peace upon the Baltic. The Molotov-Ribbentrop Pact of August 1939 had not only opened the door to Poland's destruction, but also that of the Baltic States and their neighbor to the north, Finland. The Soviet colossus wasted little time in moving to seize its share of the spoils.

1. Preparing for war

The Soviets spent an enormous amount of time in the interwar decades studying how to fight in the Baltic Sea. They planned for war against their smaller neighbors, Sweden, Finland, the Baltic States, and Poland, as well as the region's dominant power, Germany, and to counter any repetition of British and French intervention during the Russian Civil War. The Baltic's geography, particularly the restrictive confines of the Gulf of Finland, exercised a great influence on their thinking. The Gulf is shallow, island studded, easily blocked and mined, and plagued by ice from December to April.[2]

The Soviets began their post-Civil War naval building with an effort directed primarily at coastal defense, but shifted to building an ocean-going fleet in 1936. The Red Navy of 1939, at least on paper, was a formidable force, combat units, from Motor Torpedo Boats (MTBs) to battleships, numbered 454. Its forces in the Baltic included two refurbished dreadnought battleships, *Oktyabrskaya Revolutsiya* and *Marat*, each displacing 23,000-tons. Supporting these were one cruiser, a dozen destroyers, 56 submarines, as well as numerous smaller vessels and aircraft, including a naval air arm.[3]

Finland and the Baltic States prepared to defend themselves against further Soviet aggression from the moment they seized their independence in World War I's bloody aftermath. Each signed various military accords and treaties, secret and otherwise, and participated in various failed efforts to create some form of a Baltic Entente. Estonia proved to be the linchpin (albeit a weak one) of military cooperation in the Eastern Baltic. In

addition to their alliance with Latvia and their secret military arrangements with Poland, the Estonians also pursued military cooperation with Finland, an arrangement which the Finns eagerly reciprocated, and for similar reasons: a fear of the Soviet Union.

Naval defense preparation took the form of warships, aircraft, and coastal defense guns. The centerpieces of the Finnish navy were a pair of coastal defense ships, *Väinämöinen* and *Ilmarinen*, each displacing 3,900 tons. The Finns also had five small though fairly modern submarines. *Saukko*, at 114 tons, was the world's smallest true submarine, *Vesikko* was only 250 tons, and the three *Vetehinen*-class vessels displaced 493 tons each. The Germans helped build all of them, secretly (more or less) and illegally, experience that proved particularly beneficial to the Nazi regime's development of its U-boat arm. The Finnish navy suffered from very limited air assets, but additional vessels included 10 torpedo boats, four gunboats, and a number of auxiliary vessels. The Soviet Navy was ten times larger.[4]

The most important Latvian warships were the former German minesweeper *Virsaitis*, and two horrible French submarines built in the 1920s, *Spidola* and *Ronis* (390/514 tons). There were also some smaller ships, including a pair of minesweepers. The Latvian navy had 650 men at the end of the 1930s. Coastal fortifications included the works at Daugavgriva (Dünamünde), armed with a variety of Russian, French, and British guns.[5]

The Lithuanians possessed one significant warship, the former German gunboat *Prezydentas Smetona* (500 tons) and six Coast Watch armored speedboats. All lost their home when the Germans occupied Klaipeda in March 1939. The Lithuanians had no other anchorage that could take the *Smetona*, but the Latvians gave her refuge in Liepaja (after the Lithuanians disarmed her).[6]

The most useful Estonian naval craft were a pair of Vickers-built submarines, *Lembit* and *Kalev* (620/850 tons). They also had a former German torpedo boat, *Sulev* (286 tons), *Pikkeri*, a 540 ton gunboat built in Estonia in 1939, and other small craft. The total complement of the Estonian Navy, including the 900 manning the coastal artillery, was 2,100.[7]

Estonia and Finland each inherited extensive Tsarist coastal fortifications. After the destruction of the Russian Navy in the Russo-Japanese war,

Russia built an extensive system of coastal defenses called the Peter the Great sea fortress. This entailed the construction of gun batteries on strategic islands and coastal areas in Russian-controlled parts of the Eastern Baltic. The fortifications were to prevent any possible enemy foray into the Gulf of Finland and protect the sea approaches to St. Petersburg. Many of these inherited sites were in poor condition.[8]

Typical of these installations were the Estonian emplacements on Nargen Island. Here, before World War I, the Russians had constructed two 12-inch turreted batteries, their revolving mechanisms identical to those of the Russian dreadnoughts built in 1914. In 1917, Russian naval officer Lieutenant Micklashevski, along with 36 men, destroyed the batteries and the island's other military installations to keep them from falling intact into German hands. A 1924 British visitor to the installation remarked that "there is no doubt that this officer had a thorough knowledge of demolition work." Nevertheless, the Estonians invested much time and effort reconstructing the batteries.[9]

The Estonians transported one gun from Nargen to Aegna Island. Guns from Dagö also found their way to Aegna. Eventually, the Estonians armed the old Tsarist fortress with four 12-inch guns paired in two concrete emplacements, as well as a battery of four 5-inch pieces. Aegna, and its sister island of Naissaar, collectively known as the Isle of Wulf, constituted two of the most important Estonian coastal defenses.[10]

To the north of Naissaar and Aegna, and just off Porkkala peninsula, lay the Finnish island of Mäkiluoto (MacElliot), which also held strong coastal fortifications. Between these two islands was the only spot in the Gulf of Finland that the Finns and Estonians (or any other power for that manner) could easily block, thus preventing entry to or exit from the Gulf. The distance between the two islands is only 35 kilometers, standard 6-inch guns have a range of 18 kilometers. The 12-inch guns on Naissaar and Aegna had a range significantly longer reach. Ten-inch guns (254mm) armed the important Finnish battery at Saarenpää on Koivisto (which is also known as part of the Björkö defenses). Through the use of artillery on the islands and the laying of mine fields between the fortresses, the Finns and Estonians believed, as did some foreign observers, that the Soviet fleet could be bottled-up in its Kronstadt base.[11]

Cooperation between the military forces of Estonia and Finland began during Estonia's war for independence when a contingent of Finnish troops came to Estonia. The skill and bravery of the Finns played a significant role in winning Estonia's freedom and also laid a strong foundation for cooperation between the two states.[12] Ethnic and linguistic similarities, as well as the distinct threat of invasion from the Soviet Union, also served as stimuli for the strengthening of relations between the two.

In the 1920s though, the Estonian's proved much more eager to reconstruct the old Russian coastal batteries than did their Finnish neighbors. The peace treaty signed with the Bolsheviks in 1920 required Finland to dismantle the strongest coastal batteries, those on Ino Island, because their proximity to Kronstadt worried the Soviets. Before destroying these, the Finns removed and stored the guns.[13]

At the time, the responsibility for Finland's coastal defense lay with General Oskar Enckell. Enckell, one of the most talented Finnish officers, and a veteran of the Russian Army, headed a government-appointed committee to examine the problems of Finland's coastal defense and develop plans for a Finnish Navy. Enckell and his committee spent a year studying the issue and published their findings in a four volume report. Coastal fortifications did not play a large part in Enckell's plan, and his committee only recommended the construction of batteries for the defense of Helsinki. In 1926, the Finnish parliament's defense committee, the Revision Committee, released its findings. Derived partially from the work of General Sir Walter Kirke's mission, this report also argued against the reconstruction of the coastal fortifications.[14]

In the mid-1920s, after the expulsion of the former Russian officers from Finnish service, the Finns adopted a much more active operational plan for the defense of their coast. The plan, VK-27, was prepared under the direction of Colonel K. M. Wallenius. In addition to increasing contacts with Sweden, Wallenius' program examined the potential of military assistance from the Baltic States in the event of a conflict. The change in focus also brought about a search for a means of preventing the potentially dangerous passage of the Soviet fleet out of the Gulf of Finland. Such an event could prove fatal to Estonia and Latvia, two potential Finnish allies, as well as dangerous to Finland itself. The Finns determined that the reconstruction of some of the old Tsarist batteries could possibly prevent this. Strategically, the most important Finnish island fortifications were

those on Mäkiluoto Island, which was, of course, directly across from the Estonian artillery on Naissaar and Aegna, and in the narrowest part of the Gulf of Finland.[15]

The idea of cooperation between Estonia and Finland apparently resurfaced through the efforts of Estonian Admiral Hermann Salza in 1930. There had been some contacts between the military forces of both states in the 1920s and there was an unsuccessful bid on the part of Estonia for a firm military agreement between the two nations in January 1922. Finnish military authorities would not approve formal ties, believing that Estonia stood to gain much more from this than Finland. But some elements in Finnish political and governmental circles had an interest in such a deal. The leadership of Finland's Coast Defense forces was reportedly "ready to co-ordinate the system of Finnish coast defense with that of Estonia."[16]

In 1927, the two states signed an agreement allowing the military officers of each nation to serve in the forces of their counterpart. Despite this, relations between Finland and Estonia became strained in 1929. Finland had refused to agree to the Litvinov Accords (a Soviet-sponsored extension of the Kellogg-Briand Pact). This brought criticism from Estonia. An incident in September 1929 generated additional bad feelings. An Estonian patrol boat mistakenly fired upon a Finnish customs craft and the Finns demanded that the Estonian's conduct an investigation. An apology from the Estonian Frontier Guard Headquarters smoothed ruffled feathers. Neither incident proved a barrier to future cooperation.[17]

The British secretly believed that the Finns should not become involved in any entangling agreements with the Baltic States. On 26 January 1922, Sir Esmond Ovey of the Foreign Office wrote that "if Finland remains outside the orbit of the Baltic States she should never be attacked (if she were attacked by a reconstituted Russia the Baltic States could not save her)." The British believed that the best course for Finland would be to tie herself to a permanently neutral Baltic bloc. Ovey wanted the Finns informed about Britain's opinion, even though he realized that it was not really proper for the British government to tell another state how it should conduct its foreign policy. Lord Curzon, the Foreign Secretary, reasoning that since British advice had not been asked and that therefore it "would be a serious responsibility to volunteer it," killed Ovey's suggestion.[18]

In the spring of 1931, the Finns began to rebuild Mäkiluoto, off Porkkala, something the Estonians were eager for them to do. The Finns themselves saw this as an urgent task even before the suggestion from their neighbor. Both believed that by cooperating they could make the Gulf of Finland very dangerous for Soviet warships. They reconstructed the Obuchoff turret and outfitted it with a pair of 12-inch guns. When the project was completed in 1933, the Finns had one of the strongest and most effective coastal guns in the world.[19]

Effective functioning of the Mäkiluoto battery depended upon cooperation with the Estonian guns across the Gulf. Estonian officers made no effort to conceal from a Swedish military attaché Estonia's intention to cooperate with Finland in this way. Estonia and Finland also planned to lay mines in conjunction with the use of their guns, discussed measures for cooperation among their submarine forces, holding combined maneuvers with these boats in the Gulf of Finland in July 1939. The two navies also exchanged operational plans. The Soviets were well aware of what the Finns and Estonians were up to through the activities of their agents in Tallinn, and even possessed copies of all of the Estonian Navy's operational plans.[20]

As early as 1931, when the Finns embarked upon the reconstruction of Mäkiluoto, foreign observers began to notice this growing military relationship between Finland and Estonia. The two states never signed a formal agreement, primarily because the Finns pursued a policy of neutrality of which a strong element was a desire to avoid any potentially dangerous entanglements. This though, did not prevent secret military arrangements.[21]

British observers speculated that the Estonians were much more eager than the Finns to pursue military cooperation and that the Estonians also desired the conclusion of some type of firm military accord. General Johan Laidoner, the Estonian Chief of Staff, certainly wanted stronger relations, and once remarked that the Finnish and Estonian forces concealed nothing from one another. His October 1935 visit to Helsinki was another step toward furthering their collaboration. Few British diplomats thought a formal alliance existed, but by at least 1936 they believed the two Finno-Ugric nations had strong arrangements for cooperation in the event of war with the Soviet Union.[22]

The Finnish and the Estonian war plans for the Gulf of Finland centered upon efforts to close it to the Soviet Navy. Would this have worked? The matter was never tested, but least one observer from the period did not believe that the Finns and Estonians could close the Gulf. A Swedish naval officer, S. Nordgren, after visiting Aegna in September 1936, commented on the high quality of the gun crews and their weapons, but observed that the Estonian artillery spotting and observation facilities were inadequate. This led him to express doubts about Estonia's ability to use the guns at their maximum ranges, as well as in cooperation with the Finns.[23]

In the early 1930s at least one Finnish observer also expressed a lack of confidence in the possibility of closing the Gulf. An integral part of the plans involved laying substantial mine fields in key areas. At the time, the two states lacked sufficient mines to lay these fields.[24] In the early 1930s, Salza had planned to use the destroyers *Vambola* and *Lennuk* in cooperation with the Finnish Navy to sow the mines. Each of these vessels carried only 80 mines, making the laying of large fields before a sortie of the Soviet fleet virtually impossible. Moreover, the Estonians sold these two vessels to Peru in 1933, replacing them a few years later with two submarines that carried only 30 mines each. This made the successful fulfillment of their arrangements with Finland even less likely.[25] In theory, the Finnish-Estonian idea was sound; in World War II the Nazis closed the Gulf, but the Finns and Estonians lacked the means to fulfill their plan. And when the time to fight arrived, the Estonians lacked the will.

2. The fate of Baltic States

At the outbreak of World War II Estonia, like many other states, declared its neutrality. This though, could not keep Estonia safe. Moreover, the destruction of Poland directly impacted the small nation's navy. The Polish submarine *Orzel* put in to Tallinn because its commander was ill, its subsequent escape from Estonia's effort to intern it brought about a shake-up in the leadership of the Estonian Navy. Captain Valev Mere, the Navy's Commander-in-Chief, along with his Chief of Staff, Captain Rudolf Linnuste, lost their posts. Mere had become the head of the Estonian Navy on 1 November 1938 when he succeeded Captain Grenz upon the latter's retirement. Grenz had replaced Baron Admiral Herman Salza. In 1940, Salza immigrated to Germany with most of Estonia's Baltic German population. He unsuccessfully petitioned the Kriegsmarine for a commission, but he did receive a monthly pension of 500 reichsmarks.

Upon Mere's departure, Captain-Major J. Santpank became the acting Commander-in-Chief, and Captain-Major B.A. Linnenberg became the acting Chief of Staff. All of these men were former Tsarist naval officers.[26]

The *Orzel* incident also provided the Soviet Union with an excuse it could use to apply diplomatic pressure upon Estonia. The Soviets contended that the Baltic situation constituted a severe danger to the Soviet Union, something *Orzel's* escape had made this increasingly clear. Soviet Foreign Minister Vyacheslav Molotov insisted that the Soviet strategic position in the region had to be altered by securing naval and air bases along the Baltic coast that would enable Moscow to more efficiently defend Leningrad. The ultimatum presented to Estonian Foreign Minister Karl Selter said that "Suitable places for such bases are to be found on Estonian territory and Estonia must cede them to the Soviet Union." If the Estonian government refused, the Soviets promised the use of "more radical measures" as a means of altering the *status quo*.[27]

The Estonians decided resistance was futile, which raises the question as to why they invested in a military force intended to fight the Soviet Union if they had no intention of using it, though their assessment of their strategic situation was undoubtedly apt. Moreover, the Soviets indeed planned to attack Estonia if Tallinn refused to bow. The Estonians tried to negotiate a settlement and dispatched a delegation to Moscow that arrived on 27 September 1939.[28]

In Moscow, Molotov, as a means of applying further pressure, informed the Estonians that a Soviet steamer, *Metallist*, had been torpedoed by an unknown submarine. Obviously, the implication was that the submarine was *Orzel*. What is also as obvious is that Molotov. There was indeed a Soviet merchantman with this name, and it was torpedoed, but by a Soviet ship in order to manufacture a *casus belli* against Estonia.[29]

The Estonians submitted to the Soviet ultimatum and the signature of a Soviet-Estonian mutual assistance pact followed. The treaty, signed on 12 October 1939, gave the Soviets four naval bases, as well as fuelling rights and temporary use of Tallinn until the completion of the construction of a base at Paldiski, 25 miles from the Estonian capital. The treaty became the prototype for those forced upon Latvia and Lithuania.[30]

Soviet pressure had already fallen on Latvia. On 2 October 1939 the Latvian Foreign Minister, Vilhelms Munters, arrived in Moscow where he hopelessly pled Latvia's case for neutrality to Stalin and Molotov. On 5 October Latvia signed a Treaty of Mutual Assistance that gave the Soviet Union bases at Ventspils and Liepaja. Five days later, the Soviets turned on the Lithuanians, who also submitted. Immediately, the Soviets began using their new bases.[31]

The effort the Baltic States had invested in the formulation of cooperative agreements and defense forces proved wasted. During the important and critical days of September and October 1939 there was virtually no military or political cooperation between the Baltic States. The Soviet Union negotiated unilateral treaties with each, splitting them from one another. The respective leaders of the Baltic States only began to seriously consider military cooperation after the Soviets established their military bases in the three nations. By this time it was too late.[32]

The treaties with the Baltic States improved the strategic position of Stalin's empire in the Baltic Sea and vis-à-vis Nazi Germany. Stalin even gained Lithuania, minus Klaipeda, a nation that had fallen in the German sphere of influence under the earliest terms of the Molotov-Ribbentrop Pact. The partition of Poland also extended the Soviet frontier. Stalin now turned to another area the Molotov-Ribbentrop Pact had designated as within the Soviet sphere of influence—Finland.

3. The Winter War

On 6 October 1939, even before the finalization of the treaties with the Baltic States, the leaders of the Soviet Union invited Finnish representatives to Moscow to discuss changes to their mutual border. The Soviets wanted territorial concessions that would make the approaches to Kronstadt, Leningrad, and Murmansk less vulnerable to a foreign invader. The Soviets also insisted upon the sale of some Gulf of Finland islands and the leasing of naval base facilities at Hanko (Hangö) at the Gulf's mouth. On all matters but the issue of the base, the Finns proved willing to negotiate. Field Marshall Carl Mannerheim, believing the army unprepared for war, urged the government to offer the Soviets Jussarö Island, east of Hanko, for their base, but the politicians refused. The Soviets considered the base the key issue. The Kremlin ended the Moscow discussions on 13 November and began preparing for war. On 30

November, the Red Army invaded Finland. With the issue of the order "Fakel" (Torch), the Soviets launched their naval war against Finland.[33]

Despite the fact that the Soviet Navy had long-planned for this fight, the approach of hostilities caught them off-guard. The Finns had been expected to bend under diplomatic pressure, so little was done to ready the navy for war, especially one fought in winter. Admiral Nikolay Kuznetsov, the commander in chief of the Red Navy, scrambled to prepare an operational plan, which was only issued on 23 November. The Red Navy was given five tasks: destruction of the Finnish Navy; establishing a blockade of Finland; assisting the Red Army's attacks; the seizure of various enemy Gulf of Finland islands; and protecting Soviet sea lines of communication (SLOCS). The Fleet Air Arm was to support the Navy's efforts, provide air cover to Leningrad, and bomb Finnish fortifications at Björkö, Hanko, and Helsinki.[34]

Finland's heroic land and air defense of its homeland is famous, the naval aspects of what came to be known as the Winter War are less well known. At the outbreak of World War II, Finland had declared its neutrality and attempted, unsuccessfully, to maintain this position, while also instituting maritime defense measures. These included the laying of minefields and the stationing of troops on the Aland Islands. A 1921 treaty with Sweden prevented Finland from putting troops here except in the event of war.[35]

When the Winter War began the Finnish Navy, commanded by Captain (later Admiral) E. Rahola, began adding to the mine fields it had already laid in the Gulf of Finland, and added a small field on Lake Ladoga. Sweden strengthened Finland's strategic position by mining the Swedish side of the gap between the Aland Islands and the Swedish coast.[36] Finland's two armored coastal defense ships, *Väinämöinen* and *Ilmarinen*, came into Turku to assist the defense of the port because of their anti-aircraft weapons. Finland's five submarines, as well as a number of gunboats and patrol boats, patrolled the Finnish coast and coastal waters as far as the Gulf of Riga.[37]

The coastal fortifications that the Finns had reconstructed during the interwar period played an important part in the nation's defense. On the morning of 1 December, the Red Banner Baltic Fleet, under the command of Admiral V. Tributs, launched its first significant operations against the Finns. The Soviet cruiser *Kirov*, accompanied by two destroyers,

approached tiny but fortified Rusarö Island off the Hanko peninsula. The purpose was reconnaissance for a planned Soviet landing near Björkö. The Soviets had particular fears of the Björkö defenses because its guns could fire on ships entering or exiting the key Baltic Fleet port of Kronstadt. The Rusarö batteries opened fire at a distance of fifteen miles. The *Kirov* replied, but ineffectively. After three minutes a Finnish shell struck the destroyer *Stremitelnyi*. The ship withdrew to the south. The duel continued for 10 minutes more, until Finnish rounds hit *Kirov*. The Soviet cruiser sustained significant damage, the full extent of which is unknown. She proved unable to make it back to Tallinn, her base of operations, under her own steam, and had to be taken in tow.[38]

Stiff Finnish resistance led to cancellation of the Björkö landing, but the Soviets mounted a number of other amphibious attacks, a harbinger of things to come during World War II. Between 30 November and 6 December, a force of 145 Soviet vessels landed troops on the undefended islands of Seiskari, Lavansaari, Someri, Narvi, Suur, Pien-Tytärsaari, and Suursaari along the far eastern shores of the Gulf of Finland. Soviet ships and shore batteries also lent gunnery support to Red troops fighting at Ino and Pumalo. Meanwhile, Soviet submarines operated from Tallinn and Libau, eventually sinking one German and one Estonian steamer.[39]

On 9 December the Soviets attacked the Finnish coastal batteries at Koivisto Island. These guns, which provided security for the right flank of the Mannerheim Line, fought this minor duel with Soviet ships in the midst of a snowstorm. The Red Navy launched a serious attack against the island on 10 December. In the midst of fog, the Soviet battleship *Oktyabrskaya Revolutsiya* shelled the Saarenpää batteries at the south-eastern end of Koivisto for an hour. The ship lobbed 200 13-inch (350mm) shells into the island. Finnish casualties were light: two killed, and three wounded.[40]

On 13 December, near the end of the second week of hostilities, Finland approached Great Britain for London's view of the legal situation that would result from a Finnish request for naval assistance in the form of the Polish destroyers that had escaped in August. The Finns had no illusions about the possibility of the destroyers re-entering the Baltic, instead, they asked the United Kingdom to dispatch them to the Arctic port of Petsamo, where the Finns had no significant naval forces. From there, the

Finns hoped the destroyers would interdict the flow of supplies to Soviet troops fighting in the area.[41]

The British replied that such a request would produce no change in the relations between Poland and the Soviet Union, but there were other difficulties. Technically, the Polish destroyers were under British control as an agreement signed between Poland and Britain had incorporated them into the Royal Navy. The British felt that military operations conducted by the Polish destroyers against Soviet forces would constitute an act of war against the Soviet Union on the part of Great Britain. The British didn't believe the Soviet's would go to war with the Allies over this, but they feared some form of Soviet reprisal, particularly the supplying of the Germans with submarines, as well as spare parts, something elements in the British government believed had already occurred.[42]

The Foreign Office, though not attracted to the Finnish idea, broached it with the Admiralty. The Admiralty felt that nothing could be accomplished by sending the Polish destroyers to Petsamo and was generally unwilling to commit the ships to such an operation. They felt the craft were already performing valuable duty. On the other hand, the Admiralty believed assigning the Polish submarines to the area might prove militarily profitable. But using the submarines threatened to open the same diplomatic can of worms. Because of this the Admiralty argued against any such commitment and the Foreign Office, after consulting with the Poles, informed the Finns of the impossibility of committing Polish naval forces to the Arctic.[43]

The Admiralty suggestion about the Polish submarines inspired some interesting discussion regarding their military and political usefulness. Three of the Polish submarines were interned in Sweden and Admiral Sir A. Dudley Pound, the First Sea Lord, suggested asking the Swedish government to release the boats for operations in the Baltic against Soviet warships.[44]

The Foreign Office felt certain the Swedes wouldn't consider such a proposal because it violated international law. Also, the Germans might consider Swedish participation in such a scheme a direct act against the Nazi state. The general consensus was that the idea should wait. One Foreign Office official suggested that as a means of compromising Sweden's diplomatic position, and apparently of also pressuring Sweden

into a more pro-Allied stance, Great Britain should assist the escape of the interned Polish vessels.[45]

While the diplomats wrangled the naval war continued. Shortly before noon on 14 December, two Soviet destroyers, *Gnevnyi* and *Grozjastsij*, appeared off Utö, a small island southeast of the Aland group. The Soviet ships opened fire from a distance of seven miles. The Finnish batteries on Utö replied, scoring a direct hit on the leading Soviet ship and starting an internal fire. A few minutes later, the Soviet ships withdrew.[46]

On 18 December the Soviets launched a concerted effort to knock-out the guns of the Saarenpää battery on Koivisto. These weapons had been playing havoc with Soviet efforts to break through the Mannerheim Line. Several waves of aircraft attacked the island all through the 18th. Shortly after noon, *Oktyabrskaya Revolutsiya*, a destroyer leader, five destroyers, four patrol ships, and numerous minesweepers, to attack the island. The Finnish Air Force, at the request of the navy, sent two Fokker XXI fighters, one of them piloted by the Finnish ace Eino Lukkanen, to attack the Soviet spotting aircraft. The overworked Finnish anti-aircraft gunners shot down Lukkanen, who survived the crash.[47]

At 12:28 *Oktyabrskaya Revolutsiya* opened fire on the Saarenpää batteries. The Finns replied, but the old, worn-out 10-inch artillery pieces soon broke down under the strain. The Soviet battleship drew closer to the island, but the Finnish gunners repaired one of their weapons and forced the ship to withdraw. The Soviet bombardment inflicted heavy damage on the island's facilities and forests, but did no real harm to the batteries themselves.[48]

The Red Navy launched another attack the next day, this time with the battleship *Marat* and her escort of three destroyers. *Marat* opened fire at a distance of 13 miles, the Finns replied shortly thereafter with only one artillery piece to save ammunition and wear on their guns. The weak response encouraged the commander of *Marat* to close to 11 miles. The Finns then opened-up with a second gun, hitting *Marat*; the Soviet warships withdrew. Again, the Finnish batteries escaped serious harm. *Oktyabrskaya Revolutsiya* and many of her sisters returned to shell Saarenpää, as well as Tiurinsaari, between 30 December and 3 January.[49]

The Soviets, like the Finns, also laid mines in the Gulf of Finland, but also asked the Nazis for assistance mining the Finnish coast. Hitler ordered the Kriegsmarine to offer its help, but then the Soviets withdrew their request a week later. The few mines the Soviets laid posed no serious threat as Finnish minesweepers quickly cleared the enemy fields. Finnish mines drew Soviet blood in January 1940, sinking the submarine *S-2*, the most significant naval loss of the war. A small German vessel was lost the same month to a mine laid by the submarine *Vesihiisi.*[50]

The attacks on Saarenpää and Tiurinsaari marked the last serious naval bombardment of the war. The arrival of winter and its encroaching ice soon halted naval activity. During the winter many of the sailors on both sides found themselves formed into infantry units and transferred to other duties. During the course of the war the Germans demonstrated solidarity with their temporary ally. Two days following the 8 December 1939 commencement of the Soviet blockade of Finland, the Soviets inquired about German willingness to provide supplies to the Red Navy's submarines operating in the Gulf of Bothnia. The *Kriegsmarine* recommended undertaking the measure and Hitler gave his approval. The Germans began the necessary preparations, but the Soviets also cancelled this request before the Germans acted.[51]

In February, the Soviets tried to sever Finland's sea communications with Sweden by concentrating their air attacks on Finland's icebreakers. Throughout the war Red submarines had been trying to cut-off Finland from the outside, failing miserably in their attempts. This new effort proved just as ineffective as Soviet aircraft consistently failed in their bomb attacks against moving ships; ice prevented the use of torpedoes. The end of the month saw the Soviets secure the long sought-after Björkö guns—after the Finns evacuated them.[52]

Overall, one must give low marks to the Soviet Navy's performance. The force failed to accomplish virtually all of its primary missions. It never instituted a solid blockade of Finland, or cut Finland's SLOCs, nor did it destroy the miniscule Finnish Navy. Indeed, the Soviet loss of the submarine *S-2* to Finnish mines meant that Soviet losses to enemy action exceeded that of the Finns, who lost only the coastguard ship *Aurora*, and this to the accidental explosion of one of its own depth charges. The Red Navy did successfully seize a number of Finnish islands, but all of these landings were unopposed.[53] The war ended on 13 March 1940.

The effort that Finland had expended in developing military cooperation with Estonia paid the Finns no dividends during the Winter War. Estonia actually assisted the Soviets where it could and adopted a policy of benevolent neutrality toward Stalin's regime. The Estonian government's foreign policy took on a decidedly anti-Finnish bent and was seen that way in Helsinki.[54]

4. The aftermath

The end of the Winter War allowed Stalin to once again turn his attention to the Baltic States. The Baltic States gave in to further Soviet demands, including the formation of governments sympathetic to Moscow. Latvian political leaders asked the Germans to send troops into the Baltic States in a final effort to keep out the Soviets. Berlin was deaf to their calls.[55]

Lithuania would be the first of Baltic States to again suffer Communist demands. On 30 May 1940, the Soviet Union issued new demands and falsely accused the Lithuanian government of arresting some Soviet soldiers and forcing them to betray military secrets. The best efforts of the Lithuanian government failed to sway Moscow. The Soviets made more demands regarding the stationing of Soviet troops, as well as the composition of a new Lithuanian government. Having no confidence in their ability to fight, much of the leadership fled abroad and the Soviets occupied Lithuania.[56]

On 9 June 1940 the Soviets ordered to Vice Admiral V. Tributs, the commander of the Red Banner Baltic Fleet, to prepare to move against Estonia and Latvia. He was ordered to take all the Estonian and Latvian warships and merchant vessels, land troops in Paldiski and Tallinn, blockade the Gulf of Riga, support the Red Army forces that would be advancing against Rakvere, and establish coastal patrols to sever Estonian and Latvian communications. Air units were meanwhile to prevent Estonian and Latvian aircraft from escaping to Finland or Sweden.[57] When the descent came the Soviets used 120 ships, from torpedo boats to the battleship *Oktyabrskaya Revolutsiya*, as well as extensive air assets. The operations also included the seizure of Aegna and Naissaar islands.[58]

On 16 June, the same day Soviet military units crossed into Lithuania, the Latvian and Estonian governments received identical notes from Molotov

demanding, among other things, the right to base additional Soviet troops in the two states. He gave both states eight hours to reply. The Soviet Union also falsely accused the both governments of attempting to form a quadripartite alliance between the three Baltic States and Finland. At nearly any other point in the preceding two decades such a statement would have been a true one because of the numerous attempts made by various political leaders of the Eastern Baltic to create a system of collective security. The Latvians and Estonians accepted the Soviet demands and Red Army troops entered the two states on 17 June. The independence of the Baltic States had ended.[59]

When the Soviet Union occupied Estonia it took possession of its navy, which included the two Vickers built submarines *Lembit* and *Kalev*. Both served in the Soviet Navy in World War II. *Lembit* survived the conflict and is now a museum ship in Tallinn. The warships of the Latvian Navy also passed into Soviet hands. Most, including the French-built submarines, did not survive the war.[60]

In the end, all of the effort the Soviets expended to secure their Baltic flank did nothing to help them once the expected war with Nazi Germany began. The Germans quickly overran the Baltic States, while the Finns, driven into the Axis camp by Stalin's invasion, fought to retrieve what they had lost. Together, they bottled-up the Red Navy in its Leningrad-area bases until Finland changed sides in 1944. Soviet aggression in 1939 only ensured that the Finns would join the larger war, thus forcing the Soviets to fight on a front that otherwise would have remained peaceful.

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[1] *I a*m indebted to Hege Carlson, Kristi Felter, Pekka Smolander, and Lisabeth Sitonnen for translating some of the materials used in this article.

[2] On Soviet planning see Gunnar Åselius, *The Rise and Fall of the Soviet Navy in the Baltic, 1921-1941* (London: Frank Cass, 2005). For the geographical issues see ibid., 26.

[3] *Conway's All the World's Fighting Ships, 1922-1946* (London: Conway Maritime Press, 1980), 320, 323.

[4] Donald Stoker, *Britain, France, and the Naval Arms Trade in the Baltic, 1919-1939: Grand Strategy and Failure* (London: Frank Cass, 2003), 144-52, 166; *Conway's*, 365; Gene C. Stevenson, "Submarines of the Finnish Navy," *Warship International*, No. 1 (1986), 38. The *Vesikko* is now a museum ship on Suomenlinna, outside Helsinki.

[5] Stoker, *Britain, France, and the Naval Arms Trade*, 70, 168; *Conway's*, 353; Edgars Andersons, "The Military Situation in the Baltic States," *Baltic Defence Review*, No. 6, Vol. 2 (2001): 132.

[6] Stoker, *Britain, France, and the Naval Arms Trade*, 170-1; Andersons, "Military Situation," 143; *Conway's*, 354.

[7] Stoker, *Britain, France, and the Naval Arms Trade*, 125; *Conway's*, 352-3; Andersons, "Military Situation," 138.

[8] Jukka Knuuttila, "Entwicklung der Küstenartillerie in Finnland," *Marine Rundschau* 74 (May 1977): 227; N.B. Pavlovich, *The Fleet in the First World War* (New Delhi: Amerind, 1979), 56-8.

[9] Egerton to Vaughn, 26 Aug. 1924, National Archive, Kew, London, Foreign Office [hereafter FO] 371/10382.

[10] Ibid.; Nash, Report on visit of Naval Attaché to Esthonia [sic] and Latvia, 9th-19th September 1927, 24 Sept. 1927, FO 371/12551; Martti Turtola, "Aspects of Finnish-Estonian Military Relations in the 20s and 30s," in John Hiden and Aleksander Loit, eds., *The Baltic in International Relations Between the Two World Wars, Acta Universitatis Stockholmiensia 3, Studia Baltica Stockholmiensia* (Stockholm: Center for Baltic Studies), 104.

[11] Carl O. Nordling, *Defense of Imperialism? An Aspect of Stalin's Military and Foreign Policy, 1933-1941* (Uppsala: Uppsala universitet, 1984), 35; Turtola, "Aspects of Finnish-Estonian Military Relations," 104; Knuuttila, "Entwicklung der Küstenartillerie," 231; Åselius, *The Rise and Fall of the Soviet Navy*, 80-2.

[12] Veli-Matti Syrjö, "The Finns in the Estonian War of Independence," in Lars Ericson, ed., *"The Boys from the North." The Nordic Volunteers in Estonia's War of Independence, 1918-1920* (Stockholm: Military Archives, 1993), 12-18.

[13] Turtola, "Aspects of Finnish-Estonian Military Relations," 103.

[14] Ibid. For a study of Kirke's mission see Stoker, *Baltic*, 102-19.

[15] Turtola, "Aspects of Finnish-Estonian Military Relations," 103.

[16] Rennie to Curzon, 7 Jan. 1922, in Rohan Butler, ed., *Documents on British Foreign Policy, 1919-1939* [hereafter *DBFP*] (London: HMSO, 1961), ser. 1, 23:339; Rennie to Curzon, 9 Jan. 1922, ibid., 340-1.

[17] Ibid., 105; Pearson report, 4 May 1927, in United States, Department of State, *Records Relating to the Internal Affairs of Finland, 1910-1944* (Washington: NARSGSA, 1981) [hereafter *IAF*], microfilm, roll 1, file 760d., doc. 60i/4; Pearson report, 21 Mar.

1929, ibid., file 760d., doc. 60i/8; Green report, 24 Sept. 1929, ibid., file 760d., doc. 60i/11.

[18] FO minutes, in footnote of Rennie to Curzon, 9 Jan. 1922, *DBFP*, ser. 1, 23:341.

[19] Rosenberg report, Viron Meripolustuksesta, 22 Mar. 1932, Finnish Military Archives [hereafter FMA], file 2860/2, doc. 262/I/30 sal.; report by Oesch, Karikoski, and Rosenberg, 30 Jan. 1931, FMA, file 2860/2, doc 7:12; Turtola, "Aspects of Finnish-Estonian Military Relations," 105-7.

[20] Turtola, "Aspects of Finnish-Estonian Military Relations," 105-8; Laurits to Ingelius, 29 Jan. 1932, FMA, file 1403/16, doc. no. 082-31; Åselius, *The Rise and Fall of the Soviet Navy*, 119, 124 fn. 11.

[21] Sperling to Henderson, 29 June 1933, FO 371/15565; Grant Watson to Hoare, 31 Oct. 1935, FO 371/19402.

[22] Gallienne to Monson, 22 Oct. 1935, FO 371/19402; Chancery to FO, 11 Dec. 1935, ibid.; Grant Watson to Hoare, 31 Oct. 1935, ibid.; Chancery to Northern Dept., 23 Jan. 1936, FO 371/20310.

[23] Nordgren to Statrådet och Chefen för Kungl. (Försvarsdepartmentet), 16 Sept. 1936, Svenska Krigsarkivet [henceforth cited as SvKA], Marinattachén i Tallinn, file Nr 7:E/36.

[24] Rosenberg, Viron Meripolustuksesta, 22 Mar. 1932, FMA, file 2860/2.

[25] Turtola, "Aspects of Finnish-Estonian Military Relations," 105; Egerton to Vaughn, 26 Aug. 1924, "Report on visit to Reval, 12th to 14th Aug. 1924," FO 371/10382; *Conway's*, 352.

[26] Estonia declared its neutrality on 2 September 1939, "Estonia Declares Neutrality," *The Baltic Times*, 13 Sept. 1939, 1; "Interned Polish Submarine Escapes from Tallinn," *The Baltic Times*, 20 Sept. 1939, 1; "Emigree [sic] Admiral Pensioned By Berlin," *The Baltic Times*, 4 Apr. 1940, 5; Gallienne to FO, 19 Sept. 1939, FO 371/23154; report, 13 Dec. 1938, Stockholm, SvKA, file Marinattachén i Helsingfors, nr Est: 9/38; report, 13 Dec. 1938, SvKA, Bilaga 1, ibid.

[27] *Izvestia*, 27 Sept. 1939, in Jane Degras, ed., *Documents on Soviet Foreign Policy, 1917-1941*, 3 vols. (London: Oxford University Press, 1951), 3:376-7; Joseph I. Vizulis, *Nations Under Duress: The Baltic States* (Port Washington, NY: Associated Faculty Press, 1985), 25-6; Åselius, *The Rise and Fall of the Soviet Navy*, 164.

[28] Vizulis, *Nations Under Duress*, 27-8; Åselius, *The Rise and Fall of the Soviet Navy*, 164-5.

[29] Ibid.; Evald Uustalu, *The History of Estonian People* (London: Boreas Publishing, 1952), 239; J. Rohwer, G. Hümmelchen, and T. Weis, *Chronology of the War at Sea,*

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[30] Uustalu, *History*, 239; Vizulis, *Nations Under Duress*, 28-30; Åselius, *The Rise and Fall of the Soviet Navy*, 164.

[31] Åselius, *The Rise and Fall of the Soviet Navy*, 164-5; Izidors Vizulis, *The Molotov-Ribbentrop Pact of 1939. The Baltic Case* (New York: Praeger, 1990), 29. In the original secret protocol to the Molotov-Ribbentrop Pact Lithuania fell into the Soviet sphere. In a subsequent supplementary agreement of 28 September 1939 Germany received territorial compensation in Poland in return for condoning the Soviet annexation of Lithuania, ibid., 17-18,

[32] Edgar Anderson, "The Baltic Entente: Phantom or Reality?" in Stanley V. Vardys and Romuald J. Misiunas eds., *The Baltic States in Peace and War, 1917-1945* (University Park and London: Pennsylvania State University Press, 1978), 135.

[33] James Vanceslav Anzulovic, Jr., "The Russian Record of the Winter War, 1939-1940: An Analytical Study of Soviet Records of the War with Finland From 30 November 1939 to 12 March 1940," (Ph.D. diss., University of Maryland, 1968), 2-4; Olli Vehviläinen, *Finland in the Second World War: Between Germany Russia* (New York: Palgrave, 2002), 38-9; Rohwer, et al, *Chronology*, 10; Åselius, *The Rise and Fall of the Soviet Navy*, 184.

[34] Åselius, *The Rise and Fall of the Soviet Navy*, 184-5.

[35] Knuuttila, "Entwicklung der Küstenartillerie," 230.

[36] Erik Wihtol, "Mine Warfare in the Baltic Sea and the Gulf of Finland, 1939-1941," in *New Interpretations in Naval History. Selected Papers From the Ninth Naval History Symposium Held at the United States Naval Academy, 18-20 October 1989*, William R. Roberts and Jack Sweetman, eds., (Annapolis: Naval Institute Press, 1991), 183; Hans R. Bachmann, "Die deutsche Seekriegführung in der Ostsee nach Ausschaltung der polnischen Marine in Herbst 1939 (IV)," *Marine Rundschau* 68 (July 1971): 408; C. W. Koburger, Jr., *Naval Warfare in the Baltic, 1939-1945. War in a Narrow Sea* (Westport and London: Praeger, 1994), 15.

[37] Eloise Engle and Laurie Paananen, *The Winter War. The Russo-Finnish Conflict, 1939-1940* (New York: Sidgwick and Jackson, 1973) 25; Per-Olof Ekman, "Die Schiffe und Boote der finnischen Marine im Zweiten Weltkrieg," *Marine Rundschau* 77 (Dec. 1980): 714.

[38] Allen F. Chew, *The White Death: The Epic of the Soviet-Finnish Winter War* (Ann Arbor: Michigan State University Press, 1971), 130-1; Koburger, *Naval Warfare in the Baltic*, 15; Knuuttila, "Entwicklung der Küstenartillerie," 230-1; Wihtol, "Mine Warfare," 200, fn. 2; David M. Crowe, *The Baltic States and the Great Powers: Foreign Relations, 1938-*

1940 (Boulder, San Francisco, and Oxford: Westview Press, 1993), 135; Rohwer, et al, *Chronology*, 10; Åselius, *The Rise and Fall of the Soviet Navy*, 80-2, 186.

[39] Rohwer, et al, *Chronology*, 10; Åselius, *The Rise and Fall of the Soviet Navy*, 186.

[40] Chew, *The White Death*, 131; Knuuttila, "Entwicklung der Küstenartillerie," 231.

[41] Snow to FO, 13 Dec. 1939, FO 371/23645; Collier, FO minute, 16 Dec. 1939, ibid. See also Snow to FO, 21 Dec. 1939, ibid.

[42] Collier, FO minute, 16 Dec. 1939, ibid.

[43] Ibid.; Phillips to FO, 18 Dec. 1939, ibid.; FO to Snow, 22 Dec. 1939, ibid.

[44] Dudley Pound Green Paper, 26 Dec. 1939, ibid.

[45] Ibid.; Barclay, FO minute, 1 Jan. [1940], ibid.; Collier, FO minute, 3 Jan. [1940], ibid.

[46] Chew, *The White Death*, 131; Knuuttilla, "Entwicklung der Küstenartillerie," 231; Wihtol, "Mine Warfare," 100, fn. 2.

[47] Chew, *The White Death*, 131-2; Rohwer, et al, *Chronology*, 12.

[48] Chew, *The White Death*, 132.

[49] Ibid.; Rohwer, et al, *Chronology*, 12.

[50] Wihtol, "Mine Warfare," 183; Stevenson, "Finnish Submarines," 38-9.

[51] Chew, *The White Death*, 130; Knuuttilla, "Entwicklung der Küstenartillerie," 231; Eloise Engle and Lauri Paananen, *The Winter War: The Soviet Attack on Finland, 1939-1940* (Mechanicsburg: Stackpole, 1973), 25; Wihtol, "Mine Warfare," 183-4; Gerhard L. Weinberg, *Germany and the Soviet Union 1939-1941* (Leiden: Brill, 1954), 88-9, 174-5.

[52] Åselius, *The Rise and Fall of the Soviet Navy*, 185-6, 194.

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[54] Evald Laasi, "Finland's Winter War and Estonian Neutrality," *Journal of Baltic Studies* XXIV (Fall 1993): 279-80.

[55] Vizulis, *Nations Under Duress*, 35; George von Rauch, *The Baltic States, the Years of Independence, 1917-1940*, Gerald Onn, trans., (London: Hurst, 1995), 220-3.

[56] George von Rauch, *The Baltic States, the Years of Independence: Estonia, Latvia, Lithuania, 1917-1940* (London: Hurst, 1995), 219-20.

[57] Shaposhnikov to Tributs, 9 June 1940, Russia, Central Archives of the Naval Forces of the U.S.S.R., C.R-92, r.2c, f.671, 1-2, http://veterans.eesti.org.au/history/soviet-russia-occupies-estonia/1a-directive-of-the-peoples-commissar-for-defense-of-the-ussr/.

[58] Excerpts from Tributs report, after 21 June 1940, Russia, Central State Archives of the Naval Forces, C.R-92, r.2.c, f. 672, 171-252, http://veterans.eesti.org.au/history/soviet-russia-occupies-estonia/1a-supplement-exerpts-from-the-report-of-the-commander-of-the-red-banner-baltic-fleetvice-admiral-vtributs/.

[59] Rauch, *The Baltic States*, 220-1.

[60] Gallienne to FO, 4 Aug. and 1 July 1940, FO 371/24761; Mairin Mitchell, *A Maritime History of Russia, 848-1948* (London: Sidgwick and Jackson, 1949), 373; *Conway's, 1922-1946*, 352-3.

The Baltic Patrol: From Counter-Revolution to National Liberation

By Daniel Moran PhD, Professor, US Naval Postgraduate School

In November, 1918, following the conclusion of the armistice that ended the fighting on the Western Front of the First World War, Great Britain decided to send a squadron of light cruisers and destroyers into the Baltic Sea. The exploits of this force, known in Britain as the Baltic Patrol, are well known to historians of the region.[1] It is widely accepted that British naval intervention made an important, if not decisive, contribution to the achievement of independence by the Baltic states little more than two years later. The aim of this paper is not to evaluate the military operations carried out by the Patrol, but to locate them in relation to the evolution of British policy toward the revolutionary events that had been unfolding in Russia and Eastern Europe since 1917.

That Britain's interests in the Baltic at the end of the war were difficult to define almost goes without saying; though in this respect conditions there were no more obscure than they were across a vast stretch of territory, extending from the Rhine to Urals, and from the Baltic Sea to the Persian Gulf. The Great War had dissolved traditional structures of political authority and social order across this whole area, an outcome the victors had only dimly foreseen, and with which they were ill-prepared to cope. The armistice of November 1918 is remembered in the West as having brought the war's fighting to an end. But it did not so such thing anywhere within this enormous arc of chaos and revolution, where widespread violence would persist for years to come, sometimes on a scale exceeding that of the Great War itself.

In retrospect the efforts of the victors to limit, manage, or exploit the War's revolutionary consequences have mostly been regarded a lamentable. They are often held up as having sowed the seeds for a resumption of global war twenty years later, and for the persisting instability of places like the Middle East, where the consequences of Allied policy after 1918 are still readily visible on a map. These are perhaps excessively harsh judgments, given the scale of the problems the Allies confronted, which would have confounded the statesmen of any era. Nevertheless, however dark one may paint the prevailing strategic background, there is no question that the result of Britain's intervention in the Baltic stands out as

a genuine if modest and transient success. History has judged the work of the Baltic Patrol to have been, on the whole, good work, which is reason enough to consider what it did, and how it did it.

In doing so, however, it is also worth recalling how peculiar and selective historical memory can be. It is common for historical episodes to be interpreted in terms of their outcome, a reasonable point of view if the outcome is all you are trying to explain, but one that also risks distorting or obscuring the motives and expectations of those who were actually involved. What is less reasonable, and almost equally common, is the habit of supposing that the outcome in question was somehow the most likely result all along, and that whatever divergence may exist between the perceptions of contemporaries and those of the historian are owed to the fact that the people on the spot were not able to recognize the larger pattern of events—what Hegel called the "cunning of history"—as clearly as those who have the benefit of hindsight. This is a mistake, and one that can drain the sense of contingency from events that took contemporaries by surprise. The liberation of the Baltic states after 1918 was no more foreseeable, and was not in fact foreseen, any more than their re-emergence on the world stage after 1991 was foreseeable, or foreseen.

And indeed the two results bear some resemblance to each other, in that in both case conditions arose in which the policy of the Great Powers became temporarily paralyzed, by doubts about their own capacities, and by fear that decisive action on their part might set in motion some unwonted spiral of escalation. Their shared ambivalence and uncertainty allowed the initiative to pass, for a time, to smaller states in which the determination to act, given the opportunity, had been building for years, if not for generations. In both instances it was the willingness and capacity of small states to recognize the possibilities inherent in the unprecedented vacuum of power that had suddenly enveloped them that made the difference. Such outcomes may appear in retrospect to be over-determined, but that should not blind us to the fact that they were completely unexpected almost until the moment they actually occurred. Unless we keep this in mind the conduct of the Baltic Patrol, and of the statesmen who sought to employ it as an instrument of policy, really does appear capricious and inexplicable.

Of what policy, then, was the Baltic Patrol an instrument? This is not an easy question. The orders provided to the squadron's first commander,

Rear Admiral Sir Edwyn Alexander-Sinclair, instructed him to "show the British flag and support British policy as circumstances dictate,"[2] a formulation that might politely be described as unhelpful. The one element of British policy that did not need to be spelled out was the requirement to blockade German shipping, an established feature of the naval war that had been underway since 1914, and which was now extended to the Baltic under the terms of the armistice. It was the extension of the blockade against Germany that in turn provided the legal basis for British operations against Russian ports in the Baltic, a seemingly exiguous observation, but one that comes up surprisingly frequently, along with a wide range of other legal technicalities, in inter-Allied diplomacy concerning the Baltic Patrol's activities, which were view with considerable skepticism by Britain's most important allies, the United States and France.

It is a further sign of how fragile and uncertain British policy was, that it should have sought to cloak itself in forms of legality would normally have been brushed aside, as they routinely had been in the past whenever larger and more firmly grasped interests were at stake. As a practical matter British warships were able to enter the Baltic only because of the simultaneous collapse of both German and Russian power, a most unusual and unforeseen circumstance in itself. As a legal matter, their operations were justified by the continued state of war with Germany, and by the claim that Russia's Baltic ports might provide a means for Germany to evade the blockade. The incongruities of this situation would become apparent once that state of war ended, however; which it does after Germany accepts to terms of the Versailles settlement in the summer of 1919. From that point on the demands for a clearer policy on the part of the British became more insistent—from its allies; from neutral states like Sweden, which had long felt aggrieved by Britain's naval bullying; and from the British Admiralty, which evidently felt that it was important to be at war with somebody if you are going to go around sinking ships and that sort of thing.

A good deal of the ambivalence surrounding British policy in the Baltic arose from the fact that the armistice also required German forces in the East to remain in place and resist the further advance of the Bolsheviks. Like the British, Russia's revolutionaries also sought to fill the vacuum of power created by Germany's collapse. This unnerved the Germans along with everyone else. Thus, while Sinclair was being sent to the Baltic at least partly to contribute to the continued starvation of German civilians, his

presence had also been requested by the German commander on the scene, who feared that the Russian warships based at Kronstadt might pose a threat to the forces under his command.[3]

The idea that the real mission of the Baltic Patrol was to strike some kind of blow against Communism fit in naturally with the general drift of British policy since the Bolshevik seizure of power in 1917. Yet the blow was clearly not intended to be decisive overall, and perhaps not even locally. By the time Sinclair's squadron was being dispatched thousands of British soldiers had already been committed against Red forces around Archangel and Vladivostok, fighting alongside White Russians whose leadership would certainly take exception to any aide conveyed to the Germans or to the Baltic nationalists—in practice, anyone other than themselves. Sinclair's squadron carried no soldiers, however, nor any gun with a caliber exceeding six inches.[4] It was, in other words, a force ill-equipped to influence military events on land directly.

Both the composition of Sinclair's force, and the hemming and hawing that surrounded its military purposes, reflected the lingering ambivalence of British policy toward Lenin's government. Everyone in any position of power in Britain regarded a Bolshevik victory as a bad thing, but not all regarded it as the worst possible outcome. For many, the worst possible outcome would be one that somehow forged a lasting bond between Germany and Russia, even a restored, counter-revolutionary Russia. Roughly speaking, the Patrol's task was to do what it could to keep the Germans and White Russians fighting side by side against the Bolsheviks, while somehow holding them apart politically. Under the circumstances is easy to understand the impatience British sailors would display toward their political masters, who were perfectly capable of insisting, for instance, that White Russian forces could receive supplies from the British, but not from the Germans, whom the British were also supplying.

The conduct of British operations in Baltic would become an object of intense rivalry between the two leading figures in the Cabinet, the Prime Minister, David Lloyd George, who wished to hedge every bet, and Winston Churchill, the Secretary of State for War, who would have preferred to steam straight into Kronstadt, damning the torpedoes along the way. When Sinclair was told, in his initial instructions, that any Bolshevik warship operating in the Baltic should be regarded as doing so "with hostile intent," it was the voice of Churchill that he was actually

hearing, since that instruction came from the Admiralty, and not from the Foreign Office.[5] Nevertheless in war rules of engagement have a way of filling whatever gaps may arise in foreign policy, as Churchill knew perfectly well; and that is pretty much what happened in this case, though only for a while. In the end, it would be the hedged bet that would finally be played. In the meantime, the principal concern of the Baltic Patrol would be to sink enemy warships, an activity that came naturally to any British sailor, but one that, by its nature, could have only a limited effect on the course of politics ashore.

British assistance had also been requested by the Estonian National Council, the provisional government of Estonian to which Britain had accorded *de facto* recognition following the Russian Revolution of November 1917. Its representatives were told, on the day Sinclair put to sea, that his ships carried armaments destined for them and their compatriots in Latvia.[6] In the final analysis it was the Baltic Patrol's capacity to insure a continuing flow of arms to Baltic nationalist forces that proved to be its most crucial contribution to Baltic independence. On this matter, however, even the British Admiralty was doubtful at first. Its view was that further deliveries of weapons should be withheld unless the British commander on the scene was convinced that "the Estonian or other Government is of a stable nature and can control [its] Army," a judgment that was to be reached while doing nothing to "interfere with local politics, nor give color for the assumption that Great Britain is favoring one party or another."[7]

When the Baltic patrol was first dispatched, the most likely outcome for the Baltic states, in the eyes of any informed observer, would not have been *de jure* sovereignty—unfettered national independence—but some form of *de facto* autonomy within a reconstituted Russian empire (or, as some imagined, a federation), Red or White; or alternatively as part of a new multinational East European Bloc extending from Scandinavia to Poland, an idea that was occasionally bruited about at the time. What made autonomy short of sovereignty the most likely outcome was simply that, as the British knew, such an arrangement would be acceptable to *any* Russian government, including Lenin's, if it came to that; which in turn explains why Whitehall felt no compunction about enlisting the Baltic nationalists in its anti-Bolshevik coalition. Their participation was essential from a variety of military perspectives. They provided additional manpower and a base for operations against St. Petersburg, and they also constituted a

bridge between Russia and Central Europe, which, if held, would stem the westward spread of Communism. And for all this the Baltic peoples could expect some kind of reward, even if it was not exactly what their leaders were hoping for. British policy in the winter and spring of 1919 included periodic diplomatic assurance of support for Baltic independence, but it is important to recall what this kind of language meant in this period, when it was also addressed, for instance, to Arabs, and Jews, and Kurds, and Armenians, and any number of other formerly subject peoples, all of whom were promised exactly the same thing. These were diplomatic formulae chosen with care, precisely because they could be made to appear consistent with a wide range of political outcomes.

An additional obstacle to a firm policy, beyond deep uncertainly about conditions on the ground in the Baltic, was presented by the depressed state of British public opinion. Britons at the end of 1918 were weary of war, skeptical of any claim that Britain had vital interests in Eastern Europe, and by no means universally unsympathetic to Bolshevism, whose atavistic and authoritarian nature was not yet clear. Shortly after the Baltic Patrol departed in November, the *Times* of London, a reliable voice of official opinion, published a series of editorials that portrayed the intervention against Bolshevism as a natural extension of the war that had just been won against Germany.[8] In January, however, the *Daily Express*, a mass-circulation paper that made its money by echoing the sentiments of its readers, declared with Bismarkian thunder that "the frozen plains of Eastern Europe are not worth the bones of a single grenadier"—fair warning that political risk management would have to be an important consideration of whatever policy Britain might finally adopt.[9]

By the start of 1919 Lloyd George had in fact decided to withdraw the squadron altogether, a decision apparently driven by American demands that all foreign forces be withdrawn from Russia. Early 1919 also marked something of a low point in the theatre—Bolshevik forces captured Vilnius on January 5, and appeared on the verge of overrunning the entire region. In the end, however, the decision was not carried out, perhaps because the British squadron was already sufficiently engaged that its withdrawal would have required the kind of political explanation that would have alienated at least some of the forces the British were trying to keep in play; perhaps because its presence off-shore could be represented, for purposes of mollifying the Americans, as not being "in" Russia. In any event, by the end of 1918 Sinclair had already swept the Baltic clear of

Soviet naval vessels, capturing two of them in the process, which he turned over to the Estonians. His ships had also provided fire support to Estonian, German, and White Russian forces operating along the coast, and taken up station opposite the major coastal cities, affording a kind of ultimate sanctuary for regional governments, and a relatively secure base for their military operations. And of course he had delivered the first vital load of military materiel, by which the tide of the fighting on land would gradually be turned.

None of these advantages would survive the squadron's departure. Retaining them was simply a matter of maintaining its presence. In little over a month, Admiral Sinclair had achieved command of the Baltic Sea. It would fall to his relief, Rear Admiral Sir Walter Cowan, to consider what else might be accomplished with the forces as his disposal. Although Cowan was as eager as Sinclair to fight the Bolsheviks, it would not be until mid-May, more than five months after his arrival in theatre, that forces under his command would find occasion to do so. In the meantime he was chiefly preoccupied by the increasingly aggressive and indiscriminate conduct of German forces in the region, whose anomalous position—fighting under the terms of a settlement dictated by the victors in a war they had lost—had always represented a kind of trap-door underneath British policy. It opened during the spring of 1919, following the decision to place all German forces in the Baltic under the command of General Count Rüdiger von der Golz, who had previously had charge of German auxiliary forces in Finland. It is scarcely possible, at this stage, to speak of the German government having a policy in the Baltic, but von der Golz did. He believed that sufficiently stunning success there might help redress the balance of Germany's defeat in the West, improve its position in reaching what he believed (falsely) would be a negotiated settlement with Allies, and perhaps lead to the direct annexation, or at any rate subordination, of Russia's former Baltic provinces to Germany, where they might provide an attractive living for his own soldiers.

In April a force of Latvian Germans known as the "*Baltic Landwehr*" overthrew the Latvian government in Liepaja, forcing its leading members to seek safety aboard a merchant ship under British protection, a disconcerting but somewhat unfathomable development that might have been passed off as an internecine quarrel among Latvians. In May, however, von der Golz's forces, fighting alongside Estonians and White Russians, succeeded in ejecting the Bolsheviks from Riga, a major success

that Cowan had directly supported, but whose sequel amounted, in the eyes of one British observer, to a "reign of terror" carried out by the Germans.[10] The British, along with the Allied Council of Foreign Ministers in Paris and, most emphatically, the Baltic nationalists, now demanded that von der Golz and the German nationals serving under him leave the Baltic. This was not something that the British could do themselves. The defeat and expulsion of German forces would be the work of Estonian and Latvian armies, aided on occasion by British gunfire. Once it had been done Britain's options in Baltic shrank appreciably.

From the beginning, the implicit objective of British naval operations versus the Bolsheviks in the Baltic had been the capture of St. Petersburg—implicit because it could not be accomplished by naval forces alone, but required the cooperation of allies whose forces would bear the brunt of the military risks, and whose interests had to be taken into account. In addition, the British were themselves divided over whether such an operation was a good idea. Churchill, agitated by the whiff of German self-assertion that arose from von der Golz's rogue operations, had been clamouring for an immediate offensive against St. Petersburg since April. Others, less highly placed but more attuned to the politics of the region, wondered how such action could be reconciled with a policy whose watchword was non-intervention, and whose basis in international law was about to evaporate, now that the Germans had been presented with the terms of Versailles. They worried that any operation by White Russian forces against St. Petersburg, particularly if based in Finland or Estonia, would breed such phenomenal distrust in the region as to give the Bolsheviks another opportunity to revolutionize those countries. It might even lead to war between a new White government and Finland, owing to Finnish territorial claims in Russia, which would be advance by Finland as just reward for its contribution to victory.[11]

In the end Churchill got his way. The White offensive against St. Petersburg commenced in June, admirably support by Cowan's squadron, which had been supplemented for the purpose by an aircraft carrier and a coastal monitor mounting 15" guns. The British cabinet, deprived of its fig leaf of legality by the German acceptance of Versailles, even minuted (in response to an inquiry from the Admiralty) that "a state of war did exist between Great Britain and Bolshevist Government Russia," a statement of no practical significance, since it was never made public.[12] By the time the Whites met their final defeat in October, British policy had settled down to

the notion that the most it could achieve, given the resources it was prepared to commit, was the neutralization of the Baltic. This was accomplished by informing the Baltic governments that they should consider themselves free to make a unilateral peace with Russians, on the understanding that they did so on their own authority, and at their own risk: an odd conclusion to a policy of "supporting" Baltic independence, perhaps, but one that corresponded both the limits of British power, and to the requirements of regional politics.

British policy drifted toward the Baltic Nationalists partly because they alone welcomed Cowan's assistance unreservedly, to the point of openly inviting the establishment of a permanent British naval presence in the region (an option the British did not take seriously).[13] At the same time, both the Germans and the White Russians were gradually disqualifying themselves as partners. In the German case the problem was simply that German aggressiveness became sufficiently indiscriminate in character that it threatened to become an incitement to the further spread of Revolution, rather than a barrier against it. The decline of the White Russians in British eyes was more subtle, and perhaps less deserved, since it was owed mainly to their inability to achieve the kind of victory against the Bolsheviks that British policy required. The scale and character of the forces that Britain was prepared to commit in the region were calculated to limit British liability, and provide a means of escape—what we now call an "exit strategy"—in the event that things went wrong. One need only consider what the history of the Baltic after 1918 would have been like if the British had sent an army there, rather than a naval squadron, to see the extent to which this is true. The White Russians, needless to say, had no exit strategy, and given the scale of the challenge they faced it was perhaps inevitable that their unceasing demands and their uncompromising (and generally reactionary) political attitudes would come to seem unmanageable in Whitehall.

The Baltic nationalists had no exit strategy either, unless one supposes that they would have accepted the kind of autonomy, short of sovereignty, that they themselves would have recognized, at the start, as the most likely outcome of their efforts to resist the Bolshevik ascendancy. At the end, however, such a settlement would have been a bitter disappointment indeed. There is little question that it was British intervention that made the difference between these two outcomes; which is not to say that the British chose or even desired the second one, merely that it was within

their grasp at the end, and served their purposes well enough. Baltic independence did not require that Bolshevism be overthrown, merely that its Westward spread be halted. British power proved sufficient to vindicate this relatively limited ambition, though it took them a while to recognize those limits themselves.

It is really only after the campaign against Saint Petersburg was abandoned, and with it the policy of regime change that underlay support of the White Russians, that British support for Baltic nationalism became, for the first time, a natural and coherent policy—one that would help secure Europe against the Westward spread of Bolshevism, and also draw a line under British intervention against Lenin's government, by depriving his White Russian opponents of the essential base from which St. Petersburg might be attacked in the future. Britain's decision to urge the Baltic states to make peace with the Bolsheviks effectively neutralized the Baltic with respect to Russia's larger quarrel with the West, and proved to be the first step toward the *de facto* normalization of relations between Britain and Russia that would follow a little over a year later; the ultimate pay-off for the Baltic Patrol's efforts. Its exploits may appear to be no more than a characteristic example of an old-hand maritime power seizing an opportunity to fish in trouble waters. That is a fair description of how the operation began. At the end, however, it had evolved into a kind of live-fire exploration of how far the British were prepared to go in their opposition to the Revolution. Whether they might have discovered that limit some other way is a good question; but it seems clear that they did in fact discover it by virtue of their intervention in the Baltic.

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[1] On the operations conducted by the Baltic Patrol see Edgar Anderson, "An Undeclared Naval War: The British-Soviet Naval Struggle in the Baltic, 1918-1920," *Journal of Baltic Studies* 22, number 1 (April, 1962), 43-78; Geoffrey Bennett, *Cowan's War: The Story of British Naval Operations in the Baltic, 1918-1920* (London: Collins, 1964); and William A. Fletcher, "The British Navy in the Baltic, 1918-1920: Its Contribution to the Independence of the Baltic Nations," *Journal of Baltic Studies* 7, number 2 (1976): 134-44. On the politics surrounding those operations see Stanley W. Page, *The Formation of the Baltic States: A Study of the Effects of Great Power Politics upon the Emergence of Lithuania, Latvia, and Estonia* (Cambridge, Mass.: Harvard University Press, 1959); Georg von Rauch, *Die Geschichte der baltischen Staaten* (Stuttgart: Kohlhammer, 1970); and Richard H. Ullman, *Anglo-Soviet Relations, 1917-1921*, 3 volumes (Princeton, NJ: Princeton University Press, 1961-1973). There is an interesting, brief discussion of the Patrol's activities as exemplify the limited use of naval force in James Cable, *Gunboat Diplomacy, 1919-*

1991: Political Applications of Limited Naval Force, 3rd ed., rev. (New York: St. Martin's Press, 1994), 46-51.

[2] Cable, *Gunboat Diplomacy*, 47.

[3] Anderson, "Undeclared Naval War," 43.

[4] A six-inch naval gun of this period had a maximum range of about nineteen kilometers, and fired a shell weighing 45 kilos. The most distant targets bombarded by the Patrol, prior to its assault on Kronstadt in the summer of 1919 (by which point a ship mounting heavier guns had arrived) were in the western outskirts of Riga.

[5] Bennett, *Cowan's War*, 144-45.

[6] Anderson, "Undeclared Naval War," 44.

[7] Ullman, *Anglo-Soviet Relations*, 2: 281.

[8] Fletcher, "The British Navy in the Baltic," 137.

[9] Quoted in the London *Times*, Obituary for Brigadier Roy Hill-Smith (21 August 1996), at http://www.curioussymbols.com/john/brig/times.html.

[10] Ullman, *Anglo-Soviet Relations*, 2: 256.

[11] Ibid., 256-64.

[12] Cable, *Gunboat Diplomacy*, 49.

[13] Von Rauch, *Geschichte*, 63.

Sustainable Armor Capability for Small Powers: The Case of Georgia in the August War

By Frederic Labarre, Head of Department of Strategy and Politic, Baltic Defence College

In the late afternoon of August 7th 2008, Major Z.J.[1] turned off his computer, and prepared to leave his work at the General Staff of the Georgian Armed Forces (GAF) in Tbilisi. He had trouble deciding whether he should cover the eighty kilometers that separated him from his hometown of Gori on such a muggy evening. Perhaps he would stay in Tbilisi after all and watch the inauguration of the Olympic Games. Elsewhere in the GAF, there were no such dilemmas; Maj. R.B. was on duty in the 4th Brigade in Avnevi, and Maj. B.A., of the 1st Brigade, was patrolling the Iraqi sands. For these three men and nearly ten thousand others, these were the last hours of relative calm at the end of what had been a busy week. Georgian troops, responding to mortar and small arms fire of unexpected intensity, had moved up to the South Ossetian, and had been conferring with the Russian peacekeepers[2] in the restive province since the 2nd, date at which the 58th Army had just returned from its annual "North Caucasus" exercise.[3] The Russian peacekeepers told the Georgians that they could no longer "control the South Ossetians."[4]

Maj. Z.J.'s phone rang as he closed his office door. He was told that the GAF was on alert level three (mid-range in a five level gradation, with 5 being normal readiness level, and 1 all-out war). This was unusual. At 0300 on the morning of the 8th of August, he was woken up; "we're at level one. Your presence is required at the Gori command center immediately."[5] Only then did he learn that a Georgian artillery brigade located on the outskirts of Gori had been attempting to delay an alleged Russian advance towards the South Ossetian capital Tskhinvali with its "Grad" batteries. Georgia was now at war.

This is an attempt at establishing the facts as to how Georgia's armored capability fared against what emerged to be as the Russian 58th Army's 19th Motor Rifle Division (MRD) which descended upon Tskhinvali through the Roki tunnel.[6] The purpose of this essay is to shape a case study to inform small power policy-making on the procurement and employment of a sustainable armored capability defined as "main battle tanks" (MBTs). Consequently, the study is aimed at personnel already familiar with the

situation in Georgia and with the employment of armor in general. The events described in this case study have been pieced together from three separate interviews with three serving Georgian officers who have participated in the conflict, and with discussions with South Ossetian eye-witnesses and other experts. Their recollections have been corroborated to the greatest extent possible from open sources. The Russian point of view, to which the author had no similar access, is represented from media analyses. The intent is not to assign blame for the beginning of hostilities. To avoid appearing tendentious, the essay is limited to the armored and related action that took place between the 7th and the 12th of August in Tskhinvali. An article in *Aviation Week & Space Technology* spells out the nature of this confrontation as a "flawed fight: Georgians anticipated no response and Russian pilots expected no opposition."[7] The hypothesis of this paper is that the quality of employment of armor by both sides is dependent upon the quality of operational art on the one hand, and on concepts of readiness and capability on the other.

Georgia is one of the many post-Soviet republics having inherited Soviet operational art concepts, and yet, as a western-leaning country, which also tries to integrate new concepts into its doctrine. Has a clash of war fighting concepts something to do with the quality of operational art displayed in Tskhinvali? The second question to be answered has to do with whether the GAF was "ready and capable". Readiness and capability are notions that offer a theoretical basis buttressing force generation and armor employment. The first part of this essay covers a chronological case study, and the second part compares the performance of armor with the doctrine, and with a theory of capability and readiness. The result is an analysis that combines the facts of the case study with the ideals of the doctrine.

1. Tskhinvali battle case study

Late in the evening of August 7th, an independent Georgian artillery battalion opened fire from the outskirts of the strategic town of Gori, some 30 km south of Tskhinvali. The "Grad" multiple rocket launchers were laying their fire at the limit of their range, between the town of Djava and on a string of villages loyal to Tbilisi.[8] Other batteries targeted the town of Khetagurovo due west of Tskhinvali. It is likely that this latter fire was preparing the passage for Georgia's 4th Brigade, located in the village of Avnevi.

From the latitude of Gori, the GAF can use three roads to meet a force coming from the Roki tunnel, through which the 19th MRD fed the 135th, 503rd and 693rd motor rifle regiments (MRRs). All three roads lead through the very center of Tskhinvali, where the Russian peacekeeping mission has its headquarters. On the western side of Tskhinvali, Georgia's 4th Brigade can move to the center of Tskhinvali from the west by route 23 and quickly end up behind the South Ossetian presidential palace after crossing the railroad tracks. From the south, the separate tank battalion and the 1st Brigade's tank battalion that would see most of the action in the following day can best move from Gori up route P54 and make a short western detour by the villages of Kvemo Niqozi and Niqozi. Further to the south east, P2, which is actually the main road, allows an outflanking by the east of the whole town, if any tank column is so adventurous to engage onto the narrow roads leading up to Kheiti, Mamita and Dzartsemi. Otherwise, a left turn from that road into town some five kilometers in the city (near the football stadium) allows a junction with P23 and P2 on the way to the Roki Tunnel, and the Russian peacekeepers' headquarters.

In the night of the 7th to the 8th, the Georgian armed forces' 4th Brigade's 42nd infantry battalion maneuvered from the village Avnevi through Khetagurovo, accompanied by fourteen T-72 tanks and four BTR-80 armored infantry fighting vehicles belonging to the 1st Brigade's tank battalion. This tank battalion, commanded by Major D., had orders to move in the direction of the north western edge of the city of Tskhinvali on route P23. Very soon after proceeding, the tank column engaged enemy vehicles. Four cars (evidently South Ossetian fighters) equipped with SPG-9 anti-tank guns were destroyed close to the village of Tbeti, no doubt helped by the improved night-vision capability of the Georgian T-72. Dawn would neutralize this advantage. As the 4th Brigade continued towards its assigned position, Major D. received the order to turn right into the city, at the level of the railway station. This separated the tanks from the infantry units of the 4th Brigade, which made the tanks vulnerable to South Ossetian fighters. That day would be murderous for Major D.'s force; his tank battalion lost five tanks and crews between the railroad tracks and the city's north western edge, at the latitude of the Russian peacekeepers' headquarters. More likely than not, this damage was caused by South Ossetian infantry, but the action of Russian peacekeepers cannot be discounted.[9]

While most of the 42nd battalion remained west of the city, in the open, one of its infantry companies pushed through to find itself with its back to the

Russian peacekeepers' headquarters, and face to what possibly became in the afternoon the left flank of the Russian 693rd MRR. This meant that this infantry company, which had moved up to contact without tank cover, had become unwittingly surrounded.[10] The independent tank battalion was sent from Gori to help it disengage.[11] Proceeding along route P54, it passed through the Niqozi villages, then swung back to cross the railroad tracks on the south west corner of Tskhinvali. "I don't know why they did this, but they went directly into the town. This was a mistake" says Maj. Z.J. The independent tank battalion moved nevertheless some four kilometers into the city. Meanwhile, the Russian 135th MRR was maneuvering towards the north western heights above Tskhinvali, north of the village of Tbeti. The separate Georgian battalion became engaged by infantry close to the peacekeepers' headquarters, and lost four tanks and crews in the process to anti-tank guided missiles (ATGMs). It is doubtful that the loss was inflicted from Russian tactical air forces. UN satellite sources show that sorties were concentrating mainly on targets located deep in the Georgian rear.[12] It is also unlikely that those weapons were launched from vehicles of the 19th MRD, as it would only come within range of Tskhinvali in the afternoon of the 8th of August, and sources report little to no vehicle-to-vehicle contact. More likely, South Ossetian fighters or Russian peacekeepers did them in.

At noon on the 8th of August, the 2nd Brigade deployed from its base in Senaki.[13] This brigade's task was to control the access to the Georgian interior from Abkhazia, Georgia's other separatist province. When the GAF understood the magnitude of the opposition, they had no choice but to commit every unit available. Indeed, in the north west of Tskhinvali, a fierce battle was raging. Meanwhile, Major D. had managed to move the remaining tanks of his armored battalion (attached to the 1st Brigade) to defend the western plains of Tskhinvali. His position was in the shade of the pine grove, possibly between the 135th and the 693rd MRRs which were materializing above Tskhinvali. Shortly after noon, Major D. was alerted to an imminent air strike. He ordered everyone out of their tanks, but as they were in the open, the Su-24 dropped anti-personnel cluster munitions on the area, wounding the Major in the leg.[14] Although wounded, Major D. ordered the tanks back, and he was rescued by civilians who took him to an aid station. The 19th MRD arrived in the suburbs of Tskhinvali in the afternoon of the 8th of August.[15] The intensity of artillery fire, the presence of Georgian infantry, the traumatic experience of the battle of Grozny thirteen years before and doctrine compelled the Russians to bypass the city.

Most of the Russian-Georgian contact was composed of infantry engagements. And most if not all tank destruction occurred at the hands of infantry. According to Maj. R.B., some hits were scored on Russian tanks. He recalls how a friend "used no less than four rockets to destroy a single tank." The first two hit the glacis, but did no damage save clearing the infantry that was riding on the vehicle at that moment. The third knocked out a track, and the tank became immobilized. The fourth hit between the turret and the chassis which made the tank erupt.[16] Another friend decommissioned a tank by dropping a hand grenade down the open hatch.[17]

By the evening of the 8th of August, the three motor rifle regiments were attacking the Georgians in and around Tskhinvali. The 135th was already to the west, the 693rd was pouring below Tamarasheni (north) and the 503rd was possibly by-passing the city from the east.[18] The Russians were taking deliberate care not to enter Tskhinvali itself with their armored equipment. The plain on the west of the city would allow the Russians to fan out and dislodge the traffic jam in their rear. Some one hundred and twenty T-72 MBTs, one hundred and ninety BMP-3s and ninety-five BTR-80s[19] were deploying against Georgia's twenty remaining tanks and infantry vehicles. Still, the GAF felt it owned the day, having repulsed the South Ossetians and dislodging the Russian peacekeepers to the northern edge of the city.

At the end of the day, the Georgians declared a cease-fire which lasted until the morning of the 9th of August. To say that either side controlled Tskhinvali at this time is exaggerated. The Georgians had prevailed because the intensity of the fighting was dropping in the city itself, and because the Russians remembered the lessons of Chechnya. They were avoiding Tskhinvali and enveloping the Georgian forces at the same time. The cease-fire allowed the independent tank battalion to migrate back to its baseline in Gori. There is also evidence that the tank battalion of the 4th Brigade was also returning to south western positions. On the 9th of August, there was no action in the capital itself. According to Maj. Z.J., the Russian Air Force happened over a more or less deserted Tskhinvali, and dropped bombs on targets inside the city, but the pilots possibly mistook elements of the 503rd for Georgian troops.[20] This accounts for some fires that were detected by UN satellites on the main street of Tskhinvali.[21]

The Georgian skies filled with airplanes searching frantically for artillery positions and other tactical targets. Until then the Russian Air Force had been concentrating on targets deep in the Georgian rear. According to Maj.

R.B., batteries were so well concealed that the Russian air force did not score any hits.[22] In the north of Tskhinvali, fighting resumed, and a Georgian reconnaissance platoon performed a successful ambush wounding Major General Khrulëv, the 58th Army's commanding officer, near the village of Khermeti.[23] The Russians were slowly making their way south on the eastern edge of the city. Russians suffered casualties in the village of Argvitsi, probably as they attempted to repulse the 3rd Brigade on the Prisi heights.[24] During the day, the 2nd Georgian Brigade which had been ordered to the area with a twelve hour delay arrived south of Tskhinvali.

On the 10th and 11th of August, 1966 troops from the 1st Brigade arrived in Gori from Iraq to be reunited with Major D.'s tank battalion. [25] It seemed to Maj. B.A. that the sky was swarming with airplanes. "All one had to do was point a man-portable air defense system (MANPAD) skyward and pull the trigger for the missile to find a target"[26] he claims. As a method of armored force protection, Georgia developed original air defenses. Pairs of infantrymen would patrol the theatre on recreational vehicles, one driving, while the other would engage targets with his MANPAD. One of the tasks of these "motorcyclists" would be to protect the Georgian tank formations which had been positioned in a crescent all around the southern tier of the city.[27]

These "motorcyclists" have acquitted themselves of their task successfully, no tanks having been lost to air during the battle of Tskhinvali. But there are several explanations for this. The first is that the Russians were initially conducting air operations in the rear of the GAF. The second is obviously the generous provisions of air-defense arsenal that the Georgians have procured. The third may be doctrinal. Apparently Russian pilots do not have a flight mission when they leave their base; they are guided by forward air controllers (FACs) to their targets. Since the FACs were stuck in traffic several kilometers behind, pilots had to communicate with friendly (but inexperienced) elements on the ground by cellular phone.[28] Finally, Georgian sources say that Americans re-assigned a satellite whose data was being tapped by the Russians. Giving it a 500 meter discrepancy, this accounts for Russian errors in targeting (including the hits on civilian structures) and explains why civilian communications were left untouched.[29]

Time was running out for the GAF. The unilateral cease-fire offers of the 8th and 10th of August had been offerings that the Russians had no reason of taking. Lulls in fighting allowed the 693rd and 503rd to complete the

encirclement of the city. Apart from a lone contact near the stadium (allegedly between two tanks), where the Georgians prevailed, there was no contact in Tskhinvali for the remainder of the battle. By the 11th, the Russian 20th MRD had taken advantage of the departure of the 2nd Brigade from Senaki to enter Georgia from Abkhazia, the 76th Airborne troops from Pskov Oblast had arrived, the "Vostok" (east) and "Zapad" (west) battalions from Chechnya were already south of Tskhinvali, and the Black Sea Fleet had sunk the Georgian navy practically at anchor. While the few remaining close air support aircraft from Georgia were making their last run on the descending Russians, the Georgians were overwhelmed, and at noon began a general retreat towards the city of Mtskheta, the north western suburb of Tbilisi. The battle of Tskhinvali was over, and the battle of Tbilisi was expected to begin. On the morning of the 12th of August, at 0859, Russian President Medvedev declared an end to military operations.[30]

2. A clash of ideas or materiel?

Did superiority in ideas or superiority in material decide the outcome of the battle of Tskhinvali? Operational art is the fusion of materiel with military concepts of operation. To a significant extent those concepts also transferred to the newly-independent republics that emerged out of the collapse. This section traces the sources of Russian military doctrine and shows how Russian ideas became intermingled with the western concepts that Georgia began to adopt in the mid-2000s.

Soviet operational art has endured through years of strategic and social upheaval and remained as Russia became the successor state to the dissolving USSR. The Soviet General Staff Academy taught that military strategy was defined by

> …a system of scientific information about the characteristics of contemporary wars, the forms and types of their execution, the structure of Armed Forces and the preparation of the state for war. It also includes the field of practical action of the political leadership and the high military command with respect to the preparation of the Armed Forces and their deployment to foil enemy aggression and achieve political aims in war.[31]

Military strategy, it teaches, must never be divorced from political consideration, and that the political forces deploy resources for the development, training and maintenance of the military. Technically speaking, this means that the process of strategic formulation must be reconciled with

factors of capability, readiness and sustainment. Changes to this systematization were successfully resisted by the leadership of the Armed Forces as the Soviet Union was collapsing. A text signed by the hand of an alarmed Igor Rodionov in 1991 insisted that military doctrine should continue to be formulated by the higher military and political leadership so that "consequently, its tenets concern the activities of various ministries, departments and installations dealing with the development and practical implementation of both… domestic and foreign policy." [32] In fact, current Russian minister of defense Serdyukov gave the strongest indication of continuity when he said "there is no reform at all going on… We are simply restoring order in everything… Years passed during which nothing was done… These issues were simply left in the background."[33]

Russia's current foreign policy is specific about protecting "compatriots" abroad or Russian-speaking populations. The fate of Russian minorities has become systematically securitized. Any country where Russian citizens or sympathizers are living is thus put on notice.[34] Following from a political strategic analysis, Russia's *Defense White Paper* outlines the possible trends of future warfare. In 2003, it put considerable emphasis on the factor of asymmetric warfare, but this asymmetry had a distinctive conventional flavour, as reliance on precision-guided munitions, tactical air forces, missiles, and the need to keep conflicts as short as possible was established.[35] Following this exercise, the operational level of planning considers the "location and composition of probably enemy groupings of armed forces and mobilization" as well as "physical and geographic conditions."[36] From these documents and plans follow the development and application of power "using forms and methods corresponding to the situation and ensuring rapid superiority over the opponent."[37]

The Soviets, and now the Russians, have built their concepts of military operations around the operational maneuver groups. Operational Maneuver Groups (OMGs) use the MRD as core unit. The MRD is the expression of the form and method to ensure rapid superiority over an opponent. In Russia more than anywhere else, military history is critical in conceptualizing doctrine at the tactical, operational and strategic levels.[38] Historical success has legitimized the permanence of the motor rifle division and is indicative of the validity of the operational concepts for which the MRDs are designed. Organizational inertia prevented change in the formulation of doctrine, and so logically, no change in the composition and operational use of a motor rifle division can be expected. The most enduring military operational

concept is that of "deep battle" fathered by Marshal Mikhail Tukhachevskii.[39] Deep battle retains historical legitimacy and permanence in great part because technological innovation has enabled its full application through the decades;

> The tank and the airplane of the 1930s unfettered the offence and made blitzkrieg and deep operations supreme… ATGMs in the 1970s seemed to reinvigorate the defense, while operational and tactical maneuver concepts secured to restore the power of the offence.[40]

Deep battle is a concept ahead of anything the West could produce until the introduction of "Air-Land Battle" espoused by the US Field Manual 100-5 in the early nineteen-eighties.[41] The concept was shelved because Stalin's cult of personality and the period of massive nuclear retaliation made it dangerous to apply. De-Stalinization and the advent of tactical nuclear weapons pulled *deep battle* out of obscurity.[42] The organization and administrative processes that enabled this re-birth seem to have changed little even today.

The Russia-Georgia war employed fractions of combined arms for a group strike in depth, using surprise, and exploiting a high tempo of operation designed to avoid critical losses. If this description is accurate, then the MRD is the correct indicator to analyze.[43] The Mechanized Division is the ancestor of the modern MRD. A look at the table of strength shows stability in personnel but an increase in importance of mobility as the years go by (more tanks, less artillery).[44] Deep battle replaces a wide frontal assault with strikes all along the enemy's tactical and operational depth, using the simultaneous effects of combined arms. Essentially, deep battle means that war should be waged in the enemy's rear regardless of whether one's posture is offensive or defensive. [45]

The deep battle concept operates thus;

> The security zone [covering force area] is overcome by forces of the first echelon formations [divisions] after powerful air and artillery strikes of the most important objectives to the entire depth of enemy defenses. Forward detachments form each division destroy covering and security subunits [battalions and companies] of the enemy and secure important objectives and areas in the forward defensive positions. Their operations are supported by artillery fire and air strikes in cooperation with operations by tactical air assault forces.[46]

The Russian Federation implemented deep battle in the fashion described above during the August War. This essay does not discuss the preceding *maskirovka* operations inherent to deep battle, but the order of battle presented to the Georgians along with near-overwhelming air strikes deep in the rear was severely impeded by the terrain correspond to the schematics found in Colonel David Glantz' work on *deep battle.* The organization of an MRD prompts the use of tanks in the first echelon at every level of command, and the Russians developed tactics that did not require the support of a second echelon.[47] This does not exclude the presence of other echelons, as the force has to proceed on account of terrain along usable avenues of ingress.[48] Nevertheless, the end result speaks for itself. In 1991, Zakharov accurately predicted that air power would have predominance in future deep operations. Operations would see a shift at all levels to combined arms action "based on massed, grouped, concentrated strikes by different combat arms."[49] Zakharov also insisted on the need for "simultaneity", but this aspect could not be performed owing to difficulties in terrain. This partly explains the lack of simultaneity between the air and ground forces when the Russians invaded South Ossetia. The most compelling indication that the MRD applied deep battle principles in Tskhinvali is based on and an observation Zakharov made that "the time is logically arriving when the period of irreversibility will be so small that it will be impossible to avert enemy actions, without stepping on the path of aggression oneself."[50] This predicament would seem true for both belligerents in the August war, especially if one presumes a high degree of continuity of policies and concepts from the USSR to Russia on the one hand, and from the USSR to Georgia on the other.

Georgia's force structure is testimony to this continuity. A dramatic increase in defense spending, which culminated in the astronomical sums of the 2007 and 2008 (thirty per cent of the total *Government's* budget) denote ambition and intention.[51] They also denote comfort with Russian and Soviet principles of organization much more than with western methods. Tables 1 and 2 in Appendix demonstrate how Georgia has been trying to match the overall strength of a motor rifle division. The celerity and amplitude of this effort has correspondingly alarmed Russia which vowed to act militarily if its interests were threatened. The two countries were approaching the apex of conventional "brinksmanship".[52]

Georgia's force development follows and exceeds the formulation of the *Strategic Defence Review 2007.* Planning and force generation seemed aimed at

securing a solution to Abkhaz and South Ossetian separatism, which the document considered to be a more imminent threat than foreign invasion.[53] Simultaneously, the desire to attract NATO seems to have been confused with the development of a massive capability. In both cases, the solution to separatist claims and NATO membership, force procurement seems to have been the fruit of dubious logic. Maj. Z.J. said that the force structure itself was meant as a deterrent, which is why the modern GAF resembled a force that was also capable of matching the 19th MRD. He also added that the sight of a large force structure would somehow convince the South Ossetians and Abkhazians that Georgia was a capable guarantor of security to the populations of those two provinces. According to this logic, the separatists would have no incentive to seek shelter in Russia.[54]

A comparison of force structure at the regimental level in 2000 and in 2008 shows Georgia's tendency toward matching Russia's local superiority.[55] The quality of the arms procured speaks volumes about the perception of threat. Georgia procured a significant portion of its tank force between 2003 and 2007, but it also purchased significant anti-air weaponry.[56] The force generation was therefore organized around two poles; mobility and air defense.[57] The positioning of new military bases was determined by the domestic conditions in the country. While this reflected the concerns of the Georgian *Strategic Defense Review*, the purchase of anti-air and anti-tank weaponry can only be associated with a foe having these capabilities.[58]

Independent republics are able to now develop their own doctrine, but there is evidence that this process did not take place until very recently in Georgia.[59] Georgia has adopted a system of defense and strategic planning that is recognized by NATO. The family of documents (the *Threat Assessment Document*, the *National Military Strategy*, the *Strategic Defense Review*, etc.) that supports the formulation of national strategy and by extension military doctrine is no less systematic than that of the Soviets' or today's Russia, but it is contradictory. The contradiction does not stem from varying priorities from one document to another, as Vyacheslav Tselyuko suggests, but from the force structure that these threats generate. If separatism is the main threat, or, as the *Strategic Defense Review* suggests, terrorism, why procure air defense in such large quantities? In Georgia, as in many countries aspiring to NATO membership, the production of strategy documents is less a matter of security planning than administrative obligation to Brussels.

In consequence, political decisions about how and where to employ the armed forces have been aimed at making Georgia an attractive partner to NATO and large powers. The decision to send the infantry component of the 1st Brigade to Iraq is a political decision that has contradictory domestic implications, because deterrence is thereby depleted, and the capability suffers in its readiness levels to meet actual threats. Unless the Georgian government really believed the threat assessment of its *Strategic Defense Review*, the force structure it funded betrayed other intentions. Georgia lost the engagement in Tskhinvali because the amount of materiel it deployed was not available to match the 19th MRD. The GAF deployed against South Ossetian separatists, but as Maj. Z.J. confides, was "taken completely by surprise by the arrival of the Russians."[60] When a NATO intelligence official was asked whether any unusual Russian movement had been detected prior to the invasion of South Ossetia, the answer was "none whatsoever. And that's the honest truth."[61]

Georgia demonstrated a doctrinal gap in the combined employment of armor and infantry. With the 2nd Brigade in Senaki deploying twelve hours late, the 1st Brigade's infantry in Iraq, the 4th Brigade with only four tanks, and the 5th Brigade unready, the Georgian forces advanced in Tskhinvali with infantry divorced from armor. The 42nd infantry battalion, for example, proceeded into town without protection. The 1st Brigade's armored battalion proceeded to the north west of Tskhinvali on the 8th of August without infantry. The separate tank battalion that was sent to dislodge the 42nd battalion from Gori had no infantry support. But these conditions are still acceptable against an opponent without apparent strategic reserves. We will not insist on the failures of analysis or intelligence that failed to account for the involvement of the Russians. The manner in which the GAF was sent into battle comes directly from the fact that its doctrine was based on faulty assumptions. In consequence, operational decisions that informed the employment of armor followed logically from these flawed assumptions. The forces that met in the mountains of South Ossetia owe their size (and the resulting asymmetry) to the coherence (or lack thereof) of policy. Russian employment of force in a given way and in a given area can be traced back to coherent political objectives. Georgian force generation and employment can be traced back to a set of competing and discordant objectives. On the one hand, Georgia's participation in expeditionary missions secures advantages from large powers. On the other hand, doctrine is aimed at securing NATO membership. Finally, deployment was not aimed at the appropriate threat although the overall structure of that force was sufficient.

In other words Georgia suffered a defeat because of the weakness of its military concepts from the strategic to the operational level. Caught between its Soviet planning heritage and the attraction of misunderstood and misapplied western concepts, the GAF could not prevail over an opponent with a clear purpose and intent.

3. Asymmetrical readiness and sustainability

Upon the involvement of the Russians, the escalation of the size and mass of the GAF is the attempt not only to match the size and mass of the local challenger, but also to establish "net military readiness" at the operational level.[62] This escalation is also indicative of a desire to ensure a supply of capability so that potential power can become actual power when the demand calls for it.[63] Regardless of the size, a capability is not effective if it is not ready, and readiness cannot translate into *duration* if there is no sustainability. In other words, it is not because the 19th MRD and the GAF have the same number of tanks or the same strength that they can perform equally well. The preceding section has shown that a confusion of strategic vision has divided the GAF along several competing missions, and provided a doctrine that was inapplicable to a force structure that was Russian or Soviet in inspiration. This section explains the consequences on readiness and sustainability of the GAF.

Definitions of readiness are vague and deficient. Some call it the "ability of forces and systems to enter into combat without unacceptable delay." Others confuse it with capability as the "capacity to perform a mission when directed" or the "ability to fight with little or no warning."[64] Little thought is given to the indicators that help us define and measure readiness and distinguish it from capability. Readiness concerns the mixture and matching of doctrine, force structure, training and materiel. Soviet definitions equate readiness with capability itself, or, more generally, include the qualitative with the quantitative aspects of a capability.[65]

> When experts discuss readiness among themselves, their usage of the term tends to be much more focused and technical. This professional usage refers not to capability in general, which includes the desired size and type of forces, but to the status of whatever forces do exist… Are they [forces] well-oiled, in fighting trim… or do they need time to be… supplied with essentials, repaired or retrained?[66]

The analyst and force planner are confronted with questions of logistics (supplies and repair) and training. The confusion of terms only grows by the fact that logistics is considered synonymous with sustainability.[67] On the other hand, readiness indicators such as mission capable rates and average time of repair associate training with readiness.[68] Not only are readiness and capability often confused, but this confusion extends to understandings of sustainability. There is a need to distinguish the "immediate availability [capability and/or readiness] of a unit from the amount of time it can continue to fight once engaged [sustainability]." Betts adds that "a force that could fight spectacularly on the first day but would collapse on the second is no more ready… than is one that could not fight as well but could fight longer."[69] This describes the predicament of the Georgian armored battalions in evident fashion. But if the immediate capability (the size and mass) of the GAF armored battalions was identical to that of the Russian MRD, how do we account for the outcome? Where is the asymmetry, or rather, how did the asymmetry develop? A proper definition of readiness therefore encompasses sustainability as an object of a given capability. Readiness can be defined as the *application of resources for the generation of a force structure capable of a sustained response in time, for the duration of a threat.*

Russian/Soviet readiness of the Armed Forces at the operational and strategic levels involves the development of a technical base of combat power with modern weapons. It requires high standards of training, the development of military sciences and continuous troop control.[70] Georgia benefited from much of the same features, but the "military sciences" were clearly lacking because of a lack of historical experience and, as highlighted in the previous part, a mismatch of missions and force structure. The GAF was unable to reconcile what it had inherited from the Soviet past with western methods and systems.

The Russian conception of sustainment differs from that of the west. The sustainment plan must conform to the type of force available. Soviet or Russian equipment is not designed to be sustained in the same way as western equipment. The GAF could not prevail because its force structure was Soviet/Russian and the sustainment plan was western. Russian conceptions of readiness recognise the relation between availability of forces and availability of time. Georgia had forces available, but had no time to bring them to bear (no pun intended). Even if *all* the GAF had been available at the right time, the outcome would have been the same even with the natural advantages conferred by the defense. It is when immediacy

converts into duration that sustainability becomes crucial. The difference between the Russian and western conceptions of sustainability is measured by the difference between effectiveness and efficiency. Whereas American and NATO concepts of sustainability seek to generate capability in the duration at the lowest cost, Russians focus on duplication of capability (large forces) to *replicate immediacy*.[71]

During the Cold War, US and NATO forces allocated more personnel to equipment maintenance that the Soviet Union. In other words, the tooth-to-tail ratio favors the Russians.[72] In keeping with the dental analogy, a Russian force descending on an objective can be compared to a shark's rows of teeth. Each row is fragile, but when teeth are broken, another row eventually rolls into position as replacement. A modern western army prefers to go to the dentist instead. To summarize, Russian sustainability can be equated with repetitive readiness based on the replacement of units rather than their maintenance.[73] This is true for individual vehicles as well as for whole units. The Russians ensure the sustainment of *effort* rather than the maintenance of *units*.[74] The question of supply and repair therefore becomes

> … the active prosecution of the battle, the provision of the proper equipment and the maintenance of supplies and reserves, the careful structuring of forces, the skilful choice of operations, and the skill with which [fighting] can be conducted that…most contributes to an army's ability to sustain itself in battle.[75]

The Russian method has its merits, because it avoids the problem of duration altogether by reproducing "structural readiness" (mass times speed) constantly.[76] It is the operational and tactical calculations in the volume of fire (and the corresponding quantity and quality of capability) that sustain the effort. Donnelly illustrates his point with an algorithm taken from a *Voennyi Vestnik* article where the number of tanks is calculated relatively to a certain number of anti-tank guided weapons (ATGWs) per kilometer of front. He believes the results to be a percentage of chance of survival, but I believe that the percentage resulting from the algorithm pertains to the fighting power of that unit. An armored formation of twenty tanks per kilometer of front facing the density of five ATGW per kilometer of front will retain seventy-five per cent of its fighting power, whereas a doubling of the density of ATGW for the same threat will ensure that the tank unit will see its fighting power depleted to ten per cent. Donnelly says that western computations of the same period correspond to Soviet statistics.[77] Russians applied these principles in full knowledge of the terrain in which their tank

units would be deploying, and of the overall capability of the Georgian forces. Echelons are therefore a system of sustainment as much as a concept of operations. Glantz writes that a "single echelon offensive is designed to attain swift victory" against an unprepared foe.[78] The order of the echelons is seldom uniform because the way the Russian forces present themselves is dependent on the forces they expect to fight and terrain.[79]

Georgia's tank forces did not acquit themselves of their mission because many units were structurally unready. In addition to the structural unavailability, training was inadequate. Despite a one-year program[80] to train tank crews in Israel, it is unreasonable to believe that some two hundred crews had become proficient with their equipment to the point of being sent into battle. "During the years of Shevardnadze", explains Maj. Z.J., "we slept." Up until 2000, Georgian forces regularly received their military training and education in Russia and in 1998, there was a mutiny in the Georgian forces to protest against low salaries.[81] Since 2002, American assistance with the Global "Train and Equip" Program (GTEP) enabled Georgian officers and soldiers to become acquainted with western principles of organization and concepts of operation.[82] Many other countries, including the Baltic States, have provided advice for the formulation of Georgia's security documents and NATO membership. But all these efforts were ill-adapted to Georgia's reality. "We basically copied American field manuals" laments Maj. Z.J. "Only now are we starting to write our own doctrine". Even worse, the GAF sought training advice with Defensive Shield, a military consulting firm headed by Israeli General Gal Hirsh, responsible for the failed Lebanese operation in 2006.[83]

A demand-driven sustainability system cannot exist against an able opponent that wages deep battle, because a system based on force protection will create and require duration for sustainment while the opponent operates more rapidly.[84] The asymmetry is therefore one of supply and type. Supply depots located in the rear are usually the first objects of attention of air power, as the Georgians discovered when their ammunition warehouses in Gori were targeted. Thankfully, the shallowness of the front helped the Georgians recover vehicles and re-supply troops during combats, but often this meant taking units momentarily out of combat rather than moving up supplies up to the first line. Later, the rout would be so complete that a large quantity of equipment had to be left behind because it could not be moved.

The Georgians lacked operational readiness because the status of their equipment left much to be desired. The equivalent of ninety per cent of a tank battalion had fallen victim to engine failures between 7 and 10 August. As Betts said, the quality of a sustainability concept, if it is to ensure readiness, must match the quality of the equipment procured.[85] Equipment and force structures not designed for the duration cannot be sustained in a western manner.[86]

Conclusion: Whither tank armies for small powers?

The Battle of Tskhinvali is revealing for what it tells us about Russian concepts of operation. There is evidence to believe that *deep battle* remains an important concept in the Russian arsenal. The case study developed remains partial in many respects; first it is difficult to get a complete and accurate picture from both sides of the conflict, and second many critical elements of the battle plans have been left out for want of space. The missions of the Russian and Georgian air forces would be interesting to analyze. In the end, this essay exists as a sacrificial lamb to other analysts who will uncover new data about the first European interstate war of the twenty-first century.

The first conclusion is that an effective air defense can be efficiently procured. Air force operating and training costs are prohibitive for many small countries, and, increasingly, for big ones as well. This limitation has led Georgia to develop original techniques to defend its armored force. The mobility of an air defense force can create defense in depth, which is a concept that the Russians were probably not expecting. In any case, more research needs to be done on that particular aspect of the conflict.

An armored force is ideal to provide direct fire in a blocking action, but the GAF abandoned this and other advantages by calling for too many cease-fires at inopportune moments. Even without these significant interruptions in combat, a much larger follow on force would have been needed to bring tempo to a counter offensive but confusion about political goals had meant that the forces were unavailable on time. The near absence of tank-on-tank contact during the Battle of Tskhinvali shows that a tank is not needed to kill another tank. As someone said, "a tank is not a tank. It is how you use it." The paraphrase could be a "tank is not what it looks like, it is what it does."[87] The Georgians have committed a critical sin in attempting to copy western models. On the other hand, the experience should perhaps lead NATO powers to question their rationale of force generation and

employment. Tselyuko boasted that western methods which the Georgians learned were not so superior to the Russians' needs to be heeded.

Georgian armor failed because of inadequate preparation and incoherent purpose. The Georgians even before they set out to write their own doctrine, must develop their own system of risk estimate, security concepts and national military strategy. The tool must be shaped according to the goals sought. The question remains, *is an armored capability needed for national defense*? But it should be answered along the lines of "this is what I need done for national defense." The Georgian brigades were conceived with an organic tank complement, yet, infantry and tank were used independently too often, making the tank look like a capricious toy to the lone infantryman, but in reality, it was a tomb worth millions of dollar for nearly a dozen Georgian crews in the battle of Tskhinvali. The dominant figure of the battle of Tskhinvali is the infantryman with his anti-tank weapon. Half of the Georgian tanks committed to that battle ended up tipping their hats. One third remained on the sidelines because of mechanical failures. Three quarters of the armored capability was captured or destroyed by the Russians in less than ninety-six hours after the battle. If not the screams of burning men, then the amount of money expended by Georgia in the purchase should give pause to think for small countries.

If the defense of the nation requires the psychological comfort of armor with adequate mobility, the dilemma will not change. Mobility will have to be assured with a long tail, and there is no guarantee that ideas of "inventory on wheels" or lower combat weights[88] will be any match for what the Russians can align.

This research has shown that the Georgians had conceptually procured for the two goals of armored mobility and air defense, but the dominant feature of the battle of Tskhinvali was the infantryman. Getting the individual soldier to contact was the key operation to sustain. The amalgamation of tank and lorry is impractical once contact is made, because a pause in advance has to be made to allow the infantryman to dismount and fan out before advance (at the pace of a person on foot) can be allowed to resume. If Georgian (and for that matter Russian) planners had focused solely on the sheer *speed* and the mobility in *general*, there is reason to believe that the preferred armored vehicle would not have been the tank, but the army infantry fighting vehicle, or the land attack vehicle; wheeled, fast, and able to deliver soldiers to the front in relative comfort while fighting.

Small states that have the loyalty of their constituencies should not have to resort to a breakthrough capability, and the Georgian case proves this, with the ease that the tank battalions had in advancing to contact (even when bisecting territory allegedly controlled by South Ossetians). With the infantryman as king of the battle against tanks (which may not always be true in the future), the center of gravity of a small power has to do with its people, and their fighting capability. A tank "wastes" talent insofar as tank-killing capability is concerned. A tank can only kill another tank if and only if it is within range, and then, only one at a time. With up to four individuals in each vehicle, there are at least three who should be tank-killers who are occupied by their tank-management specialty. The tank cannot be concealed while maneuvering. On the contrary, the infantryman is only impeded by the ammunition he can carry. The more foot soldiers are out there, the more tank-killing (and airplane-killing) power there is. For small countries, the ultra-specialization that comes with high technology capital investment such as tanks and high performance airplane is an investment in manpower that the government cannot afford. That does not change the premium put on mobility, which is even more acute in armies of small sizes, such as Georgia's and a number of newly- or re-independent states. The need is not so much of armor but to develop the sort of mobility that brings anti-tank capability to bear in such rapidity as to "create" a form of immediacy and strategic depth by trading space for time. Once the capability is put into action, every ounce of strength has to be deployed in an offensive function, and in a tank, the individual functions are passive most of time; from the time it takes to bring the weapon to contact, to the activities of the men serving the tank (the driver, tank commander, weapon loader are undoubtedly *active*, but their function is not *always* equal to the soldier in a killing trade). Small countries who depend so much on manpower must consider *people* as weapons. This line of thinking means less emphasis on armor and technology and more emphasis on the multiplication of force through the weaponization of the individual.

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Interview subjects

Mr. A.P., a citizen of Tskhinvali, South Ossetia/Georgia

An unnamed American (CIV), NATO Intelligence Division

Mr. Bruce Jones (UK A, ret.) an independent analyst working in Tallinn, Estonia

Major B.A. (GEO A), a member of the 1st Brigade

Major R.B. (GEO A), a member of the 4th Brigade

Major Z.J. (GEO A), a member of the Georgian General Staff

APPENDIX A: Force structure comparison

Table 1: Georgia-Russia regimental force structure comparison 2000

Georgian Motor Rifle Brigade	Russian Motor Rifle Regiment
ca. 2100 personnel	Ca. 2170 personnel
Headquarter company	Headquarter company
Motor rifle battalion	Motor rifle battalion
Infantry battalion (in trucks)	Motor rifle battalion
N/A	Motor rifle battalion
Artillery battalion	Artillery battalion
Tank battalion	Tank battalion
Scout company	Reconnaissance company
Engineer company	Engineer company
Signals company	Signals company
Air defense battalion	Air defense battery
Anti-tank battery	Anti-tank battery
Logistical complement	Logistical battalion
Total land forces size: 12600 pers.	Total land forces size: 800000 plus
Division size: N/A	Division size: 12400-13000 pers.

Sources: *Jane's World Armies 2000*, http://warfare.ru

Table 2: Georgia-Russia regimental force structure comparison 2008

Georgian Motor Rifle Brigade	Russian Motor Rifle Regiment
ca. 3205 personnel	ca. 2400 personnel
Headquarter company	Headquarter company
Infantry battalion (in APCs and IFVs)	Motor rifle battalion
Infantry battalion (in APCs and IFVs)	Motor rifle battalion
Infantry battalion (in APCs and IFVs)	Motor rifle battalion
Artillery battalion	Artillery battalion
Tank battalion	Tank battalion
Scout company	Reconnaissance company
Engineer company	Engineer company
Signals company	Signals company
Air defense battalion SEPARATE	Air defense battery
Anti-tank battery	Anti-tank battery
Logistical complement	Logistical battalion
Total land forces size: 17900 pers.	Total land forces size: 800000 plus
Division size: N/A	Division size: 13000 pers.

Sources: Military Balance 2008, Military Balance 2009, http://warfare.ru, Ministry of Defense of Georgia, *Strategic Defense Review 2007*.

APPENDIX B: Endurance of the Soviet MRD structure

Table 3: The shift towards mobility in the strength numbers of a typical MRD with Georgian force structure comparison

1946 Mechanized Division	12500 men
	197 tanks
	63 self-propelled guns
1954 Mechanized Division	15415 men
	294 tanks
	55 self-propelled guns
1958 Motorized Rifle Division	13150 men
	227 tanks
	10 self propelled guns
1961 Motorized Rifle Division	13767 men
	241 tanks
	10 self-propelled guns
1963 Motorized Rifle Division	11013 men
	218 tanks
	NO self-propelled guns
1968 Motor Rifle Division	10500 men
	188 tanks
	NO self-propelled guns
1987 Motor Rifle Division	12890 men
	272 tanks
	NO self-propelled guns
1999 Motor Rifle Division	13000 men
	265 tanks
	NO self-propelled guns
2008 Motor Rifle Division	11240 men
	242 tanks
	NO self-propelled guns
2008 Total for GEORGIA	14000 men (Army regular)
	183 tanks

Sources: Glantz, *Soviet Military Operational Art…*, 163-212, Jane's World Armies 2000, *Military Balance 2008*, Stockholm International Peace Research Institute Arms Trade Register 2007, and http://warfare.ru. The

number of Georgian tanks is calculated based on the evidence provided by the International Institute of Strategic Studies, the warfare.ru site, and SIPRI data on international trade.

APPENDIX C: Photographic evidence

Figure 1: Tskhinvali aerial photography (GoogleEarth)
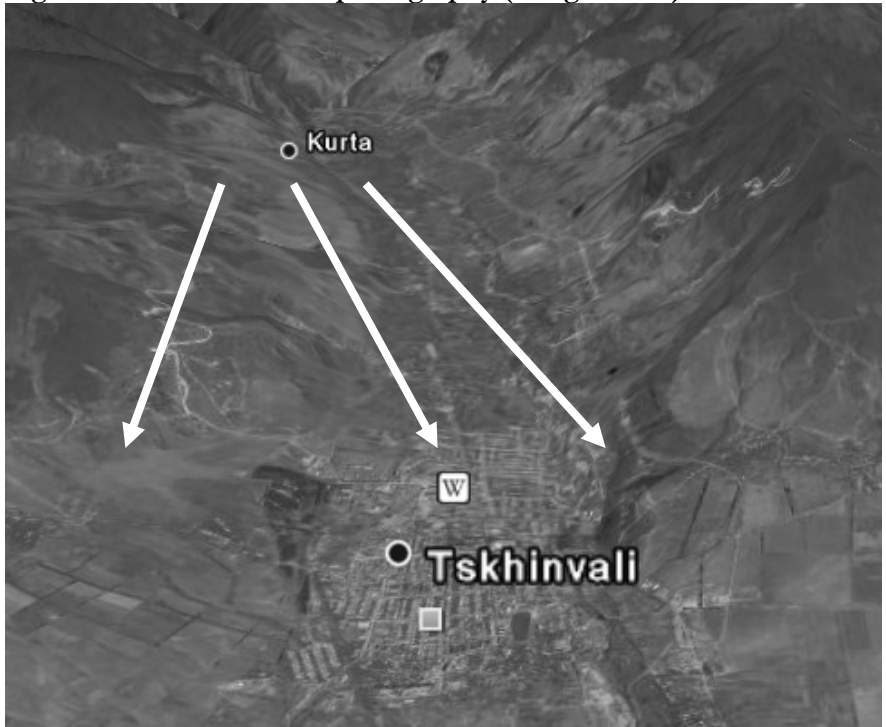
Above: Tskhinvali and the Kurta region. The large dark green feature in the south east (below the "h" of Tskhinvali) is not the soccer stadium, it is the water basin. Part of the 135th MRR came it through Tamaresheni, directly to the north, but also from the mountain road to the north west (the white line snaking in above the pine grove). The red arrows indicate the probable avenues of advance of the 135th, 693rd, and 503rd MRDs (left to right, respectively)

APPENDIX D: Strategic positioning and size of units, August 2008.
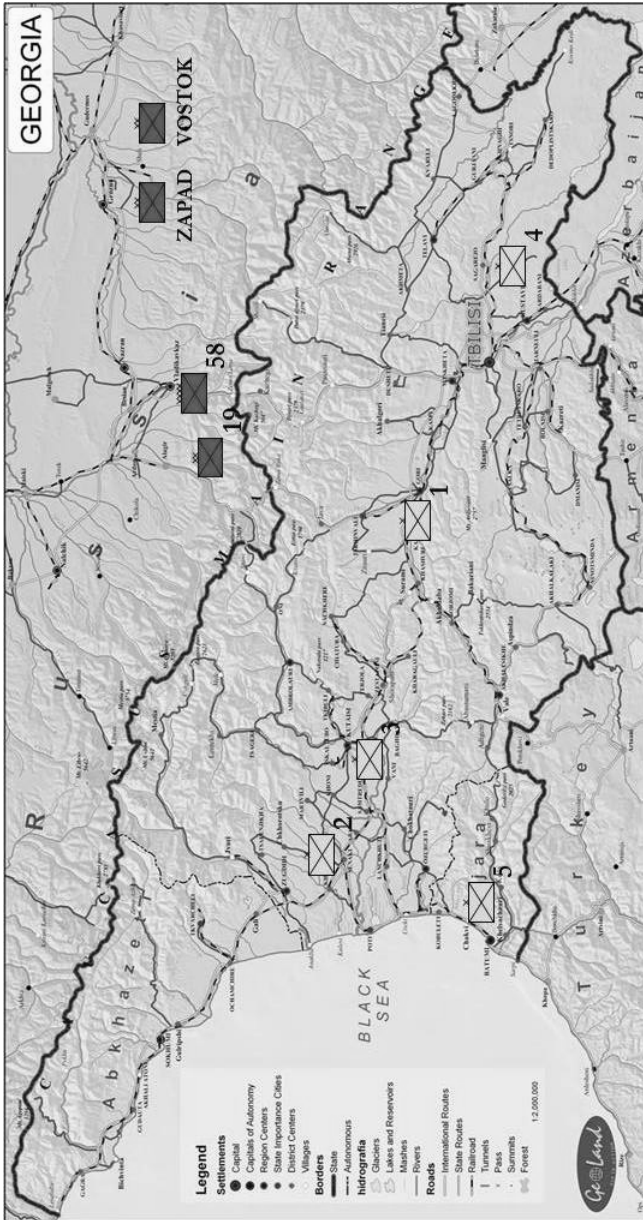
[1] The author is grateful for the three interview sessions held with three officers of the Georgian Armed Forces (GAF) and their patience in explaining the sequence of events. The author is also grateful to the Russian and South Ossetian officials who have provided support and advice, and, to the limit of their authority, offered to confirm the data presented here. As these individuals are still serving in their respective forces and agencies, they are referred to by their initials in this paper. The author is also grateful for the generosity of Lieutenant General (ret.) Michel Maisonneuve, Lieutenant Colonel Michel Beauvais, Colonel Kristian Ekroll (NO A), Major Brian Boyce (USMC) and Bruce Jones in sharing their expertise.

[2] Interview February 27 Maj. Z.J.

[3] "Russia begins exercises in volatile N. Caucasus Region", *RIA Novosti*, 5 July 2008, Online English version, www.rian.ru/russia/20080705/113174665.html Ironically on the sixty-fifth anniversary of the Battle of Kursk.

[4] Interview February 27 Maj. Z.J, corroborated by Marie Jégo *et al.*, "Spécial Crise géorgienne: Autopsie d'un conflit", *Le Monde*, 31 août-1er septembre 2008, 13. "Marat Koulakhmetov, le commandant de la 'force de paix' mixte, reçoit le négociateur [Temur Yakobashvili, minister for re-integration] géorgien. Au cours de la conversation, il lui dit son ras-le-bol des separatistes ossètes, devenus incontrôlables." Author's trans.: "Marat Kulakhmetov, commanding officer of the "peacekeeping force", receives the Georgian negotiator, Temur Yakobashvili. During the conversation, he confides in him that he is fed up with the Ossetian separatists who have become out of control."

[5] Interview February 13, Maj. Z.J., Maj. B.A., Maj. R.B.

[6] The exact timing of the crossing of the tunnel is disputed. Some sources indicate that Russian troops were already in Georgia by the evening of the 7th. See Mark Smith, *Russian Chronology July-September 2008*, 08/27, Shrivenham: Advanced Research and Assessment Group, November 2008, 63. Smith mentions that on 7 August "the president of Abkhazia, Sergey Bagapsh, says that a Russian military battalion from NCMD [North Caucasus Military District] has entered South Ossetia."

[7] David A. Fulghum, Frank Morring, Jr., and Douglas Barrie, "Georgians anticipated no response and Russian pilots expected no opposition", *Aviation Week & Space Technology*, 1 September 2008, 23.

[8] A former high official of the Ministry of Foreign Affairs of Georgia, speaking at a conference sponsored by the Austrian National Defense Academy's Peace and Conflict Institute (IFK) 4 March 2009, spoke of the "Sanakoyev Project" where Dmitri Sanakoyev was "installed" by Tbilisi in that region to balance against Russia's Eduard Kokoity in Tskhinvali. Although many ethnic maps declare that

area as being controlled by forces loyal to Tbilisi, there is wide acknowledgement that Sanakoyev's legitimacy is heavily challenged.

[9] Email message from Maj. R.B., 21 March 2009. This message pertains to a conversation held between Maj. R.B. and Major D. (1st Brigade), wounded midday 8 August 2008 on the western side of the capital. A.P., a Tskhinvali resident, noted two burnt out tanks on the eastern side of the railroad tracks passed the western village of Tamarasheni (Note that there is a second village called Tamarasheni, north of Tskhinvali). This information was shared with the author 4 March 2009, in a private discussion at a conference on Georgia hosted by the Austrian National Defense Academy's Peace and Conflict Research Institute (IFK), Vienna, Austria, held 3-5 March 2008.

[10] February 13 interview with Maj. Z.J., Maj. B.K. and Maj. R., corroborated again by Maj. Z.J. February 27. I say unwittingly, because the negotiations held with the Russian peacekeepers between August 2 and 7 did not suggest that they would take sides in the conflict.

[11] Some accounts suggest that this may have been the mechanized element of the 5th Brigade, but by the admission of Maj. Z.J., the 5th Brigade is merely a "paper unit" and was not capable at that moment. This is supported by the fact that Bruce Jones, an independent expert working in Estonia, forwarded to the author an unclassified presentation made by the Georgian Ministry of Defense in early 2008, where four of the five Brigades are clearly identified and located, but where the fifth is missing. The report that a mechanized battalion from the 5th Brigade can be read in Marina Perevozkina, "Eto ne konflikt – eto voina", *Nezavisimaia Gazeta*, 8 August 2008, www.ng.ru/politics/2008-08-08/1_war.html Author's translation: "According to Anatolii Barankevitch, Georgia is preparing for major aggression. 'Right now, not far from here [Tskhinvali] is the mechanized battalion of the 5th Georgian Brigade.' Others [units] are headed in our direction."

[12] UNOSAT http://unosat.web.cern.ch/unosat/freeproducts/Georgia/Russia_ConflictAug08/UNOSAT_GEO_Tskhinvali_Damage_Overview_19Aug08_HighRes.pdf.

[13] Email of 29 January 2009, from the Defense Attaché Office, Tbilisi, Georgia, of a NATO power.

[14] The model of the airplane is ascertained credibly thanks to Bruce Jones. A PowerPoint slide, corroborated by the Georgian Ministry of Defense, identifies the airplane positively. The identification of the airplane is made easier by the infrequency of air missions over Tskhinvali that day, according to A.P., a Tskhinvali resident contacted in Vienna, 4 March 2009. Interview of 13 March 2009, Maj. R.B.

[15] http://warfare.ru/?linkid=2227&catid=321&comd=lang I have not been able to verify the authenticity or the exact origin of the information from this site.

[16] 13 February 2009 interview with Maj. Z.J., Maj. R.B., and Maj. B.A. This is not uncommon and a critical factor in procurement and anti-tank force generation; RAdm Sir Anthony Buzzard, "The Possibility of Conventional Defense", *Adelphi Paper*, 6, December 1963, 8. Evidence of Russian losses to anti-tank guided munitions and other man-portable anti-tank weapons is discussed in http://warfare.ru/?linkid=2227&catid=321&comd=lang

[17] Conversation March 30, Maj. R.B., Maj. B.A.

[18] This order of battle can be deduced from piecing several sources together. The identification of the units is provided by Sergey Vasilev, "Podarivshinie Tskhinvali zhizn", *Krasnaia Zvezda*, 14 August 2008, www.redstar.ru/2008/08/14_08/3_01.html, Sergey Bogdanov, "Tsena mira", *Krasnaia Zvezda*, 11 August 2008, www.redstar.ru/2008/08/11_01/1_01.html, Mikhail Barabanov, "The August War between Russia and Georgia", *Moscow Defense Brief*, 3:13, 12 September 2008, www.mdb.cast.ru/mdb/item3/article1/?form=print. The "Warfare.ru" site mentions only a few losses in tanks for the Russian armed forces, but identifies the location of the destruction of one T-72 belonging to the 693rd in Zemo Niqozi, a village south by south west of Tskhinvali, while other sources put the 135th above the western village of Tbeti. This leaves the 503rd unassigned, and this must have been the unit proceeding east of the city and the river. http://warfare.ru/?linkid=2227&catid=321&comd=lang

[19] "Russian Federation", *Jane's World Armies 2000*, Issue 6, December 1999, and James Hackett, ed., *The Military Balance 2008*, (London: Routledge, February 2008), 219-220, corroborated by Mikhail Barabanov, "The August War between Russia and Georgia"…

[20]Aleksander Khrolenko, "Khornika prinuzhdenija k miru", *Krasnaia Zvezda*, 11 August 2008, www.redstar.ru/2008/08/11_08/2_01.html Evidently a cease-fire is worthy of the name only if all sides abide by it, otherwise, it is merely the cessation of combat by one side. Khrolenko refers to this situation cryptically; "Boi na okrainakh Tskhinvali to zatikhaiut, to vozobnoblayutsja." Author's translation: "Combats on the outskirts of Tskhinvali at some times die down, at others, become louder."

[21] UNOSAT http://unosat.web.cern.ch/unosat/freeproducts/Georgia/Russia_ConflictAug08/ UNOSAT_GEO_Tskhinvali_Damage_Overview_19Aug08_HighRes.pdf

[22] This is disputed by Mikhail Barabanov, "The August War between Russia and Georgia"… but James Hackett, ed., *The Military Balance 2009*, London: Routledge, February 2009, 177, proves otherwise. In February 2009, Georgia had a total of two-hundred and thirty-six pieces of artillery, and in the detail, there is no difference between the 2008 and the 2009 data. The February 13 interview session with Maj. Z.J., Maj. R.B. and Maj. B.K. suggests a lot of air activity over Tskhinvali, but Konstantin Makienko, "Air Farce: The Russian Air Force didn't perform well during the conflict in South Ossetia" *Russia & CIS Observer*, 4:23, November 2008, www.ato.ru/rus/cis/archive/23-2008 says that on the 9th there was next to no activity. While a Tskhinvali resident told the author (4 March 2009, Vienna, Austria) that there were never more than two or three airplanes over Tskhinvali at any given time, sources from the Georgian Ministry of Defense suggest otherwise.

[23] Aleksander Khrolenko, "Khronika prinuzhdenia k miru"…

[24] Sergey Vasilev, "Podarivshinie Tskhinvali zhizn"…

[25] Corroborative notes from Maj. B.A. 16 March 2009.

[26] 13 February interview with Maj. Z.J., Maj. R.B., and Maj. B.A. Georgian sources claim up to nineteen victories over Russian aircraft, all from ground fire. While the Russian Defense Ministry will acknowledge the loss of four aircraft, Mikhail Barabanov, "The August War between Russia and Georgia" claims that the overall losses were one Tu-22M3 *Backfire*, one SU-24MR *Fencer E*, and four Su-25 *Frogfoot*. Said Aminov, "Georgia's air defenses in the war against South Ossetia", Moscow Defense Brief, 3:13, September 2008, www.mdb.cast.mdb/3-2008/item3/article3/?form=print claims the same numbers but adds a possible three additional victories. Therefore the total verifiable could be as high as seven to ten airplanes shot down. Russian authorities blame the Buk-M1 surface to air missile for some of the losses, and this is corroborated by Georgian sources. See Konstantin Makienko, "Air Farce…"

[27] 13 February, 27 February and 12 March interviews with Maj. Z.J., Maj. R.B. and Maj. B.A.

[28] William P. Baxter, *The Soviet Way of War*, (London: Brassey's Defense Publishers, 1987), 151, 192-193. The use of cellular phones is corroborated by notes from a presentation made at the Fall Atlantic Council of Canada conference 4 November 2008, Cadieux Auditorium, Ministry of Foreign Affairs of Canada, Ottawa.

[29] 12 March interview Maj. R.B.

[30] Viktor Khudoleev, "Voiska zadatshu vypolnili", *Krasnaia Zvezda,* 13 Aug. 2008, www.redstar.ru/2008/08/13_08/1_03.html and Mark Smith, *Russian Chronology July-September…*77.

[31] Ghulam Dastagir Wardak, ed., *The Voroshilov Lectures: Materials from the Soviet General Staff Academy, Vol. 1: Issues of Soviet Military Strategy*, (Washington, DC: National Defense University Press, 1989), 55.

[32] I. N. Rodionov, "On Several Tenets of Soviet Military Doctrine", in Harold S. Orenstein (trans.) and David M. Glantz, eds., *The Evolution of Soviet Operational Art, 1927-1991: The Documentary Basis, Vol. II: Operational Art 1965-1991*, London: Frank Cass, 1992, 336, and David M. Glantz, "The Intellectual Dimension of Soviet (Russian) Operational Art" in Brian J. C. McKercher and Michael A. Hennessy, eds., *The Operational Art: Developments in the Theories of War*, Westport CT: Praeger, 1996, 125, and Willard C. Frank Jr. and Philip S. Gillette, *Soviet Military Doctrine from Lenin to Gorbachev 1915-1991*, Westport, CT: Greenwood, 1992, 2.

[33] Mark A. Smith, *Russian Chronology, April-June 2008*, 08/25, Shrivenham: Advanced Research and Assessment Group, September 2008, 16.

[34] Marcel De Haas, *Putin's External and Internal Security Policy*, 05/05, Shrivenham: Conflict Studies Research Center, February 2005, 4-6.

[35] Marcel De Haas, *Putin's External and Internal Security Policy*, 6.

[36] Wardak, *The Voroshilov Lectures…* 96-97.

[37] Mary C. Fitzgerald, "The Soviet Image of Future War: The Impact of Desert Storm" in Willard C. Frank Jr. and Philip S. Gillette, eds. *Soviet Military Doctrine from Lenin to Gorbachev 1915-1991*, Westport CT: Greenwood, 1992, 373. Quoting Vorobev.

[38] David. M. Glantz, *Soviet Military Operational Art: In Pursuit of Deep Battle,* London: Frank Cass, 1991, 2-3. The importance of military history is directly related to Marxist notions of the inevitability of the victory of the socialist camp over the imperialists. Because history moves in a pre-determined way which is obscure to those unaware of their condition of alienation and exploitation, Soviet victories are interpreted as evidence of the rectitude of history and Marxist thought. For more on the impact of history in Soviet and Russian thinking, see Peter H. Vigor, "The Function of Military History in the Soviet Union", in Carl Reddel, ed., *Transformation in Russian and Soviet Military History: Proceedings of the Twelfth Military History Symposium USAF Academy 1986*, Washington, DC: United States Air Force Academy, 1990.and Chris Donnelly, *Red Banner*, London: Brassey's, 1989, 219-221.

[39] Richard Simpkin, *Deep Battle: The Brainchild of Marshal Tukhachevskii*, London: Brassey's, 1987. Albert and Joan Seaton, *The Soviet Army from 1918 to the Present…*

80-81 disagree as to the wisdom of Tukhachevskii, especially in tactical matters. There is no doubt however of his penchant for mobility.

[40] Glantz, "The Intellectual Dimension …", 141-142.

[41] Richard Simpkin, *Deep Battle: The Brainchild of Marshal Tukhachevskii*, (London: Brassey's, 1987), 249-270, Glantz, *Soviet Military Operational Art…*, 253 and Robert Leonhard, *The Art of Maneuver*, (Novato, CA: Presidio, 1994), 159-165.

[42] Glantz, *Soviet Military Operational Art…*, 208.

[43] A. N. Zakharov, "Development Trends of Armed Struggle" in Harold S. Orenstein (trans.) and David M. Glantz, eds., *The Evolution of Soviet Operational Art, 1927-1991: The Documentary Basis, Vol. II: Operational Art 1965-1991*, (London: Frank Cass, 1992), 345, 348-349.

[44] See Appendix B: The Endurance of the Soviet MRD Structure, Table 3: The Shift towards Mobility…

[45] Albert and Joan Seaton, *The Soviet Army 1918 to the Present*,…95, Glantz, *Soviet Military Operational Art…*, 15-25, and Glantz, "The Intellectual Dimension…", 141-142.

[46] Glantz, *Soviet Military Operational Art...*, 225, and Zakharov, "Development Trends of Armed Struggle", 347. Zakharov foresaw the predominance of air assets and the reduction of duration of the initial phase of war so as to avoid "irreversibility" (a critical loss of troops).

[47] Ibid., 209.

[48] William P. Baxter, *The Soviet Way of Warfare*, (London: Brassey's Defense Publishers, 1987), 94-95. Historically and practically, having more than two echelons is the least desirable, but photographic evidence of the Russians snaking their way to Tskhinvali shows that this must be done when the conditions dictate it. This situation is clearly an example of how the operational tempo must not be allowed to develop gaps. This is partly why one could find such concentrated masses of armor as potential targets all along the Djava road. See Simpkin, *Deep Battle…*, 261.

[49] Zakharov, "Development Trends of Armed Struggle", 347.

[50] Ibid., 354-355.

[51] Presentation at the Austrian National Defense Academy, March 4 2009, also "Oboronnye raskhody Grusii v 2008 godu uvelitchatsa do $1 mlrd", *RIA Novosti,* 5 July 2008, www.rian.ru/society/20080705/113192732.html , James Hackett, ed., *Military Balance 2009…* 176. Vyacheslav Tselyuko traces the difference between

planned spending and actual spending. When Georgia would say in its *Strategic Defense Review 2007* that defense spending would be 3.9 per cent of GDP, the actual spending in 2007 was 8 per cent. See Vyacheslav Tselyuko, "Force Development and the Armed Forces of Georgia under Saakashvili"… and Ministry of Defense of Georgia, *Strategic Defense Review 2007,* Tbilisi, December 2007, 93.

[52] Peter W. Schulze, "Geopolitischer Machtpoker am Kaukasus", *Sozial Wissenschaftliche Schriftenreihe: Konflikt am Kaukasus*, Wien: Internationales Institut fuer Liberale Politik, Feb. 2009, 13.

[53] Ministry of Defense of Georgia, *Strategic Defense Review 2007,* 66-67, 77.

[54] Conversation with Maj. Z.J. 30 March 2009.

[55] See Appendix A: Force Structure Comparison, Table 2: Force Structure Comparison Georgia-Russia, 2008.

[56] Vyacheslav Tselyuko., "Force Development and the Armed Forces of Georgia under Saakashvili"… Vitalii Denisov, "Kto vooruzhal Grusiju", *Krasnaia Zvezda*, 11 August 2008, www.redstar.ru/2008/08/11_08/3_04.html

[57] Ministry of Defense of Georgia, *Strategic Defense Review 2007,* 71, 74, 78.

[58] Luc Mampaey, *Les pyromanes du Caucase: les complicités du réarmament de la Géorgie,* Notes d'Analyse du GRIP, 26 septembre 2008, 6. www.grip.org/bdg/pdf/g0908.pdf Mampaey, citing the UN Register on Conventional Arms, lists the purchase of seventy-four T-72 MBTs, ninety-six surface-to-air missiles for the BUK-M1 system, a hundred MANPAD missiles, and some thirteen thousand anti-tank guided missiles.

[59] Willard C. Frank Jr. and Philip S. Gillette, *Soviet Military Doctrine* … 2. This author was defense advisor to the Ministry of Defense of Estonia 2000-2001, and can testify to the overbearing influence of western advisors in strategic and security concept formulation. Strictly speaking, there is very little indigenous thought about military doctrine in former Soviet Republics. This predicament continues even today; Maj. Z.J. confided to the author that Georgia's employment of armor formations was purely reactive, and no Georgian doctrine was developed for the contingency of August 2008 save for the copying of field manuals. The Office of the Defense Attaché of a NATO power in Tbilisi believes that Soviet concepts were more readily recognizable in the way the GAF handled its forces. (Email of 29 January 2009).

[60] Interview 13 February, Maj. Z.J., Maj. R.B., and Maj. B.A.

[61] Private conversation with an officer belonging to NATO's Intelligence Division, 24 September 2008, Rome, Italy, on the occasion of the 55th Anciens Seminar of the NATO Defense College.

[62] Richard K. Betts, *Military Readiness: Concepts, Choices, Consequences,* Washington, DC: Brookings Institution Press, 1995, 40.

[63] Ibid., 28.

[64] Richard K. Betts, *Military Readiness*, 25.

[65] Ibid., 26, and Wardak, *The Voroshilov Lectures…*, 177.

[66] Ibid., 26.

[67] Chris Donnelly, "The Soviet Use of History for Operational Analysis: Establishing the Parameters of Force Sustainability", in Carl Reddel, ed., *Transformation in Russian and Soviet Military History: Proceedings of the Twelfth Military History Symposium USAF Academy 1986*, Washington, DC: United States Air Force Academy, 1990, 244.

[68] Betts, *Military Readiness…*, 26.

[69] Betts, *Military Readiness…*, 37.

[70] Wardak, *The Voroshilov Lectures…*, 185-186.

[71] Betts, *Military Readiness…*, 156.

[72] Baxter, *The Soviet Way of Warfare*, 246-247.

[73] Ibid., 116.

[74] John Stone, *The Tank Debate*, Amsterdam: Harwood Academic Publishers, 2000, 164.

[75] Donnelly, "The Soviet Use of History…" 250.

[76] Betts, *Military Readiness…,* 40.

[77] Donnelly, "The Soviet Use of History…" 267-269.

[78] Glantz, *Soviet Military Operational Art…*, 229-230.

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[82] US Department of Defense News Release, *Georgia "Train and Equip" Program Begins*, 217-02, 29 April 2002.

[83] Benjamin Barthe, "Israël embarrassé par sa coopération avec l'armée géorgienne", *Le Monde*, 31 août-1er septembre 2008, 6. Also Luc Mampaey, *Les Pyromanes du Caucase…*, 4.

[84] Stone, *The Tank Debate,* 134, and Patrick Wright*, Tank*, New York: Viking Press, 2000, 433, 442.

[85] Betts, *Military Readiness…*, 158.

[86] Stone, *The Tank Debate*, 136.

[87] Wright, *Tank*, 442.

[88] Stone, *The Tank Debate*, 167-169.

Facing the Complex Battleground: Urbanized Terrain

It's a dirty business, but somebody has to do it. (URBAN COMBAT)
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By Zdzislaw Sliwa PhD, Colonel, Polish Army, Faculty of Baltic Defence College

Military operations in urban terrain have always been the worst scenario for the armed forces of every nation. It was underlined by Sun Tzu, who pointed out in his famous *Art of War* that "*The worst policy in war is to attack the walled cities. Attacking cities is the last resort when there is no other alternative.*"[2] Next, he emphasized the long time which was necessary to start the siege including all the equipment and soldiers' preparations. On the other hand, he mentioned that "*those skilled in war, …, capture enemy's cities without laying siege to them and overthrow their kingdom without lengthy operations.*"[3] Such an understanding of the issue was probably common among Chinese military thinkers during the end of slavery society in China, in which cities played an important role.[4]

Having in mind Sun Tzu's point of view one can note that, in general, fortified cities have played for millennia an important role as centers of economic, political and cultural activities all over the world. Cities were connected with their military function and often used as anchors for defensive lines.[5] Sometimes their fall was connected with the final defeat of an opponent. Urban areas also played an important role during revolutionary warfare. The various revolutionary theories expressed different points of view as to how one might best exploit cities. These views were affected by the different regional settings, the level of support from the masses, and the ideas, experience and background of the revolutionary leaders. For example, in Russia Lenin believed that the revolution had to begin in urban centers. A different attitude concerning the role of cities was presented by Mao, who assumed that revolution should be launched from rural areas, as he stated: "*Take small and medium cities and extensive rural areas first; take big cities later*"[6]. A similar attitude was presented by Che Guevara, who believed that the revolution should start in the countryside. On the opposite side, Carlos Marighella preferred early military action within the urban setting.[7] Such is the function of cities that the term „*urban guerrilla war*" became an important factor in fighting internal civil wars, or when facing a conventional invasion by another

country.[8] The past and present conflicts, and the lessons learned from them, constantly present the likelihood that future warfare will face "*walled cities*" and it to win their seizure will be unavoidable.

1. Urbanization as a constant process

At present urban operations, as a military environment, are continuing to challenge the world's most technologically developed, well trained and experienced armed forces,[9] and the outcome is not so obvious when counting only relative strengths. At the same time it is important to underline that urban operations were largely forgotten during the Cold War period. But military involvement in peacekeeping operations, humanitarian relief and combat operations have recently influenced military thinkers and the topic is back on the desk. Thus, the situation in regards to cities has changed rather quickly after collapse of the bipolar world. It is strictly connected with the fact that human race is crowding into cities and "*a demographic upheaval of seismic proportions is today transforming almost the entire developing world from a predominantly rural society to an urban one.*"[10]

For example, such a trend is ongoing in the most populated country in the world – China. The country's population pattern is changing rapidly and China's "*urban population surged to 607 million with an urbanization rate of 45.7 percent at the end of 2008*".[11] So, since 2000, China had increased by 148 million. To compare in the early 1980s, the rural population accounted for nearly 80 percent of the total. The same development is ongoing in the rest of the world. In general, during last 30 years world's urbanization has increased rather quickly and such a trend will continue parallel to geographical and social phenomenon.

The global tendency in conflict today is naturally encouraging inferior forces, military and non-military organizations including non-state actors, to move in a calculated manner into heavily populated areas to partially neutralize adversaries' advantages and to search for political, economic and logistical support there. In a parallel development, the situation is changing the pattern of present conflicts and will influence them in the nearest future. For future enemies, who will mainly engage in asymmetric warfare, exploiting the urban environment will be a matter of life or death. Such an attitude will be particularly valuable when technologically underdeveloped forces struggle with any army that can dominate them by more advanced

technological weapon systems. From a military point of view, urban areas will create the main centers of gravity of operations as they are still very important in several dimensions, among them as a symbol, a political nucleus, a communication and transportation net, an economic heart, and as mass media centers. As such, there will always be doctrinally important major military objectives to be controlled. It has been proven repeatedly in conflicts over the last century that such urban operations are unavoidable.
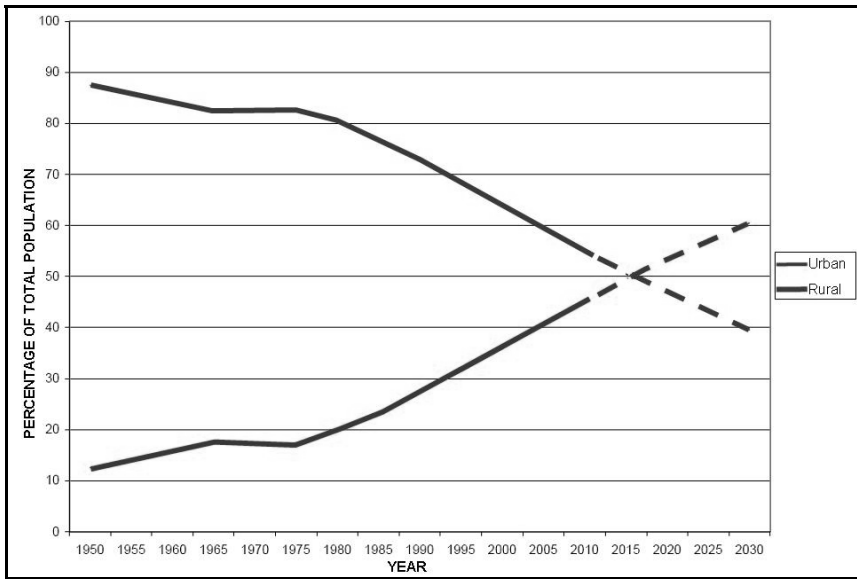
Fig. 1. China's Urban and Rural Population 1950 – 2030.
Source: China Statistical Yearbook, various years. Compare: K. C. Seto, *Urban Growth in China: Challenges and Prospects,* Department of Geological and Environmental Sciences and Freeman Spogli Institute for International Studies Stanford University, 2007.

2. Urbanized terrain as battleground

From a historical perspective, urban combat has been connected with heavy casualties among soldiers and non-combatants, devastation of the area's infrastructure, the heavy use of logistics resources and, especially in recent years, with political concern by national and international society. To avoid the cruelty of such combat in the future, urban doctrines and

combat systems should be revised to improve their combat efficiency in this environment in order to preserve one's own troops and, what is also very important, to protect the lives of non-combatants and the vital urban infrastructure. The difficulty of the urban battle was demonstrated during many urban struggles during World War II. One of the most important battles occurred in Stalingrad and, according to Mao Zedong "*this battle was not only the turning point of the Soviet – German war, …, it was the turning point in the history of all kind.*"[12] In the post-war world the problems of urban war have persisted. During the Vietnam War the North Vietnamese Army attacking Hue city took advantage of US and South Vietnamese lack of keenness to bombard the city as cultural sanctuary inhabited by a friendly population. So, when heavy fighting started, fighting that including air attacks and artillery fire against targets within the city, the fight was carried out under the lenses of the media cameras. As a result, international public opinion saw the cruelty of the war and the US tactical victory became a part of the strategic defeat that came about as a result of the Tet Offensive of 1968. Moreover, the Hue battle was a very bloody one as the NVA lost 5,000 soldiers, the ARVN more then 380 dead with nearly 2,000 wounded and American lost 210 dead and 1,360 wounded[13]. Urban warfare in Mogadishu in 1993 was another example of cruel nature of urban war. The events of 1993 came as a shock for the intervention forces and public opinion about the intervention was greatly affected by the death of Special Forces soldiers and the destroyed helicopters.[14] The outcome of the fight pushed the US to review its urban warfare doctrine and this was very helpful later during Iraqi War. It is important to mention that urban challenges face leaders at every echelon and, in many cases, the lack of joint urban operations training has been painfully obvious as this gap in training has influenced the outcome of the urban battle at all levels. At the same time, the urban struggle proves that warfare is changing to meet various threats. For instance, in Mogadishu the troops inside the city were supervised and commanded by US generals and officers sitting in the camp located kilometers away.

Urban warfare has been a very important factor in the Iraqi war, as was predicted by Tariq Aziz, former Iraqi foreign minister, who said in October 2002: "*Some people say to me that the Iraqis are not the Vietnamese! They have no jungles or swamps to hide in. I reply, 'let our cities be our swamps and our buildings our jungles.'*"[15] Such conclusions were the outcome of the First Gulf War (1991) as the results of the war convinced Iraqi leaders that there was no benefit from facing US and Coalition forces in open terrain. Similar

conclusions came from the Second Iraq Wars and the initial operations against the Taliban in 2001, which led them to conduct an asymmetric war mainly in cities in order to confront the Western armies' weaknesses and to avoid their strengths. As a result, the Taliban and al Qaeda are still conducting this form of struggle with some success as such critical assets that give the Western armies their advantage-- intelligence, surveillance, maneuver and firepower-- are largely negated.[16] According to some military thinkers, urban warfare is an important part of antiterrorism war especially because, "*For Western military forces, asymmetric warfare in urban areas will be the greatest challenge…. The city will be the strategic high ground – whoever controls it will dictate the course of future events in the world.*"[17] This is an area where the media will influence policy even at the strategic level as happened during U.S. intervention in Somalia. In the period before the intervention the repeated media images of starving Somali children speeded up the US and American intervention. Later, the images of US soldiers being dragged along the streets helped end that commitment.
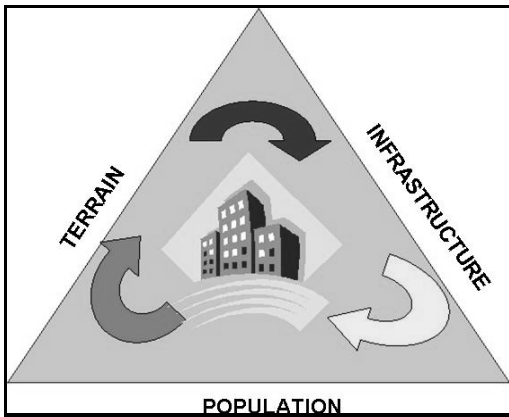

Fig. 2. Urban triad.

It looks like the media will remain a major factor for any operation from the strategic to the tactical level. The worldwide media exposure of media companies such as CNN and the BBC can quickly give turn a tactical action into one with strategic impact.[18] This is all connected with the fact that the urban environment is a very complex one and covers three main dimensions (fig. 2): population, terrain, and infrastructure. And all of these are mutually connected.

3. The complex approach to the urban environment

Such is the complexity of cities that, among US military thinkers, some have developed ideas along the so called "*indirect approach*" [19] to urban warfare. Alternate theories have been developed concerning the direct fight in cities that might be necessary because of political or military circumstances.[20] One statement notes that, "*Tomorrow's objective is not the top of a hill; it lies in the middle of a city block, surrounded by noncombatants.*"[21] Urban warfare is still under the process of evolution and this evolution is closely connected with an increased dependence on technologies and the evolution of fighting tactics for this difficult environment. For example, a central category in the IDF (Israeli Defense Forces) conception of the new urban operations is "swarming." This refers to well coordinated joint actions undertaken by a network form of organization whose well equipped, and temporarily separated units, can operate semi-autonomously, but in general synergy with all others.[22] Such a focus on urban operations is also very important for Western modern armies.

As a parallel development, it is necessary to stress that the search for technological solutions never should be pursued at the expense of personnel, as the need to focus on the human element of any military operation is the most important factor if one wants to achieve the desired end state. This is especially important as there is high probability that in the future soldiers will be involved in urban warfare and in such difficult terrain the many technological advantages Western soldiers have over the enemy will be reduced by the complexity of cities and human elements involved within it.[23] People are the most important dynamic during the combat in this type of terrain. As the Russian General Wasilij Chuikov once said: "*Fighting in a city is much more involving than fighting in the field. Here the 'big chiefs' have practically no influence on the officers and squad leaders commanding the units and subunits.*"[24] His words are still valid for combat leaders at all levels, but especially at the tactical level, because that level of war is the most important. In modern warfare, and in particular urban warfare, success requires the dispersal of numerous physically isolated units and requires small and autonomous actions based on tactical creativity. So, the proper training of leaders must be improved and redesigned as soon as possible.[25] Of course technology, and modern concepts such as INFOOPS, PSYOPS, SIGINT and precision targeting are excellent force multipliers, but in urban operations there is no substitute for well trained,

resolute, moral soldiers leaded by capable commanders on the ground who at the same time, are able to provide a sense of security to the civilian population.

Additionally, according to R. Collyer, the present situation in the world requires further development of military capabilities to effectively operate in urban terrain in joint and coalition environments.[26] These capabilities are all closely connected with creating modern doctrine, effective training systems and with determining the appropriate structures and equipment for MOUT[27] that makes the soldier a central element in any combat system. The current state of thinking on urban operations takes into account the fact that in Chechnya in Grozny dedicated combatants, armed only with light weapons (mines, mortars, RPGs, AK-47) were able to inflict heavy casualties to Russian troops that were unacceptable even to Russian public opinion.[28] So modern military thinking has to consider built-up areas as potential global areas of military operations which require updated MOUT doctrine and the right tools to deal with that environment. At present the term RMA (Revolution in Military Affairs) is very popular, but according to S. Graham in the light of the political consequences from the difficulties of Iraqi operations the current US RMA is faced by an "*urban turn,* which is connected with ongoing changes in military programs, structure, and training.[29] To improve its urban war capabilities the US Army has created an urban training area at Fort Polk and the USMC has constructed the Yoda Village in Arizona. In a similar manner, NATO has started new programs to improve its readiness that include operating inside build-up areas. The NATO effort includes the RTO Study Group „*Urban Operations in the Year 2020.*"[30]

As the terrain is clearly important, urban warfare capabilities are a part of many doctrines e.g. Canadian doctrine is bearing in mind that future conflicts will be distinguished by features such as precision, lethality, compression in time, expansion in volume, dominance of knowledge and simultaneously (asynchronous) operations rather than sequentially phased operations. The Canadians note the influence on doctrine "*by the very high likelihood of operations in urban terrain.*"[31] As a result, in the future many armies will be involved in urban operations depending on location, politics and international involvement of the operations. This is true especially when supporting peace, providing humanitarian aid, fighting with terrorists or fighting asymmetric enemies. Such Low Intensity Conflicts (LIC) will require appropriately prepared forces to face challenges in this demanding

environment. Such a necessity is usually connected with developing suitable doctrine, tactics, training, equipment and supporting technologies which have to be prepared well before any engagement.

Such the understanding of the importance of MOUT can be seen among new rising military powers, including China. As stated by Zheng Qinsheng, Chairman Jiang Zemin pointed out in "*China's Declaration of the XXI Century*" that she should first turn itself into a powerful country and next be ready to make a greater contribution to the progress of mankind and world peace. This is connected with an increase of the world's population and tighter supplies of natural resources and a relatively smaller space for subsistence. As a result, the tasks of the military struggle that China may currently face have not yet been totally separated from the nature of taking cities and seizing territory.[32] The PLA will be an instrument to support new China and to defend political power. Such a situation will require defending cities and more places in future conflicts.[33] The political situation in the world is generally indicating that urban operations will not be a challenge for China as internal issue. But the quickly developing country is more and more involved in international security arrangements and some of the potential hotspots are located in areas which are rich in natural resources. Resource exploitation, which is critical for Chinese economy, will require a safe and secure environment in those regions will be of vital interest to that nation. Consequently, and having in mind that present low intensity conflicts are mainly connected with MOUT, the PLA has to be prepared to fight an adversary hiding inside buildings and ruins.

Conclusions

Looking back, Sun Tzu was definitely right in the *Art of War*, but his perspective comes from an agrarian age when storming walls was rather unwise and avoidable. But the present age realities are connected with the need to carry out urban operations because the enemy is using this environment.[34] So, as it has been proven many times, there is a need to conduct urban operations with all possible means and technologies that modern troops possess. For example, some years ago it was not easy to fight during the night, but now soldiers of developed armies own the night, and the same will probably happen with urban warfare. This is all connected with the complex effort to prepare armed forces for the future and to transform them by the following means: modernization, change of organizational structure, creating strong reserves, development of strong

and adaptive leadership.[35] Moreover, the process of collecting lessons learned from modern urban operations fought during last asymmetric conflicts should be ongoing continuously to avoid mistakes done by other countries.[36] So, it looks like many countries have to consider that, up to some extent, "*cities are the most likely battlefield in the 21st century.*"[37]

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Proceedings of a Workshop "Russian Security Present and Future", 9 June 2009 *

By Baltic Defence College faculty

The workshop held at the Baltic Defence College was not the first of its kind, but as the College continues to develop its functions as provider of high-end knowledge provider for students and policy-makers alike, it is possible that the success of this endeavor will trigger a series of workshops yielding booklets like this one, and articles in specialized journals. These products, in turn, may find their way into the curriculum of the College. More importantly, however, it is necessary to take stock, occasionally, of the security developments that shape the regional strategic environment.

On the 9th of June 2009, specialists from various Baltic ministries, Tartu University, St-Petersburg University and the Finnish National Defense University met with their counterparts at the Baltic Defence College to discuss the wider implications of Russia's search for security in a changing world. The workshop focused on region-to-region security dialogues, on the ways and means at Russia's disposal to determine its own security unilaterally, and on the state of Russia itself. In other words, the premise was not of *military* security but of *wider* security. The underlying theme was that structural readiness (the amount of military equipment on hand) is not a guarantee of safety or a threat in itself. Such capabilities are less credible in today's interdependent world than they were during the Cold War days. Security is very much dependent on societal and economic factors. How these factors play out in Russia hypothetically have implications for Euro-Atlantic relations and for Baltic security as well.

1. Russian Wider Security and its Impact

"Wider" security is often thought of in geographic terms. For example, wider Russian security is very much dependent on the status of relations between Russia and Euro-Atlantic partners. And because Russian decision-

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* Disclaimer: The content of this report reflects the opinions and views of the guest speakers invited and the lecturers of the Baltic Defence College, and in no way represent the policies and positions of any Ministry of Defence, of Foreign Affairs, international organization, or that of the Baltic Defence College.

makers believe firmly that the policies and positions of Euro-Atlantic partners is dictated by the United States, then Euro-Atlantic/Russian relations (or NATO- Russia relations) are in fact summarized by the kind of relations Russia has with the United States.

The workshop yielded that the post-Cold War history of U.S.-Russia relations was mixed. A certain number of friction points were inherited from the Clinton administration. President Clinton's administration was overwhelmed by the problems of the Middle East and in the Balkans, and foreign policy in general, or with major actors such as Russia, suffered as a result. The audience was reminded that the USSR's collapse was due to crass mismanagement, and the new Russia should have reformed its economy, something it hasn't done.

While U.S.-Russia relations remained acceptable, the trend is unmistakable; each new American President arrived in office buoyed by the belief that harmonious *personal* relations with the Russian leadership will achieve the desired effects. Ultimately, each of these administrations' hopes turned out to be illusory. When Mr. Clinton entered office, Strobe Talbott, a renowned expert on Russia (he translated *Khrushchev remembers* in the early 1970s), was motivated by the same enthusiasm, which seemed to be reciprocated at least until the abrupt conclusion of the Balkan wars in 1995. The 1998 currency crisis and the Kosovo air war in 1999 sealed the relations between U.S./NATO and Russia for the next few years. The Bush Administration that succeeded Clinton's was less inclined to compromise, and was definitely more realistic. Yet, it is at the infamous Ljubljana meeting in 2001, that Mr. Bush "saw Mr. Putin's soul", and decided that he could do business with him.

The events of September 11th 2001 lent credence to this belief, as the perceptions of Russia and the United States about what constitutes a terrorist (and how to deal with the problem) suddenly found reconciliation. In this sense, the trend of the Bush Administration with Russia is atypical. This yielded unprecedented cooperation between the two giant countries in the pursuit of the war on terror. When resource revenues became lucrative enough to allow Russia to recover, however, the accompanying self-confidence of the Russian leadership started to strain relations. When the issue of energy resources became confused with the war on terror, relations took a turn for the worst.

On Iran, for example, Russia and the United States were never able to find compromise. The U.S. strongly opposes the development of nuclear potential in a rival that has repeatedly stated that it viewed the U.S. and some of its allies (notably Israel) as hostile powers. As far as Russia was concerned, Iran is an important partner, because on its assent lies Russia's use of the Caspian Sea for oil and gas exploration. In addition, Russia has been supplying technology and know-how to the Iranians in the development of their civilian nuclear reactors.

For years, U.S.-Russia relations have been deteriorating, and factors of disagreement have begun permeating areas where there had been long-standing cooperation. As Russia continues to block United Nations resolutions on Iran, it is no surprise to see that the European Union is no more able to sway the former superpower to re-establish harmony in the Euro-Atlantic world. As was explained, the Common Security and Foreign Policy of the European Union is ill-adapted to deal with a centralized and authoritarian power like Russia. The disagreement at what to do with Russia in the European Union relative to energy security in particular is palpable. While certain countries fear Russia's influence, others adapt to it, and yet other EU members leverage it for their own advantages, suggesting fragmentation within the EU. This fragmentation supplies yet another reason for the EU's tendency to "muddle through", and find consensus on the lowest common denominator.

This tendency means that even when the EU acts "together", Russia can still negotiate from strength. As evidence of this strength becomes more tangible, the risk is that national policies within the EU will tend to predominate over common ones. Because the variety of members means a variety of views on Russia, the prospect of "deeper" integration is held hostage to better relations in general. Of course, it does not help that Russia finds the EU less relevant as a partner than the U.S. (because Euro-Atlantic relations are shaped by the Americans). Somehow, the only solution the EU has to salvage its unity is to decide on the lowest common denominator, but individual security will be perceived to be based on bilateral deals. Although this was not developed further during the discussions, it is possible that EU-Russia relations, when examined from the energy security standpoint, are dependent on what Russia believes to be leverage by the EU in its old "sphere of influence". For example, in 2006 and 2009, Russia repeatedly cut gas flows to Ukraine, a move that had repercussions in Central and Western Europe. The EU's implication in

attempting to craft an energy security regime involving Ukraine may be seen by the Russians as interference in favor of Ukraine.

Obviously, other non-related statements about Ukraine's NATO prospects play on Russian fears. The Bucharest Summit declaration on Georgia and Ukraine one day joining NATO without a Membership Action Plan (MAP) finds itself integrated in what Russia sees as an integrated discourse of politico-military-economic expansion detrimental to Russia. It must be said that too little is being done to evacuate the zero-sum mentality currently at work in the Russian leadership. In any case, too many international events have taken place to lead the Russians to believe that integration is beneficial to them. As a result, Russia seems to have embraced relative isolationism. This isolationism carries the prospect of unilateralism.

When coupled with the fragmentation of policy-making on energy security, Russian unilateralism, as recently demonstrated in Georgia, is a factor that acts on straining relations not only between the Euro-Atlantic partnership and Russia, but within the Euro-Atlantic framework as well. The Baltic States rightly reacted with alarm at what was happening to Georgia, and not only because they had invested a lot in terms of foreign aid and advisory assistance. Russia's foray into Russia was based on the precedent set by the Kosovo air war. Although it has been said that there is no such "rule of precedent" in international law (which is true), it nevertheless remains equally true that precedence is based on a generalized understanding of what is "equitable".

The Russians, in their minds, based their intervention on what was thought of as a perverted "responsibility to protect", and although NATO condemned the action as "disproportionate", and claimed that this was contrary to the Helsinki Final Act (in particular), it did not condemn the illegality of the action, because this would mean that the Kosovo air war could suffer from unfavorable revisionism. It is not the first time that Russia had acted in reciprocity and copy-cat mode to Western actions; there is no coincidence between the 1956 Suez Crisis and the Hungarian Crisis that same month. One permitted the other because it demonstrated a split between NATO allies for one, and because it created a precedent that would cast Western camp in a bad light if the Invasion of Hungary was condemned. Similarly, in 1968, the Prague Spring followed U.S. escalation in Vietnam, and similarly played on a widening split within

NATO (France had left the integrated military structure two years before). So Georgia's case today can be blamed on the occurrence of the Kosovo air war.

In the end, the Baltic States had cause to worry, as the eruption of the first international conventional war in Europe since 1945 only highlighted their exposed geographic position. While it is not clear what the Baltic States hope to gain by supporting Georgia's entry into NATO, the "Russia fact" cannot be ignored, and a proper internationalization of the problem may occur only through the multiplication of allies, and the leverage that isolated partners like Georgia and Ukraine can get from the newer NATO members. Still, the fragmentation at work within the NATO and EU members plays into Russian hands. As the world moves ever more into a realistic mindset, small powers like Georgia find themselves increasingly at risk of being ignored by larger powers.

This trend had been evident since the early 2000s. The abrogation, ignorance, or violation of many international treaties and conventions buttressing international relations has promoted self-help attitudes over cooperation. For example, the United States abrogation of the ABM Treaty in 2002 was reciprocated by Russia in part by not extending the Conventional Forces in Europe (CFE) treaty. The actions of private military companies in Iraq (Abu Ghraib) and of the United States in Guantanamo have called into question the value of the Geneva Conventions and the 1948 Declaration on Human Rights, meaning that matters of interest are not based on norms and values, but on the exercise of coercive power. Not only does this asymmetry of values affect intra-Alliance relationships, but within the European Union, the enlargement fatigue has prevented the deepening of the most successful European regime of all time when the EU Constitution failed to be ratified in 2004, on the opposition of Turkish membership. As a result, precedents for self-help are set that are easily reciprocated by Russia. Furthermore, the fragmentation of the political spectrum allows Russia to act as overwhelming power in any bilateral combination.

Domestically, Russia's position is abysmal, but this is counting on a Western view of affairs. In fact, there are many features of its society and economy that support self-help trends. First, the economy continues to produce higher standards of living than ever before in Russian history, and this even in a cooling economic environment. At the same time, the

standards of living remain low enough to prevent any widespread discontent that could threaten the regime in place. Furthermore, taxes are being collected more regularly, and while taxes are being paid, the average life expectancy means that workers live out their useful lives without being a burden to the state. This contributes to the stability of domestic energy consumption, eases the state burden on pension payments, and allows the state to concentrate on external ventures. Without a credible opposition, or with a credible opposition based on a civil society unwilling to risk what it has got for dubious advantage, the state has a free hand internally and externally.

To generate the kind of revenue that maintains internal stability, the Russian state has sought to centralize power and decision-making, and, to its credit, has focused on a few areas of success. The manner in which this focus was applied is less creditable, however. The Russian state has been engaging in neo-mercantilist practices, enabling foreign firms to explore, develop and exploit oil and gas on Russian territory, until the state acquires a controlling stake in the exploiting firms. Mitsubishi, Shell, TNK-BP, Exxon and many others have been expelled one after the other, and their activities have been seized by Russian interests close to the central power. Similarly, the arms industry found itself concentrated into a clearing house called "Rosoboroneksport" which supplies the Russian state with weapons for free (occasionally) and trades with partners that are unpalatable to the United States and the European Union. A similar control of chemical and metallurgic companies in Russia has been taken through this clearing house. At the same time, most of the leadership of these firms and the government are related to the old Soviet KGB and Mr. Putin's East German connections. While this is not a problem unto itself (many countries, more democratic than Russia, operate on the same principle), the unity of command that this affords presents risks in troubled socio-economic times.

It also presents opportunities. Unity of command and centralization of assets and revenue allows the state to focus its energies. Unfortunately, Russia is short on "soft power" by habit. For the Baltic States, this is an unacceptable factor of risk. The advantage for Russia is that the economic windfall of energy revenue has helped fund the recovery of the armed forces. The Russian Federation's armed forces train more often and with greater vigor than ever before, and although serious social problems remain, the forces are generally better equipped in some localities. For

example, security sector "reform" has been successful in the Pskov Oblast experiment, which has seen the life of conscripts there dramatically improve, thanks to new barracks, equipment and infrastructure refurbishment. Elsewhere, in the Caucasus, for example, the 58th Army has been engaging in large scale annual exercises, making the 76th Airborne Regiment and the 58th Army the highest in terms of readiness.

In Georgia, this readiness was put to the test in the largest operation since the Chechen Wars of the mid-1990s. Although the operation revealed severe shortcomings in the use of the 4th Air Army based in Engels, it manifested the Russian ability at *maskirovka*, otherwise known as political-military deception, and the use of combined arms. The jury is still out as to whether the Russians applied any precise doctrine in their expedition in Georgia in 2008. Some commentators believe that the 76th Airborne, for example, started pursuing the adversary until contact, giving the impression that Russia aimed at taking control over the whole of Georgian territory. In discussions, it was agreed that this was not in fact the case. It is far better for Russia to maintain a political buffer zone between itself and NATO for which it is not responsible for (i.e. through occupation) than to take over the burden (and create the precedent for) neo-colonization. One of the conclusions of the discussions over Georgia is that not too much case should be made about the capability of the Russian leadership to prevail over the deployment of troops implementing doctrine dogmatically.

Even if the Russia-Georgian war has isolated Russia further into the camp of "proto-pariah" states, the realistic, self-help ambiance at work in international relations means that its actions are not detrimental to future dialogue. Although it has lost much credibility as a partner, those now at a disadvantage are Georgia and South Ossetia. Georgia is temporarily, if not permanently (NATO enlargement requires consensus among existing members, lest we forget) disqualified from membership, and there is evidence that this disqualification extends to Ukraine as well. The real loser is South Ossetia, who has cast its lot with Russia. Only now are the South Ossetians realizing that there is no benefit from being in the middle of two recognized powers, and their association with Russia has not triggered the independence that was hoped for.

Nevertheless, the message is clear. When and if needed, the Russian political leadership has the will and power to implement a military solution. In Georgia, it has succeeded in preventing NATO enlargement for the

time being. The use of force did provide the solution sought by the political class. The Baltic States are somewhat shielded from this outcome through the benefit of article 5 of the NATO Treaty, but as the economic crisis takes hold and self-help becomes the new norm, we must guard against the undue isolation that small powers may suffer.

Conclusions and Recommendations

If the Euro-Atlantic partners are wrestling with their own economic demons and fall prey to further fragmentation, then the post-war and post-Cold War security regimes could be at risk. When statism becomes resurgent and governments seek to control their civil societies to avoid the consequences of crisis, they may tend to become more assertive (if not authoritarian) in all aspects of governance, even in their external relations. As this puts the equality of EU and NATO members under pressure, it would be prudent to forestall this fragmentation by initiating a dialogue on renewed multilateralism within the Euro-Atlantic region.

At the same time, this fragmentation has been fuelled in small part by the centralization of power and control over strategic resources in Russia. At present, there is no incentive for Russia to seek greater integration in supra-national structures as it would limit room for maneuver. The fact that Russia seeks no further integration either means that it thrives on self-help, or that it already has very limited space to maneuver and influence developments in what it likes to call the "near-abroad". No recommendations as to *how* Russian integration into supra-national structures (such as the WTO, for example, or a resumption of the CFE and INF Treaties) during our discussions. The fact is that it has.

At the same time, Russia holds much of the resources that Europe needs to fuel itself, and if not, to keep energy prices at acceptable levels. Russia holds the key to conventional non-proliferation in its hands as well, and a lot of stability can be purchased if Russia can be convinced to stop trading arms with potential Euro-Atlantic adversaries. As a system of threats will only serve to confirm Russian fears about the intentions of its neighbors and NATO, a system of inducement could be developed to bring greater incentive for further dialogue.

Developing a set of carrots will require greater Euro-Atlantic cooperation, and here, the lowest common denominator could provide an acceptable set

of incentives to "reset" Euro-Atlantic and Russian relations. The litmus test of this attempt would be to have common measurements to determine whether Western largesse is being properly reciprocated, or whether advantages or unilaterally seized for further concessions. Paradoxically, it may still prove too attractive to Russia to allow for intra-European and Euro-Atlantic relations to consolidate however.

One of the solutions proposed was the revitalization of "neglected" multinational forums, such as the OSCE and the UN. In any case, multilateralism must meet the needs of the greater number, and the greater number of greater powers. One can never fully evacuate power-based realism from international relations, no matter how many cooperative systems are developed. Nevertheless, it seems that bringing sense and predictability to Russian actions must go through a renewed or reinvigorated multilateral system. If we want Russia to forego the military side of diplomacy and allow her to develop the "soft-power" which it lacks, it seems logical that other multilateral agencies – agencies that are trustworthy to all sides – be developed or used more often.

Both for Russia and the Euro-Atlantic world, however, the greater security framework will continue to evolve, and with globalization reaching regions of the world subject to instability, a multilateral security framework that does not rely on military coercion as primary mode of communication must nevertheless be effective and show results.

Although it would be logical to let NATO concentrate on the challenge of Afghanistan for a while rather than on the inertia of enlargement, in the absence of a reformed UN or a truly capable OSCE, it is unrealistic to expect any other agency but NATO to provide access to common values and principles. Yet, the military factor looms large in Russia's mind, and this is why NATO remains unacceptable.

It was said that NATO could not do more for Russia than it already has, that it had done all it could, and that any steps forward in NATO-Russia (or NATO-U.S., or NATO-Euro-Atlantic) relations were the business of Russia alone. It was said that the only thing more that could be proposed to Russia was NATO membership itself (an issue that emerged in the press in the mid-1990s and again in the middle of 2001). This has been ruled out by then-President Putin. It would be furthermore unreasonable for the Baltic States to agree to this, as it would water down the guarantees of

article 5 (it would in fact turn article 5 into a threat for them). Nevertheless, NATO is not without solutions, and conditional participation of Russia (as a non-voting member, or as a non-veto voting member) in the North Atlantic Council, could be put forward.

But this would need to be connected to a wide set of reforms and potential memberships for Russia that would need to be guaranteed and monitored in some way. In a fast-changing world, this may be too much for slow-moving consensual bureaucracies to undertake. The new strategic concept of the Alliance could look into this possibility.

This could also be the subject of a future BALTDEFCOL workshop on the shape that the next NATO strategic concept (post-60th Anniversary Summit) could take. The questions that could be tackled could investigate how the Baltic States will have their voices prevail in the formulation of that concept so that their concerns are more adequately reflected. Another question could be as straightforward as at what cost can Russian participation guarantee greater security for the Euro-Atlantic region if it were admitted to the North Atlantic Council. Evidently, such a carrot would need to be conditioned, and what those conditions should be can also be examined at the next workshop.

Proceedings of a Workshop on NATO's Strategic Concept, 15-16 October 2009

By Baltic Defence College faculty

Theses proceedings provide a summary of the highlights of a workshop that took place 15-16 October 2009 at the Baltic Defence College that covered the upcoming NATO Strategic Concept discussions. The workshop brought together panellists and analysts from all three Baltic States, as well as external experts. The workshop discussions were conducted under Chatham House rules so that there could be a candid discussion on the preferred way ahead for developing the new strategic concept from the perspective of Estonia, Latvia and Lithuania. This document is meant to provide an indication of Baltic nation aspirations and intentions. They do not represent the totality of the discussions that took place.

The first such statement was found in the participants' packets and consisted of a Latvian essay which was being distributed simultaneously in Strasbourg at the meeting of the NATO Secretary General's panel of "wise persons" who are charged with conducting discussions on the new Strategic Concept for the Alliance. It served as an excellent basis for discussion, as the Latvian strategic challenges are not far removed from that of Estonia or Lithuania.

1. Latvian Essay on NATO's Fundamental Security Tasks

A summary:

NATO's New Strategic Concept should serve the following key objectives:
- keep collective defence as the core function of the Alliance;
- strengthen NATO's political cohesion and solidarity;
- maintain NATO as the primary forum for transatlantic security dialogue;
- sustain NATO's military capabilities to guarantee the security of all of its members through credible deterrence and collective defence;
- provide equal security for all allies.

1.1. Core Tasks of the Alliance

The core tasks of the 1999 Strategic Concept - security, consultation, deterrence and defence - remain valid.

Article 5 is the core principle of the Alliance: it expresses the political commitment and solidarity of the members of the Alliance to act together in the interest of all members of the Alliance with respect to possible threats and challenges. Those threats and challenges will vary from the traditional to the non-traditional that will mandate appropriate responses by the Alliance in the given circumstances and include both political and military tools.

The Alliance has an obligation to continue its military transformation efforts, all the while ensuring that its military deterrence is retained, and that its forces are flexible and adaptable enough to operate across the full spectrum of operations and missions, including on the territory of the Alliance. These capabilities will allow the Alliance to respond quickly to a variety of unexpected security threats arising in the future that threaten the interests of member states and their populations.

In this context, the visibility of Article 5 in all the member states is of paramount importance, as the credibility of the Alliance's commitment to its core business is the *sine non qua* in order to preserve support for the Alliance in our population. Practical steps that would demonstrate the readiness of the Alliance to implement collective defence would give credibly to its commitment of mutual defence. Such steps should include the employment and demonstration of NATO capabilities by ensuring adequate planning, exercises and training, as agreed at the Strasbourg/Kehl Summit.

Nuclear deterrence, including the United States nuclear foot-print, remains an indispensable part of overall Alliance deterrence.

1.2. The changing Security Environment: its impact on NATO's enduring purpose

Safeguarding the freedom and security of NATO members should remain the core function of the Alliance.

The security environment that the Alliance will have to deal with in the future will be unpredictable and complex. Threats and challenges could range from the traditional to the non-traditional. In this context, the Alliance will have to:

   1) preserve credible military capabilities and arrangements relevant to traditional threats;

 2) work on strengthening adequate capabilities addressing threats from terrorism, cyber attacks, and proliferation of WMD;

 3) cooperate with other international actors with respect to constantly evolving security challenges arising from climate change, failed states, piracy and growing competition for energy resources and transit routes;

 4) respond rapidly and effectively in response to an unpredictable strategic environment, which will necessitate internal reforms of the Alliance's structures and processes to strengthen decision-making.

The key to a successful and effective way of implementing above mentioned is a single, adaptive and responsive decision making mechanism and adequate structure capability to cope with the tasks of the Alliance.

The new Strategic Concept should be based on a common perception of security. But, it is clear that NATO will not be able to respond to all conceivable threats and challenges and, therefore, it is important that a common understanding among allies on the main priorities be reached and serve as a basis for the development of an integrated set of capabilities.

The Alliance must have the ability to respond to global threats wherever they may arise. Response to out of area threats and challenges will have to be determined on the basis of the severity of the threat to the security of Alliance.

1.3. NATO's political role

NATO's political role can be enhanced by a continuous strategic discussion about security challenges within the Alliance, as well as with international actors, first and foremost the EU and the UN.

The consensus principle has been the mainstay of Alliance solidarity that prompts member states to engage in a continuous dialogue and consultation with each other on questions vital to their security. In an unpredictable security environment, such consultations will have to be

based on extensive information sharing and evaluation. The transatlantic link will be indispensable in any priority setting exercise. While the NAC is the principal venue for this discussion, there needs to be a strong link back to capitals that engages the appropriate officials. Moreover, Ministerials and HoSG meetings will need to address strategic issues in addition to operational issues and may necessitate more frequent meetings.

Given that the threats and challenges that the Alliance faces will not be limited in scope but could occur anywhere, a strategic dialogue with other international actors will increasingly become a necessity that the Alliance cannot forego.

1.4. NATO's strategy for the early 21st century

Allies should set clear priorities and clarify what the Alliance is ready to do as its primary task and where it will play a supporting role (using one set of forces).

It has been generally recognized that the Alliance is the foremost hard security provider. In the last analysis it should play to its strength, though without neglecting improvement in its civilian or soft security capabilities. Soft security should be developed through advancing NATO's civil-military joint planning and co-operation, building capabilities to respond to emerging threats in cooperation with partners and international actors with more advanced soft security tools. Shaping events rather than reacting to events can be a strategic direction for the Alliance as it adjusts to the economic downturn. At the same time, the Alliance will have to continue to balance its capabilities and not focus exclusively on requirements for current operations. NATO has to be ready to prove that it can protect its own populations and maintain a credible deterrence.

The workshop opened with a statement by Brigadier General Gundars Abols (Latvian Army), Commandant of the Baltic Defence College, who then yielded the floor to Mr. Imants Liegis, Minister of Defence of Latvia. His remarks are transcribed here, and they reflect the challenges alluded to in the Latvian essay. The Minister gave a speech that set the appropriate academic tone for the discussions that were to follow.

Mr. Liegis started by saying that the NATO Strategic Concept 1999, which is still valid until the elaboration of a new one in May 2010, coincided with

the creation of the Baltic Defence College that same year. Currently, the review of the BALTDEFCOL and the consultations of a new Strategic Concept also run in parallel.

The Minister then gave highlights of the current process and future concept issues and topics. NATO Secretary General Rasmussen has set a clear path based on the previous summer's decisions (following the conflict between Georgia and Russia), and appointed a panel of advisers (so-called "wise persons") chaired by former U.S. State Secretary Mrs. Madeleine Albright, to provide options to the Secretary General in May 2010.

Those options will go back to the nations through the North Atlantic Council and from those consultations the actual document will eventually be formulated. It is the first time that the three Baltic States are present for the formulation of a new Strategic Concept, and Central and Eastern Europe is well represented by a Polish representative, and the Baltic States in particular are represented by a Latvian representative Ambassador Aivis Ronis. This representation is a testimony of the Alliance's commitment to integration and is a proof of acceptance of its new members. There are no military representative in the group of wise persons because of the principle of civil control over the military is a key element of NATO's philosophy.

Regarding issues, the Minister stated that the current Strategic Concept discussions made particular emphasis on the importance of NGOs and non-state (or at least non-traditional) actors. In this sense, the BALTDEFCOL has a role to play in the elaboration of the Strategic Concept, and this workshop is a good example of it. The members' interests will play out in the consultations, and will probably affect the outcome significantly.

One format that seems to be generating consensus is that of the four "Rs" elicited by US-based scholar Hans Binnendijk. Binnedijk stressed the content and substance of Responsibility, Reassurance, Resilience and Re-engagement. Some of these terms are instinctive.

Responsibility means the importance of being security providers and contributors to the Alliance. ISAF is a good example where members act

responsibly towards Alliance goals and missions, and this provides the second "R" – Reassurance.

Reassurance is the reason the three Baltic States have sought membership in the Alliance. The principles of article 5 refer to mutual assistance of the members. As the process of consultation for a new Strategic Concept moves forward, the Baltic States will look for the reassurances of collective defense. Another related issue is that of contingency planning. Should it be a part of the Strategic Concept or not? The current Strategic Concept embraces the sanctity of those guarantees. This is why certain members were not keen on a new Strategic Concept.

Reassurance is nothing without Resilience, the third R. The credibility of the Alliance depends on its members not being swayed unduly in the performance of their mission. This "R" acknowledges the existence of non-traditional threats brought about by the new security environment. As far as Baltic States are concerned, interference by third countries in internal affairs is a non-traditional threat. These threats are no less real than piracy and terrorism.

The final "R" causes the most disquiet among the Baltic States. Re-engagement triggers a disparity of opinions which are difficult to reconcile. Re-engagement with Russia cannot be equated with re-engagement with other powers. Secretary-General Rasmussen wants to re-energize the NATO-Russia Council, a body created in 1997, but where real issues have not been discussed in depth. Despite the positive signs of cooperation which do exist with Russia, concerns about the NATO and Russia relationship remain due to the new regional strategic environment created by the Russia-Georgia conflict of August 2008.

The final Strategic Concept document has to be readable to the non-initiated. What kind of product do we want? A document for experts, or a document that can engage our populations? The Alliance must be visible through the new Strategic Concept in each of our countries.

The Minister left the workshop and Dr. Zaneta Ozolina assumed the role of moderator. Dr. Ozolina said that on the "reassurance" issue, there was little to worry about, as there was little talk of dismantling the Alliance. She noted that there was a mention that an updated Strategic Concept had been needed as far back as 2005. It was said that many new members were

afraid that a new Strategic Concept at that juncture would have meant greater fragmentation of the Alliance (those were the days of Secretary of Defence Rumsfeld's comments on "new" and "old" Europe, as well as a great divergence of opinion as to what the threats to the Alliance members really were). Interestingly, the divergence is not necessarily based on geography anymore. On the one hand, the political class seeks to maintain the current Strategic Concept, suggesting it is still relevant, while the academics tend to be pushing for a new concept.

One way of reconciling these competing views, as it was discussed, was to have two sets of documents. One short, concise, but broad in its description of challenges, and another, more administrative, detailed and technical set of documents that would reveal the application of the Concept in its practical expression. A short debate on that topic ensued, and Dr. Ozolina gave the floor to Dr. Kesselring, who has provided the editor with his speaking notes.

2. New Strategic Concept - Contradictions and open questions

Agilolf Kesselring

In medieval times, when a new king came to power, his vassals - dukes, counts and bishops - went to meet him as fast as possible, bringing their diplomas with them. It was the kings duty to renew the rights (*ius regaliae, ius spoliae*), which his predecessors had transferred. For mediaevalists this is a very challenging issue, because frequently those bishops, counts and dukes falsified diplomas in order to expand their rights.[1] Sometimes the process of adopting a new common strategy in NATO seems to bear similarities with this medieval ritual. While adopting a new common strategy for the alliance, there seems to be only a short time-slot, during which influence may be increased. With a new strategy, there will be always winners and losers. For some states, the common strategy will serve better their national interests and for some less. A good strategy though, - like a good medieval king - balances the system and adjusts it to the realties of power in such a way, that the alliance - like the medieval kingdoms of former times - keeps its team spirit up. We can see this function of NATO strategies especially during the Cold War with NATO strategies MC 14/2 and MC 14/3, which can be both interpreted as tools to increase cohesion and transatlantic solidarity in changing political environments.[2]

The current Strategic Concept from 1999 defines NATO's role as a defense alliance (Art. 5), transatlantic link (Art. 4), crisis management instrument (Art. 7) and catalyst for security cooperation.[3] It should be kept in mind, that the 1999 Strategic Concept has been adopted in especially difficult times. While it had been designed for managing the post-Cold War threats in the aftermath of regional instability having led to mass slaughter in Europe, the process had been rolled over by the events in Kosovo and the perceived need to act immediately. We can say that an already existing carefully developed document had to be quickly adjusted to the current crisis situation. Especially the chapter concerning crisis management was adjusted to suit the use of coercive airpower over Yugoslavia.[4]
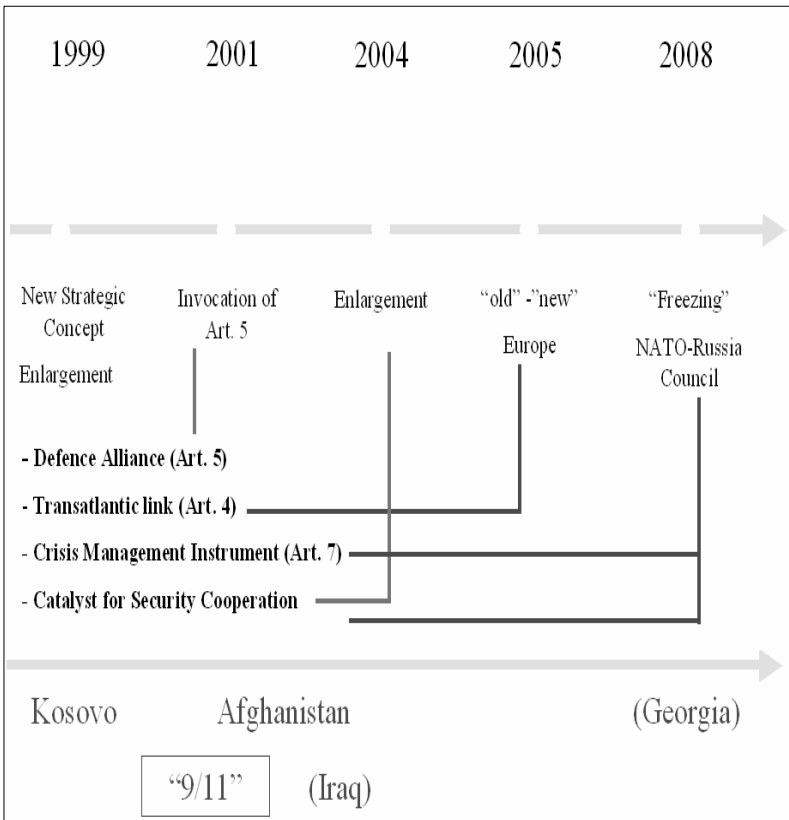

Chart 1: NATO's Strategic Concept 1999 and its application until 2009

The following events, and there first of all the massive terrorist attacks on the United States in New York and Washington ("9/11") put NATO into a situation, where the assumptions from before 1999 did not anymore match realities. The US, being under a global threat, did not invest too much time with NATO, the instrument designed for peace in stability in Europe. NATO enlargement however quickly proceeded in order to have the back free for countering the new threats and also to reward the loyalty of the so called "new Europe". The so-called "old" Europe looked for new partners in an attempt to build an axis Paris-Berlin-Moscow, which was thought to better serve national interests than going to war in Iraq. Many experts expected that NATO would never become 60 years old. Gerhard Schröder even said that NATO would not anymore be the central link for transatlantic co-operation. It has been this NATO, caught in its own identity crisis, which was not able to respond credibly in the Georgian case. NATO was at this very time expected to lance its new strategic discussion. It was postponed as there was a lack of unity and at this very moment it looked better to have an unclear old strategy than quarrels about a new one.

Let's go briefly through the main open questions or disagreements left over from the Strategic Concept of 1999. I have put them in an order following the - basically unchanged - role of NATO highlighted in the 1999 paper:

- Defence Alliance (Art. 5)
- Transatlantic link (Art. 4) (I think this is the only field, where there is a clear consensus)
- Crisis Management Instrument (Art. 7)
- Catalyst for Security Cooperation (Art. 2)

NATO as a defence alliance
- How far goes our definition of security?
- Do we emphasise on state's sovereignty or security of state's inhabitants?
- What is the area we defend?
- Are terrorism, piracy, and cyber attacks matters of defence or of security cooperation?
- How about energy security? (Riga Summit 2007)

NATO as Crisis management instrument

- How about the relations NATO-UN-OSCE-EU-AU?
- Crisis management - where? (European / global)
- Crisis management vs. power projection

NATO as catalyst of wider security co-operation
- What are the topics? Who are the players?
- Economy?
- Non-proliferation of WMD?
- China rising?
- Stability in Europe - SE-Europe - Caucasus?
- African instability - piracy - migration?

Another question is of course the question of enlargement, towards South East Europe. There are reasons to believe that this issue is already decided upon. Geopolitically we can anyway see a focus of NATO towards the South East - if through enlargement or by other means. What we can clearly see, is a regional focus towards the Southeast - through the Balkan to the Black sea and approaching a region that has been called the "arc of instability". Turkey is a key player in this geopolitical approach. This explains the US pressure concerning Turkey's admission in the EU. This leads to the question, on what the implications are for the Nordic and Baltic area.

<p style="text-align:center">***</p>

The following discussion concentrated on NATO's core task and how to establish a balance between the Alliance's role as defence provider and its role as crisis manager.

The three Baltic States' representatives seemed in agreement that security had to be taken as comprehensive and multilateral. However, upon enlargement in 2004, NATO was not well equipped to realize what Russia meant to the newer members. As the workshop was reminded, the members sign on to a Treaty, not to an Alliance, which means that oversimplification must be avoided. It is not an either/or situation. Both Article 4 and Article 5 are part of the North Atlantic Treaty. The fact that the line dividing the two articles is gray and that both articles are inalienable conditions of the Treaty should bring a measure of reassurance to all members. The focus of the *Organization*, however, remains a factor of disquiet in the Baltic States, as it is difficult to know where the "heart" of

NATO is, in Europe, or in the US? In the end, the new Strategic Concept will likely rebalance the notion that the Alliance is not a global policeman, as this would test NATO's credibility.

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3. TO's Relation with Partners - a Nordic Perspective

Agilolf Kesselring

"General von Clausewitz says, strategy is using operations for the object of war. [....] on the other hand, strategy includes the operation's success and is built on it. Vis-à-vis the tactical victory, the imperative of strategy remains silent."
(General Field Marshall Helmuth von Moltke 1800-1891)

By talking about Nordic or Baltic approaches, we have to be aware of the fact, that "Nordic" and "Baltic" are no neutral geographic terms; they imply mental maps. If we look around the Baltic Sea, we understand that all countries are members of the European Union - except Russia (including the enclave of Kaliningrad). While the countries on the Southern coast are - since 2004 - all NATO members, the countries in the North are partners. Formally, Sweden and Finland have basically the same status that Russia has vis-à-vis NATO. They are all members in the Euro-Atlantic Partnership Council (EAPC).

The crucial difference is that both Sweden and Finland are EU countries and NATO is - like it or not - *the* decisive defence organisation for and in Europe. The New Strategic Concept is therefore going to influence Sweden's and Finland's security.

For both, the Baltic Sea is a vital line of support. Both countries have an Arctic component with indigenous population - the Sami - heavily dependent on the environment in the Arctic.[5] Russia is the neighbour to the East. Sweden and Finland are engaged in NATO missions abroad, in Kosovo and with ISAF in Afghanistan. But in Finland and Sweden, the Afghanistan commitment is seen rather as a modern way of peacekeeping and not as a defence measure under article 5 of the NATO treaty.[6] Finland has also been sending fighter aircrafts to Germany for NATO certification in September 2009.[7] NATO membership remains an open question. The possibility of a future NATO membership option is not rejected, but for

the time being not politically wanted. In Finland, at the next presidential elections in 2012, the NATO question is most likely going to be central to the candidates' political programs. The Finnish people will decide. As for Sweden, it seems that this country is able to wait and see what Finland will be doing. However, it is rather to be expected that both countries will follow in the end the same policy. From the perspective of NATO, the two countries are welcome to join NATO; if they don't, it will be respected - that has both been repeatedly stated.

Russia - on the other hand - is a different partner. In 1997 it became a privileged partner of NATO with the establishment of the NATO-Russia Council. In 1999 disagreement over the NATO campaign in Kosovo have brought difficulties, as NATO moved into former Zones of Russian influence.[8] Enlargement has been another topic of disagreement - already in 1999 and even more in 2004. Disagreement came up again about the Kosovo question in 2007/2008 and since it has reached a peak in Georgia 2008, the NATO-Russia Council has been "frozen". After US President Obama had pressed already the "reset button", the New NATO General Secretary Rasmussen took up the topic of "A New Beginning" in his first speech on September 18. Some citations from Rasmussen's Russia speech may highlight this issue:[9]

"[...] I believe that of all of NATO's relationships with Partner countries, none holds greater potential than the NATO-Russia relationship."

"[...] the international security environment does not wait for NATO and Russia to sort out their act. Quite simply, NATO-Russia cooperation is not a matter of choice – it is a matter of necessity."

"[...] Our ultimate goal must be a relationship that allows us to pursue common interests even when we disagree in other areas."

"[...] NATO wants Russia to be a real stakeholder in European and international security. We need Russia as a partner in resolving the great issues of our time."

His suggestions can be summed up as follows:[10]

1) Reinforce practical cooperation NATO-Russia
- update Joint Action Plan on Terrorism

- preventing proliferation WMD
- common missile defence
- maritime security / piracy
- Afghanistan

2) Rejuvenate the NATO-Russia Council

3) Joint review of the new 21st century security challenges

At the same time Rasmussen made clear that NATO is going to continue its open door policy.

Rasmussen presents himself and NATO as "realist", most notable is the phrase, "NATO-Russia cooperation is not a matter of choice - it is a matter of necessity". He talks about necessity and interests - not about friendship, values or historical moments. In order to put the suggestions of the Secretary General into a strategic context, it might be enlightening to look into a speech by another Dane: Troels Froling, Secretary General of the Danish Atlantic Treaty Association speaking on 19 October 2001 in Helsinki:

...there is in other words always a price and all sides in the present conflict will have to realise this. In an overall strategic perspective one of the winners of the war that started 11 September may turn out to become Russia. USA will have to fight an extended war in Afghanistan, the geography of which makes Russia indispensable to the United States [...] Going in through the three Central Asian republics [Turkmenistan, Uzbekistan, Tajikistan A.K.] means moving into Russia's sphere of influence [...]. The USA will most probably also meet Russian demands in an other field: Chechnya [...] A *quid pro quo* from Moscow? Consequences? Well, if Moscow cannot win Chechnya unless it dominates the whole of Caucasus, then Georgia, Armenia and Azerbaijan will have to be included - back in the USSR?[11]

Rasmussen's speech from 2009 can be interpreted in terms of the idea of a "price to pay" for the engagement in Afghanistan articulated by Froling in 2001 - only short time after the terrorist attacks of "9/11". The question remains still open, about whom we do talk, if we say "terrorists"? Does common missile defence mean practically "no missile defence" for Eastern Europe? Can it really work in means of psychological warfare to fight the

Taliban, side by side with Russia, the "traditional enemy" of the Afghani people? Does de-freezing the NATO-Russia Council mean that the open door policy is limited to South Eastern Europe? And finally, has NATO met its geopolitical limits on the eastern boarder of the alliance's area?

Afghanistan has become the key issue of NATO in practical terms. Afghanistan dominates all other theatres, risks and problems. For the Western powers, it has become a "question of honour", "prestige" and credibility. We should though keep in mind that Afghanistan is just one theatre of operations or one operation in a grand strategy supposed to counter a mix of threats. "Terrorism" is *one* among these threats. NATO nearly follows - if I may use this historical parallel - Moltke's approach, that operations dominate over strategy. Probably this idea goes too far, but in military history terms, famous examples for prestigious operations, which dominated strategy are Verdun and Stalingrad.

NATO's strategic aim of "a Europe whole and free" might not be brought into congruency with the operational aim in Afghanistan as stepping at least partly back from NATO's "policy of open door" being also an aim on the operational level). Russia's current geo-strategic situation provides it with a key position in this question. It is on NATO's policy makers to set the priorities between concurring tasks.

In other words, in a multipolar world with various threats and risks NATO has to choose which goals are most important and which potential threats are seen as the biggest challenges. Unlike many thought still back in the 1990s, it is not enough to concentrate on the so called "new threats", but also geopolitics still do matter. The New Strategic Concept has to balance those different challenges. NATO member's interests may diverge between countries, perceiving themselves at the different front lines. Today such a frontline can be the centre of New York, the subway in London or Madrid, but also, a merchant ship in front of the Somali coast, the hard drive disk in a banking computer or an outer boarder of the NATO area. The decision on what to focus as an Alliance is however a political one.

The greatest and strategic goal of NATO is peace. Peace needs strength and credibility, but also good will and trust in the dynamic of own values. Peace without freedom and democracy should not be the aim.

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The discussions and presentations which followed reflected Dr. Kesselring's concerns. The question of missile defense, of cooperation with central Asian countries, the ignorance of values and norms in the discourse is symptomatic of the fact that Russia is ever more present in the equation. However, necessity should not replace norms in the formulation of the new Strategic Concept.

With that in mind, Baltic representatives were quick to point out that if this was the case, then all the more reason to insist on a "specific" Strategic Concept, outlining concrete steps towards a clear goal. At the same time, this goal must accord itself with some Baltic realities and perceptions, and for this reason, some workshop participants were keen to avoid a Strategic Concept focusing too narrowly on military success in Afghanistan. "Rather, one said, maintain the old Security Concept in place." To state that the new Concept has to reflect flexibility in response and means would be a truism, however, the onus is on having a Concept that is "active" not "reactive".

Conclusion

The workshop on NATO's new Strategic Concept offered an original idea that *two* separate documents should frame a broad conception of security in an active tone. While Russia still looms large in the discourse, the realities of an Alliance that has nearly doubled in size since the Study on Enlargement was published 15 years ago have to be accounted for. A frank description of the security environment in the new Strategic Concept is inevitable for finding consensus in the evaluation of evolving threats and challenges. While consolidating NATO's role in the field of non-traditional and asymmetrical challenges, a realistic assessment of conventional threats is still relevant. The use of military forces and regional conflicts still continue to have direct or indirect consequences for the security of the Allies.

This does not mean, however, that the values debate should be ignored. After all, it was said, the Alliance must stand *for* something, as well as defend *against* many threats. The non-traditional character of these threats forces a modicum of flexibility on the Alliance conception of security. This flexibility should answer the notion of complementarity between

international institutions. In other words, there is no division of labour between an EU that deals with soft security issues, and a NATO that deals with purely military challenges. The symbiosis of those roles must also be presented clearly to the constituents of the Alliance.

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[1] Wolfgang Petke, *Spolienrecht und Regalienrecht im hohen Mittelalter und ihre rechtlichen Grundlagen* - Von Schwaben bis Jerusalem. Facetten staufischer Geschichte, Sigmaringen 1995,. Ed. Sönke Lorenz & Ulrich Schmitt, 15-36.

[2] Agilolf Kesselring, "60 Jahre NATO: Wechselnde Bedrohungen - neue Strategien", *Militärgeschichte. Zeitschrift für historische Bildung* (1/2009), 4-7.

[3] *The Alliance's Strategic Concept*, Approved by the Heads of State and Government participating in the meeting of the North Atlantic Council in Washington D. C. on 23rd and 24th April 1999.

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[7] Ilmavoimat, *Ilmavoimien kansainvälinen toiminta* [http://www.ilmavoimat.fi/index.php?id=69 / 15.11.2009].

[8] Agilolf Kesselring, *NATO - Towards a New Strategic Concept 2010*, National Defence University, Department of Strategic and Defence Studies, Series 4, WP No. 33 (Helsinki 2009), 15-17.

[9] Anders Fogh Rasmussen, NATO and Russia: A New Beginning, Speech by NATO Secretary General at the Carnegie Endowment, Brussels, 18.9.2009. [http://www.nato.int/cps/en/natolive/opinions_57640.htm / 15.11.2009].

[10] Anders Fogh Rasmussen, NATO and Russia: A New Beginning, Speech by NATO Secretary General at the Carnegie Endowment, Brussels, 18.9.2009. [http://www.nato.int/cps/en/natolive/opinions_57640.htm / 15.11.2009].

[11] Troels Frøling, The Security Impact of NATO Enlargement for the Baltic Sea Region - A Danish Perspective. - *Baltic Security, NATO and the EU,* Ed. Karoliina Honkanen & Thomas Ries, The Atlantic Council of Finland, Helsinki 2001, p.34.

Piracy in Gulf of Aden: Considering the Effects of Private Protection Teams [*]

By Rene Toomse, Captain, Estonian Army

There were 111 piracy related incidents reported on the east coast of Somalia and the Gulf of Aden last year. That means an increase of nearly 200 per cent compared with 2007. Furthermore, the reach of pirates in the region has extended hundreds of miles away from the coasts. All types of vessels with varying freeboards and speeds were targeted. The pirates boarding the vessels were also better armed than in previous years and prepared to assault and injure the crew.[1] Pirates earned more than $30 million in ransoms in 2008 (a total bill is estimated close to $180 million due to payments to negotiators and other players[2]) and the estimated loss of profit while ships are out of service is something that nobody will even talk about (e.g. average insurance rates have risen up to 400% last year[3]).

Even though the US and EU have formed multinational counter-piracy Task Forces[4] consisting of numerous warships, that is not likely going to solve the problem alone.[5] The area to cover is too large (up to 2.5 million square miles) and no country can afford to send such a mass of ships to float to gain total control of that region. There are nearly 16,000 ships a year as potential targets for pirates passing the Gulf of Aden. One of the most important trade routes in the world is now threatened by instability of the region.[6] If the problem is not solved quickly and decisively the international community will face an additional negative factor in the current economical crisis due to a significant rise in prices of international trade caused by higher insurance payments or due to ship rerouting[7] to avoid those dangerous waters.

An additional problem is the strengthening links between pirates and an Islamist insurgent group called the Shabab. As part of this relationship, the pirates are becoming more closely involved in arms trafficking through the region. That contributes to instability and violence in Somalia and whole Africa, that one day will pose a major security threat to the rest of the world.[8]

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[*] This paper was selected as the top course paper of the Baltic Defence College's Army Intermediate Command and Staff Course 2009.

As the situation has not significantly improved after applying naval patrolling in the area it might now might be a right time to think of adding another layer of solutions – private security companies. While a mostly discouraging attitude has been assumed in terms of involving private sector into active actions,[9] one of the NATO's relevant standpoints notes:

> "Success in the future security environment won't be achieved by 'military victory' alone, it has to be created through communication, coordination and cooperation with all relevant actors at all levels within a global framework – providing security and stability wherever the sources of threat and instability appear."[10]

The aim of this essay is to counter the negative attitude towards using private security companies for reducing the problem. Private security companies are available asserts and are today probably the most suitable assets to use on tactical level – in commercial vessels. This paper will focus on the problem at sea by analyzing how pirates operate and what their goals are. The paper will counter the argument against using private protection teams (PPTs) and set out vital principles to use them effectively as an additional security measure. Detailed pirates' *modus operandi* and suggested tactics for PPTs will be described. The analysis provided below is a combination of information from official websites, expert research, and international open source media.

1. Threat situation and prognosis

1.1. A short history and current situation

Britain withdrew from British Somaliland in 1960 to allow its protectorate to join Italian Somaliland and form the new nation of Somalia. After the regime collapsed early in 1991, Somalia descended into turmoil, factional fighting and anarchy. Current estimated population is 9.5 million, main religion is Sunni Muslim. There is no effective government at present, and major clans rule their territories.[11]

Since 2005 there has been a dramatic increase of piracy that has captured the attention of the rest of the world[12]. Piracy has always existed in those waters and has not been considered a major problem before that, and even up to the end of 2007 the attention was relevantly low due to isolated incidents in Mogadishu port area[13]. Since then the problem has extended into the entire Gulf of Aden and other areas in open sea well away from

coastal areas reaching the distances of several hundreds of nautical miles (nm)[14] that has resulted the growing resentment with piracy in the international community.

According to estimation, on December, 31st, 2008, Somali pirates were holding 13 vessels for ransom and 242 crewmembers hostage.[15]

> "Piracy is as any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft; against a ship, aircraft, persons or property in a place outside the jurisdiction of any State..."[16]

The passage above defines piracy as an act that can take place only outside the states' territorial waters. Such activities in territorial waters are considered armed robbery and are not subjected as piracy by International Law.[17] That is, there are not clear legal standards worldwide to counter or pursue pirates who attack ships in high sea and then take them into territorial waters of weak states, or who commit armed robbery within territorial waters of a weak state without fear of facing sanctions[18].

The United Nations Security Council has recently issued a resolution authorizing all states to take an active part in the fight against piracy and armed robbery at sea off the coast of Somalia by deploying naval vessels and military aircraft, and through seizure and disposition of boats, vessels, arms and other related equipment used in the commission of piracy and armed robbery. States and regional organizations cooperating with the Transitional Federal Government (Somalia) may enter into the territorial waters of Somalia and use all necessary means to repress acts of piracy and armed robbery at sea.[19] That resolution is a good platform to reduce the problem, as risks for pirates are lifted already. The only problem is that allowed means (navies and military aircrafts) are not sufficient to fight piracy. Additional approaches and wider spectrum need to be considered.

1.2. Pirates' goals, organizations and operational setup

By analyzing various sources such as research studies, news stories and so on[20] a few major conclusions can be made:
First of all, the purpose of the pirates' attacks is purely profit. Even if before pirates justified their acts by protecting Somali waters from illegal

fishing or waste dumping by other countries, now the acts of piracy are only committed to obtain money via ransoms that shipping companies are so generously paying. That is the pirates' Center of Gravity (CoG) – easy profit. The main critical capabilities to achieve the CoG are the willingness of shipping companies to pay the ransom. The threat to the hijacked crew members' lives keeps the warships in the distance once a victim vessel is taken over. Most importantly, there is the inability of commercial ships to protect themselves.

Pirate groups are based on bigger clans and they possess an intelligence system that is operated in accordance with spotters in "bottlenecks" such as the Suez Canal, designated safe routes, and relevant offices and so on. These are combined with monitoring of relevant internet sites and communication traffic. That allows pirates to identify high cost vessels and calculate the routes. Well prepared and well equipped teams in "mother ships" are informed via satellite phones, and they keep well away form the coast and intercept the predicted route of victims. After receiving the information from home base, they launch the raid with speedboats and attack the target with great speed and aggressiveness. Those groups can perform in 5-6 boats and use diversion operations to draw away possible protecting ships in the area. Groups are well composed, armed and equipped with high tech devices such as satellite phones and GPS. There are agreements between different groups that divide areas of operations, conduct combined training, and even have combined supporting activities.[21]

1.3. Pirates' modus operandi

Once pirates make the decision to launch an attack the operation can be divided into four phases: approach, boarding, gaining control over the bridge, and diverting the course to the designated staging area while controlling the ship's crew.

Approach is usually done with high speed (up to 25 knots) from behind the target ship.[22] So far it has happened mostly in daytime and in relatively calm seas to ships that are not exceeding the speed of around 15 knots. As attackers close up to the target they open fire from assault rifles, mainly AK-47 or prototypes, once they are within approximately 100 meters range. This is a test for possible countermeasures as well as a means of applying psychological pressure on the ship's crew. Rocket propelled

grenade launchers (RPG-7 or prototypes) and medium machine guns (PK, RPK, RPD or prototypes) are in the pirate inventory as well, but they are used only in case the target vessel is not reacting to a small arms fire or shows signs of countermeasures. However, none of the pirate weapons systems exceed the effective range of 500 meters[23] and they are very limited in ammunition due to weight considerations for their small boats.

After the approach the most critical phase of the operation is the successful boarding that includes stable contact with target vessel. After that the pirates can employ climbing tools (ladders and/or grappling lines) or, in lower riding ships, simply climb over the railing. Therefore, the pirates usually conduct boarding on both sides with the intention of reducing the possible piecemeal attempts for defense. That phase is well rehearsed and is conducted usually within seconds. Successful boarding is the pirates' Decisive Point (DP) because if they fail in that phase, no control over the ship is possible and they are forced to withdraw. To reach that DP they employ speed and mass with a maximum stretch to overcome possible counteraction. If they are not able to board within 35-40 minutes they usually abort the attack, as the threat to be detained by warships in the area becomes likely.

Once on board the pirates storm the bridge and demand that the vessel stop. In that phase, while the ship is stopped, the pirates bring in the rest of ammunition and supplies from their boats and secure the boats to the captured vessel. Meanwhile the captain is ordered to gather all his crew and they are put under the pirates' armed guard.

Once the speedboats are fastened, the pirates force the captain to divert course to the harbor area given to him and the rest of the voyage consists of guarding the crew and looting in the vessel. After the pirates have gained complete control over the vessel, and order it to sail to intended harbor area where they start bargaining for ransom, there are not too many options left to free the ship without making the ransom payment.

1.4. Prognosis of developments

Piracy and armed robbery in Gulf of Aden is likely to increase and even exacerbate the situation in Somalia, which continues to constitute a threat to international peace and security in the region.[24] In the near future the pirates will improve their intelligence systems to achieve better situational

awareness, especially on the locations of warships. This will allow them to evade the only threat they have encountered so far. To improve the flow of information they will merge into stronger alliances with each other as well as with terrorist organizations present in the region and that will bring the threat to a new and much devastating level.

As capabilities of pirate groups are strengthening, they will be better organized, trained, equipped and led.[25] They are also likely to become more violent. Revenge and hate to the westerners might override the hunt for pure profit due terrorist's propaganda and that is what terrorists will pursue to achieve.

More sophisticated methods of attacks are likely to be developed, such as using night vision devices or IEDs attached to a target vessel, to force it to comply with orders, or to mass more attackers against the ships, or to target more cruise ships.[26] Ransom millions will attract more locals to join the business, and we will see a growth of weapons trafficking, more violence in Somalia, and the destruction of any possible government authority that could be the only force to gain control over the situation[27].

2. Countering piracy on tactical level

2.1. Current measures and effects

To bring the problem to the point where it might meet an international tolerance level--total elimination of piracy is not likely-- a multidimensional approach must be considered. There can be three major different lines of operations: solving the problem on the ground by attacking pirates' harbors and safe heavens and to gain control of the Somalia by means of support to the Somali government; secondly, ongoing International Maritime Interdiction Operation by multinational fleets in the sea, and the third line is to counter pirates from the target vessels by armed PPTs.

To approach the problem from the ground is not an attractive option for the international community. That might create a similar situation that we have seen recently in Afghanistan. There is neither the Western will nor resources to be committed to the next full-scale conflict in the near future.

A second line of effort is currently the ongoing by Multinational Naval Task Forces (US and EU), but the effect of these task forces are not likely

to solve anything alone. Detection and detention of pirates in small skiffs before they attack their target is a question of pure luck in those waters. Once pirates have seized the vessel, the warships become totally useless – they can not do anything when pirates threaten to harm the ship and crew if attacked.

However, the problem can be very likely reduced via tactical countermeasures applied from the potential target vessels by well armed PPTs. They can use superior firepower and tactical advantages of the high stature of the ship, as well as sophisticated detection and identification equipment. Their effects can be enormously enhanced by co-operating with patrolling warships. The ships can buy time during the action while reporting repelled pirates to warships that can take up the hot pursuit and detain failed attackers. This can be the real discouraging factor to pirates' community as the risk of death or detention are weighed up against expected profit. Eventually such an approach will not eliminate the problem entirely, but will very likely reduce the tension in the area to the level that is tolerable to the international community.

2.2. Argumentation on PPTs

Opposition to the solution described above is found in various reasons. It is a fact that some of the PPTs have been accused of misconduct in latest conflicts[28] there remains a conflicted attitude towards them.

Opponents argue that PPTs are purely interested in money and that such a focus makes them ignore human rights (one can envision the possible use of lethal force against innocent fishermen) and there is the suspicion that they may even help create the threat situation to insure their services are needed. Furthermore, as pirates feel countered, they are likely to open fire more easily and harm the crew and ship than if no resistance is met. Moreover, poorer shipping companies cannot afford to hire PPTs, and that places them into a more dangerous situation.[29]

A few mistakes are made in the case of discounting the use of PPTs. First of all, the environment at sea is completely different from that in the streets of Baghdad. While in urban areas PPTs are relevantly alone and no "acceptable witnesses" are often present. That might be the case of losing their adherence to the Rules of Engagement (ROE). The situation on a ship on the open sea is different and there are always eye-witnesses – the

crew. No PPT can act recklessly with hope that no-one will ever know about it.

Arguments that pirates will increase violence while armed resistance is present are not valid. Pirates are not suicidal and they will not endanger themselves while opposing superior power, nor will they damage ships that might explode and kill them as well. A good prediction is that pirates will stay well away from protected ships. Essentially, the argument that the less wealthy companies cannot afford PPTs to protect them is not valid – why should bigger companies give up defending their ships if they can afford it?

Additionally, there are no restrictions under international law that prohibits using armed defense on commercial vessels. The only restrictions come from national laws that differ from one state to another and are created to protect the states' independence, not taking into consideration today's situation of the threat of piracy. Those legal issues can be solved via UN Security Council.

2.3. Tactical suggestions for PPTs

As vessels come in different sizes and shapes, it is impossible to determine universal composition, weaponry and equipment of private protection teams (PPT). Therefore, sufficient time is needed to plan, organize and rehearse all the actions before voyage. The recommended PPT size should not be less than six well trained, disciplined and organized men. This allows them to provide good observation to obtain situational awareness throughout the tour. Six men can rotate by twos on watch 24/7 without losing effectiveness over a long period of time. The bigger and more complicated the vessel is, the more men are needed to provide sufficient guard on sea.

As pirates tend to use speed as one of the main principles, the early warning of a possible attack will be critical. Enhanced optics for day and night must be used constantly. Robust alert system for the resting team members must be planned to get everybody into rehearsed positions as fast as possible.

Weaponry of PPT must include assault rifles with good optics to ensure better observation, and long range targeting that enhances accuracy and saves ammunition. That is one of the additional guarantees to make sure

that no innocent people get hurt. To achieve greater effective range than the pirates, it is highly recommended to have at least two medium machineguns placed on each side of the vessel that can be easily deployed or carried to the PPTs speedboat. The speedboat will come in handy when escorting a vessel with a dangerous cargo as oil, chemicals etc. That allows part of the PPT to investigate possible attackers form a greater distance while still being supported from the vessel.

Tactics, techniques and procedures come from the team's ability and experience, and the characteristics of the ship and cargo. To counter attacks the defense plan must address different situations, conditions, clear phases, contingencies such as an evacuation plan and so on. For example the whole operation can be divided into four major phases – Long Distance, Mid Distance, Short Distance and On Ship. All actions should be carried out while the vessel is on move with maximum speed possible.

The Long Distance Phase commences usually when on a relatively empty sea the guard is alerted by an approaching vessel (vessels, boats, skiffs etc) that cannot be identified as friendly. Visual or audio signals are to be passed to the approaching vessel to stop or divert the course. Meanwhile the rest of the PPT is taking positions and is getting ready to defend the ship. In case of a dangerous cargo the speedboat of PPT is to move towards the approaching vessel with slight angle to not block the fire support sector from the ship. If the approaching vessel is not going to slow down or change direction, the PPT will use signal flares towards possible attacker that should clearly inform that the approaching vessel is not welcome in the vicinity of the ship.[30] If the approaching vessel threatens the PPT's speedboat or displays weapons, then lethal force is to be used decisively and aggressively by the support team on ship, while the team on the speedboat is breaking contact.

The Mid Distance Phase occurs when the possible attacker is in the distance between 400 – 200 meters from the ship. Whether it crossed the 400 meter line or is spurting out form the cloud of other vessels in vicinity[31] warning shots from rifles and machineguns are to be fired into the water (short or aside). If any other neutral vessels are present the PPT must consider maximum safety to avoid harming them. Any time if shots are fired or weapons pointed from the approaching vessel, then lethal force is to be used by PPT.

The Short Distance Phase commences when the approaching vessel is still on move towards the ship and has crossed the 200 meter line. In that case the full combat power will be introduced to the attacker to stop it in that distance, bearing in mind that they may carry an IED. Still, safety of all others in the area must be considered while calculating the angles of fire. Situations may occur where attackers are not spotted before they are already in Short Distance area or have been somehow evading observation (at night, in fog etc). In this situation warning shots are immediately fired short of, and next to, the suspected attacker and lethal force is to be used if the vessel does not stop, change direction immediately, or if it presents its weapons.

If all previous procedures are followed, the next phase is not likely to commence at all. So the On Ship Phase is to be considered more as contingency plan, but it is still the most important course of action to prepare and rehearse for. That phase occurs if the attackers manage to board either by surprise or with overwhelming force. Once they have reached their DP (get on deck) the fight turns to very close combat battle and there is hope to beat the pirates only if the plan is prepared and well rehearsed. Once it is obvious that the attackers have reached the deck, the defending team must pull back to the stairs that lead to the bridge. There is still a possibility to gain the tactical high ground and apply effective fire on a canalized enemy. Prepared obstacle systems will help to delay attackers' spurt towards the bridge, and that fight may initiate a long lasting position war. If PPT is really good, they may consider counterattack if the situation is favorable and help from outside is delayed.

The last resort contingency should be a readiness to evacuate form the ship. Even though not a preferred action, it is a plan to consider. Human life is the most valuable thing and once the situation has become so bad that there is no way to counter the pirates, the PPT must collect all the crew and abandon the ship with specially prepared emergency boats. That situation may emerge also if the ship is badly damaged and there is a danger of sinking or explosion.

In any case, the ship's master must send out a distress signal immediately once it is clear that the ship is under attack, or is about to be attacked. All countermeasures applied will gain significant time for patrolling warships to close to the spot and assist with all means available. In case pirates

withdraw, the security recordings will provide valuable evidence to cut off and detain fleeing pirates.

2.4. Principles to consider

Now few additional principles might need to be discussed by the international community and UN Security Council if there is a will to be truly effective in reducing the problem:

- Certified PPTs on commercial vessels are not to be considered as a threat to the states' independence when such vessels enter a state's territorial waters. Clear rules of weapons posture must be created as it is convenient to states, but it has to comply with the vessels' right to self defense in any kind of attack;

- Clear ROE and effective control systems have to be created. Certification (tactical proficiency and knowledge in ROE) by a proper institution of every individual PPT is the key to avoid possible misconduct.

- All incidents must be recorded and investigations carried out, as well, In case of proven violations of the ROE the PPT will be responsible (sanctioned by the country the members come from) and lose their certification. Certifying institution will record all the incidents, carry out final investigations and keep track of the performance of the PPTs;

- Insurance companies are to impose lower rates if a certified PPT is present during the journey. That allows shipping companies to afford protection, and disciplines the PPTs to comply with established ROE in order not to lose their certification.

Those are just a few main principles to consider. But most importantly a shift of mindset is necessary. With clear rules, and control and support from the international community, the private sector can perform the job needed and contribute significantly to reduction of the problem. Those means can establish good conditions and impose control mechanism to ensure that PPTs are performing in the best manner possible.

Conclusions

Piracy and armed robbery in Gulf of Aden is about to add a significant price tag to international economy that we, as consumers and taxpayers are forced to pay for losses in profit, higher insurance rates, ransoms, etc. More than that, the international community must be aware of the danger that Somali pirates are liable to become agents of international terrorist

networks and will strengthen these and bring the current threats to new and unpredictable level.

As mentioned above, it is not likely to achieve the real reduction of the tension in that region only by applying military means like sending conventional navies to patrol against the small pirate vessels. A possible solution to reduce piracy to the tolerance level can be achieved by applying tactical means on the commercial vessels by private protection teams. That idea complies fully with one of the NATO's principle, as it was declared in Riga Summit 2006:

> "Today's challenges require a comprehensive approach by the international community involving a wide spectrum of civil and military instruments, while fully respecting mandates and autonomy of decisions of all actors, and provides precedents for this approach."[32]

Now is the time for the international community to consider other means than military ones to repel piracy. Private protection teams can be an essential means to reduce the problem in the area, as they can not be as easily evaded as warships by the pirates. There is no reason to predict that using armed protection on the commercial vessels will lead to a more dangerous situation than now exists. To apply armed private protection effectively the international community has to establish conditions, rules and control systems for private actors that comply with everyone's rights. Additionally, co-operation between private protection teams and naval Task Forces in the region must be enforced. That is the most effective way to counter pirates and reduce their enthusiasm to continue attacks. Furthermore, the insurance companies can reduce the rates significantly while the vessel is under the protection of a certified protection team. This will enable the less wealthy shipping companies to hire protection as well.

The desired end state is a situation where pirates' risks are increased to the level where their activities are no longer cost-effective. Attacking their Center of Gravity (easy profit) by taking away their most valuable capability – to attack unprotected ships - they are forced to withdraw at least from the high seas. That allows the situation to calm down to the tolerance level that was in the region few years ago. Still, there are no perfect solutions. But the one presented in that paper can be an effective alternative at the current time and under the current conditions.

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[23] On the ground the medium machine gun can provide effective range up to 1000 meters, which is not achievable on the sea platform that is considerably less stable. Estimation is that effective ranges of all weapon systems on the small skiffs while on the move as well, are at least 50% less than on the ground.

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The French Army in the Interwar Period *

By Igors Rajevs, Colonel, Latvian Army

Marshal Ferdinand Foch once described Versailles Treaty as "not a peace but an armistice for twenty years."[1] The majority of Frenchmen agreed to the bitter truth that Germany would never accept its defeat. The upcoming war with Germany was expected to be different from World War One. Still, not everybody agreed at the time that future battlefield environment will be so different. The French Army had a need to learn from the lessons of World War One and to adapt those lessons to the possible future challenges of a new war. All the French Army's efforts in legislation, doctrine development, modernization, education and training were conducted in order to prepare it for the future war with Germany. However, it is obvious from events that these preparations were unsuccessful.

The aim of this paper is to analyze the development and transformation of the French Army in the interwar period between 1918 and 1939. In light of the known facts on the development of the French Army in the interwar period my question is: How was the transformation of the French Army in the interwar period conducted and what was the effectiveness of this transformation in preparing the French armed forces for the upcoming war?

The paper will initially analyze the French policy developments made in order to prepare France for inevitable war with Germany. It will also touch upon the inability of the French government to implement the policy decisions in reality. Furthermore, the article will review the economic conditions and the role they played in the development of the French Army. The paper will also describe the development of French doctrine and the reasons why France developed the doctrine that it did. Furthermore, the article will analyze the advantages and disadvantages of the doctrine and provide some parallels with current doctrines used in the armies of the NATO nations.

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The French Army modernization plans, mainly mechanization plans, and use of technological achievements will be analyzed in comparison to the Germany's efforts in order to identify the possible French advantages and disadvantages. Finally, aspects of education and training of French Army will be analyzed to see what influence they had on overall developments during interwar period. This paper will be limited to only a brief review of the primary interwar developments of the French Army. The general modernization trends will be seen through the prism of the development of French Army tank and mechanized units. The paper will not discuss aspects of the reserve army or developments that took place in the other services.

1. Making the policy.

It is impossible to understand the French interwar military program without a review of the legislation affecting the armed forces undertaken by the French Senate and the Chamber of Deputies. There is one well-known Bismarck stricture that "Laws are like a sausages, it is better not to see them being made."[2] He was exactly right, and the proof of this is what happened in the details of the legislative process of the French Senate and the Chamber of Deputies from the early 1920s to the 1930s. In this period the French legislators failed to produce an effective security strategy. This lack of a coherent policy became a major obstacle to France streamlining and organizing all its resources towards preparation for war with Germany.

The modern warfare system that evolved during the time of Napoleon and the Army of the Revolution, complete with the *levee en masse*, was cogently explained by General Rupert Smith in his "Utility of Force."[3] Armies built on that principle enjoyed victories on the battlefield until the new evolution of the Prussian military machine. At that point the professional officer corps and technical proficiency was the keys to success in war. However, by 1914 such an approach no longer guaranteed success. During World War I and the war of attrition in the trenches it was the production capacity of the country that won over the military proficiency of the army. The nation that had more resources and was able to raise more "battalions" would, in the end, win. The "Total War," as a contest between nations rather then armies, restored French belief in their revolutionary *levee en masse* of 1793. The sense of *nation armee* was very well suited French mentality, along with the idea that that no other nation can make a comparable commitment to its national cause.[4]

The French leaders recognized the need to redefine *nation armee* and to transform it in accordance with the situation. It was no longer enough to concentrate large numbers of men on the battlefield without paying attention to the economics of war. A nation now needed a new comprehensive approach to national security arrangements where the hardship and the profits of the wartime mobilization were more equally distributed among the population. The French approach to grand strategy was shown in its "Law for the organization of the nation in time of war." Instead of insuring the mobilization of human and material resources and the allocation of responsibilities among civilian and military agencies, the French law actually highlighted the clash between rational planning and political reality. The poor process to develop the appropriate laws demonstrated the limits of French leadership in terms of delivering a comprehensive security policy.[5]

The First Bill of the national mobilization law was initiated by Army Chief of Staff General Edmond Buat at 1920. Initially, the government shared the same view as the army and intended to revise the constitution to create an agency which would be able to deal with the integration of military and civil aspects of national defense planning. Two major political views existed at that time. One view, shared by General Buat, was for the need to coordinate industrial capabilities in support of armed forces. This position viewed comprehensive national mobilization as a trade for the reduction of mandatory service. The other view, shared by majority of the legislators, disliked conscript service and employed rhetoric to advocate shorter conscript service and generally ignored the other issues. As one might expect, the second view prevailed and the duration of conscript service was reduced without any other significant change in legislation.[6]

Only on March 1926, Joseph Paul-Boncour was appointed by the French Chamber of Deputies as spokesman for defense issues. He identified three requirements for the national organization law: the need to prepare France for a total war, the need to assure smooth transition from peacetime to wartime organization, and the need for flexible laws that could adapt quickly as circumstances required. The other important issue was that compensation paid for requisitions would not exceed the basic cost, so there would be no war profits.[7]

The next four years were spent in endless discussions on numerous issues such as: who could be called-up as reservists, should females be called-up, where should members of the Parliament and the Senate should serve during the war, whether private companies should make profits from military requisitions and requests, and many other issues. However, all those activities contributed very little to any genuine progress in the national defense program.

Further disagreements between "socialist" Chamber and "liberal" Senate led to dropping the revision of the defense law from the legislative agenda for the next six years. So, the first efforts to establish a French national grand strategy proved to be politically unobtainable at that time.[8] In the next six years after the initial failure virtually nothing happened and the national mobilization bill seemed to be forgotten by everybody because there was no visible military threat to France at the time. It was a period of international disarmament talks, and the idea was that the increased development of national assets for the defense sector could undermine the French position in international diplomacy. France was also affected by the spreading Great Depression which began in 1929. In that period France was focused on defending its franc. Social conflicts, a depressed economy, France's declining position in technology, and the poor state of the world economy all contributed to a general malaise. In that situation, defense against a disarmed Germany was not seen as a very important factor.[9]

The second attempt to establish a comprehensive national defense strategy was made in 1934. The New Chamber's Army Committee showed little commitment to the previous principles agreed to in 1927. The issues of excluding females from the call-up and payments for benefits were approved without discussion. All members of the Parliament lost their right to choose where they would serve during a war. However, further inter-ministerial discussions proved inability of the Committee to establish a clear peacetime and wartime command structure, to divide responsibilities among agencies, or even to keep the higher direction of the war in civilian hands.[10]

The "jointness" issue also was addressed during the process. In addition to three service staffs there also existed three different ministries, the actions of which were not well coordinated. The situation called for the transformation of those bodies into a coherent and unified structure. Originally the idea of a unified command was on the legislative agenda but

"the enthusiasm for drastic reform apparent in early discussions of military command arrangements soon evaporated in the face of inter-service tensions."[11] In the end, only Marshall Petain was supporting that cause, but he found no support in the Defense Committee, nor within armed forces. So, final bill of 1938 left service independence untouched and contributed very little to the improvement of inter-service relationships.[12]

After the Second World War the former Minister of National Defense Daladier insisted that the military was the cause of France's defeat in 1940. But he, as one of the ministers of war, was rightly to be blamed for fragmenting the powers of High Command and for delegating authority in defense issues to the different agencies.[13]

The implementation of the National Organization Law was also difficult. Writing the law and announcing mobilization was the easy part. Transforming this theoretical idea into the working system was much more difficult. All efforts to make this system work lacked decisiveness and lacked the necessary strong leadership. The military leaders were not interested in large revolutionary-style mobilization, and their actions were described by some historians as a combination of ill-will and negligence.[14] Without military interest in the issue, civilian institutions also were not focused on mobilization planning. The weakest point of mobilization plan lay at municipal level. The results of mobilization exercises of 1938 and 1939 showed that local mayors paid little attention to their wartime and mobilization responsibilities.[15]

In conclusion, one can say that in generally those two decades of the interwar period were wasted because French legislators were not able to produce the needed legislative acts that would allow the transformation of French defense system between the wars. They failed in three major areas. First, they were overconfident in the French ability to understand their national defense requirements. Second, they were not able to transform existing political structures in accordance with a developed vision. Furthermore, they failed to establish the unified command structure and kept all three services and respective ministries as separate entities. This would later affect the overall approach of the services to the execution of operations. Finally, they constantly refused to admit the difference between theory and reality. Thus, the legislators were unable able to implement changes within governmental structures, both political and military.

As the Minister of National Defense Daladier stated in his testimony to the Chamber of Army Committee in December 1936, there were three pillars of French national security: national organization law, armament, and the ability to harness national resources efficiently. Knowing the German advantage in first and second area, France could achieve success only by placing emphasis on the later.[16] The history of World War One had shown that French had missed this opportunity.

2. Economy

As we can see from the above, in the interwar period France lacked a comprehensive National strategy that would enable it to deal with German threat.[17] However, from the point of view of the national economy, France was not in a disadvantageous position and the French indeed devoted a sufficient amount of resources towards defense issues.

The interwar period was marked by two economic depressions in 1921 and 1929. But that phenomenon was spread worldwide and did not affect only France. Hence, all countries were at the same situation and France got no advantage or disadvantage out of it.

France had a very well developed military industry and was able to sustain it throughout the First World War and further develop it during interwar period. Even though France had an extensive amount of surplus of equipment at the end of the First World War, it did not stop the French from creating completely new weaponry.[18]

Financial constraints were never a major limitation for France. In the period from 1918 to 1935 France spent on defense a larger percentage of its gross domestic product then any other great power. Although Germany spent more than France in its defense expenditures after 1936, much of the cost was due to the fact that Germany was purchasing new stocks of basic equipment, while the French Army already had considerable equipment stocks at its disposal.[19] Still, France did not readily accept a position behind Germany and the French increased their defense budget from 12.657 billion francs in 1935 to 14.848 in 1936, 21.235 in 1937, 28.976 in 1938 and 93.687 in 1939.[20] One can conclude that the French defense system did not suffer from inadequate financing.

Of course, France could have spent more money on its defense needs. But more money would not have necessarily resulted in a better state of preparation for war. One cannot see how large financial resources might have resulted in any fundamental changes in any of the defense sectors. More money would not have resulted in the development of more modern vehicles, a different doctrine or wider acceptance of mobile concepts of war, or encouraged decentralized command and control relationships.[21] In short, France's economical and financial situation in the interwar period was adequate and certainly was not the source of disastrous defeat of 1940.

3. Doctrine

This article will analyze the roots of French doctrine and the factors that influenced its development. The concept of the Methodical Battle became the centerpiece of French military thinking. That doctrine was grounded in the French obsession with superiority of firepower and the necessity to tightly control every action on the battlefield.

The roots of the French doctrine certainly lay in the lessons learned from World War One. There is no doubt that devastating experiences of World War One had tremendous impact not only on French military, but indeed on the French nation. The war had simply blown away much of French military attitude and institutional culture. From the pre-war population of approximately 40 million France mobilized 8,410,000. And out of those mobilized French lost in dead and missing somewhere between 1,382,400[22] and 1,700,000 of its young men.[23] By the end of 1917 French Army was so shaken that it was largely out of action and mentally unable to take any offensive action. Their mind already was pre-set for the favor of defensive action. As John Keegan noted, "France sought literally to wall itself off from a renewal of the trench agony by building a simulation of the trench system in concrete along its frontier with Germany."[24]

The legacy of Verdun is the most popular explanation of interwar French doctrine. The battle of Verdun demonstrated to everyone the power of defense. Influenced by the disastrous results of the *offence á outrance* the French Army prepared to fight next war behind the concrete of Maginot Line.[25] Initially post-war mind-set was more offensive then defensive and even fortification line was seen as part of offensive operation.[26] However, further developments and political influence marked a clear shift towards defensive concept.

There was one very well known Marshal Petain dictum that was constantly repeated by French military - *"le feu tue"* - "fire kills."[27] It came from the French experience and the belief in the superiority of defense and the primacy of fire over maneuver. The formal believe in the maxim "fire kills" came from the fact that contemporary weapons were the same as during World War One, when "fire demonstrably did kill."[28] During the war the French increased number of heavy artillery pieces from 308 in 1914 to 5,340 in 1918,[29] and those guns were set to play their role in upcoming war.

There are two lessons from World War One that certainly should been studied by French: the German stormtroop infiltration tactics and the Brusilov offensive. By the end of war Germans had very successfully used infiltration tactics. In the 1917 and 1918 battles the Germans bypassed enemy strong-points and continued the advance forward, encircling and cutting off enemy troops. So, resistance of encircled units become irrelevant and they surrendered.

The Russian southern army group commander General Brusilov launched his offensive on a large front in 1916 with very little, but still precise artillery preparations in different places. In this way, the Austrians did not know were the main attack was coming and where they needed to send their reserves. Shocked by the initial attack from different directions, the Austrian defense soon collapsed and only the German intervention with their reserves pulled back from other fronts stopped the Russian offensive. As a result of this operation, Russian armies advanced for almost hundred kilometers and defending 4th Austro-Hungarian Army was almost annihilated. It was unimaginable to achieve such results on Western front.[30]

After World War One the French Army put significant efforts into development of the most modern doctrines. All new ideas and new technologies were evaluated by a new system which was set-up by the Army. The army committee carefully analyzed all aspects of personnel, equipment, structure of the units and the ways of their employment. They wanted to maximize use of firepower of each weapon and each unit. The French leadership believed that the tests conducted in a scientific fashion were the best way of proving the feasibility of new concepts.[31]

The French military doctrine was based on two major concepts – supremacy of firepower and the Methodical Battle. The French Army believed in "fire kills" dictum and introduced greater use of the firepower, which made battlefield even more lethal. French disregarded possibility of using artillery as a tool to provide immediate support to smaller units. In the French view, artillery provided massive fire support to advancing or defending infantry. Such a view, of course, had its limits. It was difficult to conduct rapid maneuvers and it limited their flexibility in maneuvering while massing fires and controlling large units. The attacking force was limited in its advance by the effective range of artillery unit that was supporting the infantry.[32]

The doctrine, which was focused on centralized use of massive artillery fire, inevitably required highly centralized synchronization of the battle itself. French called it *bataille conduite* – Methodical Battle. The Methodical Battle was tightly controlled operation in which movement of all units and fire from all weapon systems were fully synchronized and strictly executed in accordance with prepared timetables.[33] The battle itself was actually a series of engagements with strictly divided efforts, and clearly defined objectives, which should be executed in the right sequence.[34] Such an organization of the battle left little space for initiative of subordinates and no possibility to exploit any success in any phase of the operation.

The French saw the successful offensive operation in only one way. A hasty attack option was disregarded as too risky and too costly. The Methodical Battle was the solution. This required concentrations of fire with "three time as much infantry, six times the artillery and fifteen times the ammunition."[35] To put it in simple terms, the attack consisted of successive bounds of the maneuver element, firstly tanks, then infantry, moved forward for about fifteen hundred meters, seized their objective and waited for friendly artillery to be relocated to new position. When the artillery was in place, the second phase of attack started with another move for fifteen hundred meters. And all that was done in a strictly orchestrated and synchronized way.[36]

The basic doctrinal documents that were used by French Army in the interwar period were the *Provisional Instructions on the Tactical Employment of Large Units* (1921) and *Instructions on the Tactical Employment of Large Units* (1936). The 1921 *Instructions* was based on the use of firepower as the "preponderant factor of combat."[37] It described flow of the Methodical

Battle as series of successive actions starting with preparation, explaining movement of units and materials and concluding with reorganization. The *Instructions* also emphasized the role of the commander as the coordinator of the battle. The *Instructions* did not abandon the offence, but put greater emphasize on the defense. While doctrine tended to slide towards defense, the Army "retained understanding of the importance of the offence."[38]

The 1936 *Instructions* introduced some new concepts, but mainly acknowledged the dominance of previous doctrine. However, the worst thing was that by that time French military doctrine moved from an innovative basis for military education and turned to the "unfortunate status of being an inflexible prescription." Creative thinking and imaginative actions were replaced by new doctrine, which was blindly followed by the French Army.[39] That was a period, when French doctrine "had regressed rather then progressed."[40] The modified doctrine introduced little innovation, since new weapon systems remained tied to the old ideas.[41]

However, it would be incorrect to say that French doctrine was purely defensive in nature. Discussions on vital importance of offensive actions popped-up from time to time at the War College and in the military publications.[42] Even the *Instructions* of 1936 had stated that "only the offensive permits the obtaining of decisive results."[43] Unfortunately the change in wording did not lead to the change it the mindset. Firepower was still the cornerstone of French doctrine and movement of troops or maneuver was seen as possibility to gain advantage in firepower only.[44]

Nearly every book written on French Army development in the interwar period heavily criticizes French military doctrine. In fact, French interwar doctrine was the basis for what today is known as 2nd Generation Warfare. Speaking in general terms, we are not so far from the French doctrine today, because current NATO doctrine is also about "out-firing" rather then "out-maneuvering" the opponent. Today, as French before World War I, NATO nations are obsessed with "synchronizations" and "de-conflictions" to maximize their use of firepower and still pay too little attention to maneuver. However, a significant difference of current NATO tactical doctrine is in its offensive spirit and unquestioned maxim that only offensive actions can lead to a victory.

In conclusion it is correct to say that French Army was terrified by the amount of the casualties during World War One and failed to learn right lessons from previous war. As a result, the French developed a doctrine that over-emphasized the importance of the firepower, over-centralized command and control relationships, and killed any initiative of junior commanders on the battlefield. The new French doctrine was not an entirely wrong document in its explanation of tactical actions for the French Army, but the practical application of it was wrong, and this led to the disastrous results during the interwar period and in 1940.

4. Modernization of the army.

This chapter will present modernization efforts of French Army between World War One and World War Two in the field of mechanization. It will also describe organization of French mechanized units and their employment on the battlefield. Later it will be compared with similar German efforts. This chapter will show that French were actually in a more advantageous position then the Germans and they had better tanks. However, French failed to capitalize its advantage of having better tanks because their tactics and the role assigned to the tanks failed to exploit the full potential of this new powerful weapon system.

The development of the tanks in the interwar period was influenced by lessons from World War One. By the end of World War One the French developed their own successful tank, the Renault FT-17, two-man machine armed with short 37mm gun. Those tanks were designed to be used in mass and were very well suited for the "open-style" fighting during last periods of war.[45] Massive use of tanks during successful offensive of the Triple Entente's armies on the Hindenburg Line showed that different types of tank units were required. The Mark V slower and heavier tanks were able to broke through the German defensive position, but "the opportunities they made were admirably exploited by the lighter Whippets and armored cars".[46] So, different types of tanks were required for the successful completion of the operations.

In 1919 France conducted series of studies in order to identify in which direction to proceed with development of new weaponry. As a result of those studies France decided to develop three types of tanks: accompanying tanks, battle and rupture tanks --or light, medium and heavy, as we can say today. The light tank, armed with machineguns only,

was supposed to support infantry. The medium tank, armed with canon and machineguns, also had the infantry supporting role. The heavy tank was supposed to break through the enemy fortified defense lines and protect other tanks from antitank weapons and enemy tanks. The only tank that was missing in French inventory was medium tank.[47]

A new commission established in 1925 came up with the same recommendation of the development of the three tanks: light, medium and heavy. It only slightly redefined role of the medium tank.[48] The next change came in 1930, when the French eliminated requirement for the heavy tank and tried again to improve the light tank.[49] All those activities show that the French officials paid significant attention to the development of tanks, armored vehicles and mechanized units. As a result of all those activities French industry developed a number of vehicles.

The only heavy tank, the FCM Char 2C, was produced in small numbers. It never was incorporated in mechanized units and six tanks remaining in the inventory did not make it to the battle and were destroyed by German air action at a railway station in May 1940.[50]

In the medium segment, France developed number of high quality tanks. The Somua S-35 was probably the best French tank at 1940. It had sufficient armor and was armed with modern 47mm high-velocity gun. 430 such tanks were available. The other available model was Char B1 and B1-bis battle tanks. They had the same turret as S-35, but in addition to that were armed with a short 75mm gun, so potentially it was one of the most powerful tanks at the beginning of World War I. Approximately 400 of those tanks were produced.[51]

The biggest numbers of produced tanks were, of course, the light tanks. All the production models of Renault R-35, Hotchkiss H-35 and H-39, AMC 35 and FCM-36 were armed with 37mm or 47mm guns and had significant armor protection. R-35 light tank had armor that German standard 37mm anti-tank gun was not able to penetrate. Two models, R-35 and H-39, went to mass production and by 1940 French industry had produced 1,100 of each.[52]

The Wehrmacht construction program consisted of four main types of tanks. The Panzer I was designed mainly as training vehicle and it was armed with machineguns only. The Panzer II with a 20mm gun was

planned to provide some fighting capability. The Panzer III with a 37mm gun was the backbone of the newly formed Panzer divisions. The Panzer IV with a 75mm short cannon was produced to provide close support to the other tanks. However, vast majority of the tanks that participated in French campaign of 1940 were Panzer I and II tanks, which were weaker then majority of the French tanks.[53]

In total, France had 2,285 tanks available on the North-eastern front. In comparison Germany had 2,574 tanks in its ten Panzer divisions. Disregarding technical differences in the tanks themselves, we can say that it was not the number tanks that made a difference, but ways how they were organized and employed.[54]

First French manual on use of tanks was issued as early as 1920. It was based on experience from World War I and clearly stated that "tanks are not able to conquer or occupy terrain by themselves alone." They always should support the infantry, and be employed in mass and on a large front.[55] In 1929 issued *Instruction on the employment of Combat Tanks* emphasized again that tanks are to be used only as "accompanying weapons of infantry" and to large extent limited its employment.[56] Further, in pre-war time issued *Regulation on Units of Combat Tanks, 2nd Part: Combat,* the limited role of the tank was emphasized again and the manual restated the tactics of moving in successive bounds for fifteen hundred meters, while all the time staying under the artillery coverage. The draft of this regulation did include a requirement for "more rapid speed to operation," but later it was disregarded for the sake of order under the Methodical Battle.[57]

On the contrary, Germans saw tanks as a maneuver element that conducted deep penetration and continued the thrust from the main defense line to the enemy's rear for four to five kilometers. The French tactics were described by one German officer as "seven minutes of attack and seventy minutes of waiting for the arrival of the infantry."[58] The second important difference is that French doctrine overemphasized importance of the artillery. While German doctrine agreed on the importance of combined arms operations, it called for more mobile operations. German flexible doctrine exploited all the strength of the tank.[59]

It is obvious that French industry was able to produce fine tanks in significant numbers. Even the quality of the tanks was better than those that were produced in Germany. However, the French underestimated role of the tank and did not exploit its capabilities to their full potential. Instead of using the tanks' speed and shock effect, as Germans did, they limited its role to the support of infantry and did not use them as a maneuver element. The results of the 1940 war clearly showed that Germans, with their superior tactics, were able to beat the French who, in fact, had better tanks.

5. Education and training

This chapter will analyze the education and training systems of the French Army and will identify what influence those systems had on the overall developments of the Army during the interwar period. The French interwar education and training system mainly supported development and smooth implementation of the Methodical Battle concept rather than the preparation for the war itself and it did not support a realistic preparation for the up-coming war.

In 1936 the Minister of National Defense Daladier came up with a proposal to establish a National War College that would be designed for preparation and execution of "total war," where capable potential leaders from military and civil service would study national defense issues.[60] This "joint" proposal initially was countered by all the services that strived to maintain their own independence.[61] However, in the end, Daladier's proposal prevailed and the National College was established with the aim to provide to its students "background in the problems of combined strategy" and to familiarize them with the political, economic and other implications on the conduct of war.[62] However, the structure and curriculum of the college did not support such training since it offered little possibility for open discussion.[63] The National War College was founded only three years before the war and in general terms it contributed "nothing to French performance in that conflict."[64]

The Army War College initially taught offence operations[65] but further on, with the development of Methodical Battle concept, it switched to blindly following the existing concepts. College tactics were taught on the employment of artillery, which limited maneuver to the maximum range of fire and necessity to displace artillery assets in order to support infantry's

actions. Overall, such an education left little room for the development of future commanders.[66]

The French also failed to study history carefully. All the countries that participated in World War I drew their lessons learned from the same battles, but each country developed its unique conclusions. In order to avoid the massive casualties suffered during the last war, the French concept of the Methodical Battle was focused on the maximum use of fire power and tight control of all movement of troops, which consisted largely of relatively untrained draftees and reservists. Such an approach came from the lessons drawn from a narrow set of battles in 1918 which were in line with existing French thinking. The other lessons were mainly disregarded. The exercises proved to be of little value, since they provided little training and almost no food for thought. The French Army trained lackadaisically in contrast to Germans, who "prepared with the Teutonic thoroughness that they brought to war."[67]

Different types of the exercises also proved to be of a little help to improve existing doctrine or the war plans. In 1937 the French conducted explicit a comparison study of French and German armored units. The study concluded that French divisions are already "emerged from the experimental state," while German are "still a subject of discussion."[68] That was a much more positive evaluation of the situation then it really was at that time. General Billotte reported on successful outcome of the map exercise, where enemy forces failed to break through Maginot line. But speaking honestly, the general "paid more attention to the positive outcome of the exercise, then to the deficiencies it demonstrated."[69] The exercise in the Sedan-Montmedy area in 1938 showed a clear weakness in the French plan as opposed to the strength of the Wehrmacht. As a result of the exercise General Pretelat requested only a minor change to the war plan and proposed a relocation of only one division. But, for the higher command, it was easier to reject the request then to rethink the plan and exploit the full potential of mechanized units. And, as a result, the unwanted information was ignored.[70]

The French Army leadership, its generals and officers, were also responsible for the failures of the interwar development because most of them "failed in their responsibilities, for they failed to ask the hard questions."[71] Creative thinking and innovation at that time was replaced by methodical approach and fixed school solutions.

In conclusion, we can say that French interwar education and training systems supported the development and implementation of the Methodical Battle concept rather then a preparation for the war itself. All deviations from the existing doctrines, concepts and plans were disregarded, and all deficiencies that were identified during the exercises were rejected. The educational institutions and officer Corps also failed to produce the needed outcomes. As a whole, French training system did not support a realistic preparation for the up-coming war, but rather provided "doctrinally correct" education and training.

6. "Lessons learned"

What lessons we can learn from French interwar experiences that are relevant and applicable today? It all, of course, starts at political level. Security and defense issues should be treated seriously and they should not be sacrificed to the short-terms political gains, because there is much more to lose. Political leadership should carefully evaluate the threat and put in place all required mechanisms in order to establish all necessary pre-conditions for successful development of the Army and efficient political and military leadership in times of crisis and war.

Lessons from previous wars are important. However, those lessons need to be addressed honestly and objectively. Real Lessons Learned must address all actions without separating them as to one's own and the enemy's actions. Knowing what lessons to learn and not disregarding some lessons only because do not fit into one's doctrine is essential. It is unacceptable to try to make lessons fit current doctrine, because that is the shortest way to the military disaster.

Technological innovations must be exploited to the maximum extent possible, and not just made to fit the existing doctrine. They must be incorporated into doctrine and tactics, and be balanced with personnel, training and education systems.

Initiative should be one of the key elements of every military organization. Cutting down initiative from below and replacing it with rigid centralized control will lead to development of a military organization that is not capable of learning and can only obey orders. Military organizations that are not able to learn are set for failure only.

Conclusion

In conclusion, I will summarize and evaluate the French interwar activities. France had sufficient time for the preparation to the up-coming war and it devoted a sufficient amount of resources to do so. In 1938 Winston Churchill described French Army as "the most perfectly trained and faithful mobile force in Europe."[72] But why did it go so wrong? The French had all necessary prerequisites for success. Initially they had the political will to transform the defense institutions and armed forces in accordance with new realities. They had learned extensive lessons from World War I. They had all the needed military institutions like national and service war colleges in place to implement the required changes. They had proper equipment, which was of a better quality then the German equipment. But still, the French failed to prepare for the war properly.

The French developed the system where everything was predictable, and they forgot that the enemy always has a vote on the battlefield, too. The often mentioned friction of Clausewitz, that "chasm between planning and execution,"[73] played its role. And execution was main French problem at all levels starting from the strategic down to the tactical.

On the political field the French legislators wasted two decades in endless discussions and were unable to produce the needed legislative acts that would allow transformation of French defense system between the wars. They failed in three major areas. First, they were overconfident in France's ability to understand her national defense requirements. Secondly, they were not able to transform the existing political structures in accordance with a developed vision. Furthermore, they failed to establish the unified command structure and kept all three services and respective ministries as separate entities. Thirdly, they constantly refused to admit the difference between theory and reality and were not able to implement changes within Governmental structures, both political and military.

France's economic and financial situation in the interwar period was nearly the same as for the other major countries involved in World War I. France allocated sufficient and adequate resources to the military, and the resources were certainly were not the source of disastrous defeat of 1940.

The French Army developments during the interwar period were influenced by the lessons from the World War I. A major impression had been made by the terrifying amount of the casualties of that war. The French also failed to learn right lessons from previous war. The French Methodical Battle concept and the accompanying doctrine overemphasized the importance of the firepower, and it created an over centralized command and control relationship, and killed any initiative of junior commanders during the battle. The new French doctrine was not an entirely wrong document, but its practical application during World War II led to the disastrous results.

The French industry was able to produce good tanks in significant numbers. Even the quality of the tanks was better then those that were produced in Germany. But the French underestimated the role of the tank and did not exploit its capabilities to their full potential. The French Army viewed technological developments only as a supplement to the existing doctrine and was not able to understand its significance and exploit its full potential.[74] The French limited the role of the tank to supporting infantry and did not use tanks as a maneuver element. The Germans, who assigned a more significant role to the tank, were able to beat French with their superior tactics, despite the fact France had better tanks.

The French education and training system did not support positive development either. In fact, it supported the development and implementation of the Methodical Battle concept rather then preparation for the war itself. All lessons from exercises were disregarded and rejected, because almost nobody dared to challenge existing doctrine. As a whole, French training system did not supported realistic preparation for the up-coming war, but rather provided "doctrinally correct" training and education.

The Methodical Battle killed initiative, and the creation of Maginot line killed the offensive spirit of the French army and replaced it with "Maginot" mentality. From the fine, brave soldiers of World War I the French became punctual machines, afraid of braking synchronized order of action of the Methodical Battle. It all led to disastrous results in the beginning of World War II, when the French Army was easily defeated by German force.

The victorious French army of World War I was not able to prepare for the inevitable war with Germany, and it was unready in the beginning of 1940. All its efforts led the failure, and it could be concluded that French army preparations for the war were unsuccessful.

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Special Military History Feature: Studying the History of Coastal Defense of Countries of the Baltic Sea Region

By Yury Melkonov, Publisher/Editor of Baltfort Magazine

Mankind lives on the big and small islands and the sea is a means of the communication for people and nations. The struggle for possession of the coast is an important part of the world geopolitics.

1. What is coastal defense?

Coastal Defense is a complex of forces, means and constructed installations intended to defend naval bases, ports, military-economic and administrative centers, gulfs, straits and coastal communications against attacks from the enemy ships and sea landings. Until the middle of the 20th century Coastal Artillery was the main weapon of costal defense.

2. What is coastal artillery?

Coastal Artillery is intended to defend naval bases, islands areas and the various objects located at coast against enemy attack from the sea and from the land, as well as to assist the land forces operating at the coast. The basic Coastal Artillery mission is to disable and destroy enemy ships and boats within range of its fire; an additional mission is the destruction of land targets.

Coastal defense occupies a considerable part in the military science, politics and economy of a coastal State. The uniqueness of the study of the coastal defense history lies in the fact that it unites many branches of knowledge, science and engineering, including navy history, history of artillery, fortification, antiaircraft defense, as well as army history and other subjects. To properly study coastal defense history it is necessary to understand the basic periods of the development of coastal defense and to identify the main strategic areas on the Baltic Sea coast where coastal defenses were built.

3. The basis strategic areas of the Baltic Sea region

Danish Straits. Three straits (Oresund, Great Belt and Little Belt) connect the Baltic Sea and the North Sea are key strategic points in the Baltic Sea. Therefore Denmark always had a strong coastal defense. During the Second World War Germans set two 380-mm guns on Danish coast with the purpose of preventing passage of the British Fleet into the Baltic Sea.

Aland Islands. Aland Islands control the entrance to the Gulf of Bothnia. They were also were the most western point of the Russian Empire and only 150 km from Stockholm.

Gulf of Bothnia. This was the export trade route from the ports of Finland and Sweden and most trade passed through the Gulf.

Gulf of Finland. The Gulf was of great importance for the protection of St. Petersburg, the Capital of the Russian Empire. The coastal defense of the Gulf was always based on two coasts – Finnish and Estonian.

Port of St.-Petersburg and the Kronshtadt Fortress. This was the strongest fortification for the protection of St. Petersburg against attacks from the sea.

Port of Tallinn. In the time of the Russian Empire Revel (Tallinn) was a Russian Navy Base and a large port, as well as the location of a shipyard for the construction and repair of ships and submarines.

Moonzund Islands and the Moonzund Strait. This is a very important region of the Baltic Sea. Whoever owns the Moonzund Islands can control all the northern part of the Baltic Sea.

All the above mentioned regions are covered by ice in winter and are available for shipping only eight to nine months of the year, with the exception of the waters around Denmark. Therefore, warm water ports are of particular importance for the Baltic Sea.

Irben Strait. This is a major strait in the central part of Baltic Sea. The Strait is 32 km in width, with a depth of the fairway up to 24 meters. It is very dangerous to navigation. During the First World War it was defended by mines (more than 10000 mines). During the Soviet period coastal

artillery positions intended for the defense of Irben Strait were constructed on both coasts – the Estonian (3 batteries) and the Latvian (3 batteries).

Port of Riga. Ust-Dvinsk Fortress. An important port on the Baltic Sea and the second most important port in the Russian Empire. The Port of Riga had a large container terminal for the export of coal, metal and grain. It was also a naval base. Shipyards were located there. There is a large railway junction and an airport in city of Riga.

Port of Ventspils. Nowadays this is a large seaport for the export of mineral oil. In the time of the Russian Empire it was port for the export of grain. Then and now there is a naval port and ships for the coastal patrol are stationed there.

Port of Liepaja. Large coastal defense installations were built here. In the time of the Russian Empire times it was the main base of the Baltic Fleet. Later there was a Soviet Navy Base. Now it is a Latvian Navy Base.

Port of Klaipeda (Memel). Before the beginning of the twentieth century this was part of East Prussia. Since 1924 it is a Lithuanian port. It is a large commercial port and the Lithuanian Navy base. Shipyards are located here.

Kaliningrad region. Formerly the port and city of Königsberg, part of the Kingdom of Prussia and later Germany. This is a large port and a location of shipyards and the base of the Russian Baltic Fleet.

Ports on the Polish coast. The Polish ports of Gdynia and Gdansk (Gdansk was formerly the German port of Danzig) were of great importance for trade in the Baltic Sea Region. Shipyards capable of building warships and submarines were concentrated here.

The Swedish coast. Sweden on the Baltic coast had three main areas of coastal defense – the Northern area, the Central area near Stockholm, and the Southern area around the port of Norcheping. All these areas ensured the protection of main Sweden ports and sea routes for the export of Swedish iron ore.

4. The basic periods of the development of coastal defense

The Viking Period, 800-1000 A.D. The Vikings expanded settlements to all countries of the Baltic Sea Region. The Vikings would raid the region by means of sudden attacks of small groups with small ships. A modern version of the Viking tactics is performed by Swedish amphibian battalions.

The Teutonic Order Period, 1200-1400 A.D. This period is characterized by the construction of fortified castles, including many on the seacoast. The Livonian Order, an autonomous branch of the Teutonic Order, built castles located in Reval (Tallinn), Virtsu, Arensburg (Kuressaare), Riga, Ventspils, Memel (Klaipeda), etc.

1400-1700. During this time period construction of fortresses proceeded, many in the Baltic were built according to the system of the French engineer Vauban. In all fortresses artillery was emplaced.

Swedish-Polish-Russian Wars. This was the time of active military operations, both on the sea and on the land. The territory of the Baltic was annexed by the Russian Empire.

1710-1860. During this period the coastal artillery started to become a specialist force. Special fortresses and coastal defense forts were been constructed and special coastal was artillery developed. The most typical example of coast defense in this period was the Crimean War and defense of Sevastopol.

1860-1914. The equipment of coastal artillery with rifled guns began and the caliber and range of guns increased sharply. Naval mines were developed and the use of aircraft for reconnaissance and artillery spotting was begun. Communication devices and artillery fire control was developed. The use of concrete in the construction of fortifications began.

The First World War. Coastal defense of all countries of the Baltic Sea Region was an active part of the military operations of the war. Geopolitical changes in the Baltic Sea Region took place and the independent states of Finland, Estonia, Latvia and Lithuania were created.

1920-1940. Period of Independence. Each of the new countries created its own coastal defense system. Most of the installations were taken over from the Russian Imperial period and remained in use. From 1939 –on the soviets constructed coastal defense positions and established large fleet bases on the coasts of Finland, Estonia, Latvia, and Lithuania. The war between the USSR and Finland took place. There were geopolitical changes on coasts of the Baltic Sea and the Baltic States were annexed by the Soviet Union.

Second World War 1939-1945. In the Baltic Sea Region coast defense installations played a role in the war. The coastal operations required a joint approach, with army, coast artillery, naval and air forces participating and cooperating.

1945 – 1961. The Cold War. All countries restored coast defense positions. New coastal batteries were built with protection against nuclear weapons taken into account. The active use of radar systems for sea and airspace monitoring, as well as for the coastal artillery fire adjustment, began. Soviet coastal batteries in Poland were built and the use of mobile artillery systems and coastal missiles began.

1961 – 1991. Cold War. Missiles in use. The slogan "Baltic Sea – the Sea of Peace" was the official position. However, it was also a period of active military measures for coast defense. The coastal defenses of all the Baltic Sea Region countries were reequipped with coastal anti-ships missiles. The stationary artillery systems were removed and antiaircraft missiles were mounted onto the positions of the old coastal batteries.

1991 – 2009. Period of Independence. In 1991-93 geopolitical changes on Baltic Sea costs again occurred. The Baltic States restored their independence. There are no new coastal batteries on the Baltic Sea coasts. Sweden removed the artillery installations from its defense systems. There are large sea-monitoring radars mounted on old sites of coastal batteries and coastal batteries have been turned into museums.

5. Future of the coastal defense

Coastal defense has passed a long way from a sword and gun to missiles and radar. All the experience of the development of coastal defense indicates that coastal protection should not be stationary. Mobile coastal

missiles systems today are well-developed. The sea-monitoring and the collection of information of the movement of ships is the main task of coastal defense today. Missiles built to strike ships can be launched from the coast, from ships, and from the aircraft. These are now general tasks for conventional armed forces and no longer a specialist branch of the forces. Today it is necessary to consider also the increase of new kinds of threats, such as the threat of international terrorism, illegal immigration, drug trafficking, and contraband shipping.

Countering these threats should be performed by several services of the state to include the military coastal defense force, a coast guard, a border guard, the police, the army, the navy and air force. The international military cooperation of all the Baltic Sea Region countries is of particular importance today.

Yury Melkonov was born in Riga and is author of the following books: The Batteries of Moonzund, Guns of Kurland Coast, The Riga. He is Editor-in-Chief of Baltic military-historical magazine BALTFORT.
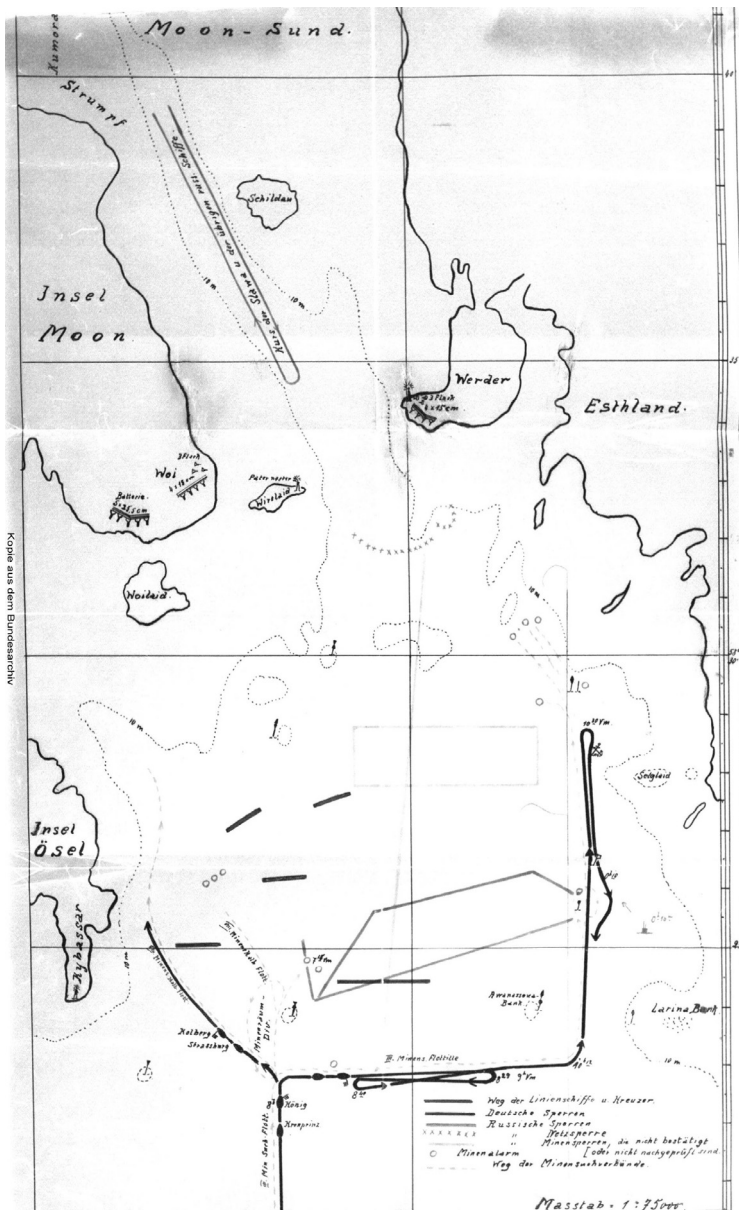
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Los P., Jurkevich B., Noga L., Konstantinov S., Gnezdilov A., Stenko V. *Handbook of Coastal Artillery of Soviet Navy.* (Moskow, Voeniztat, 1977).

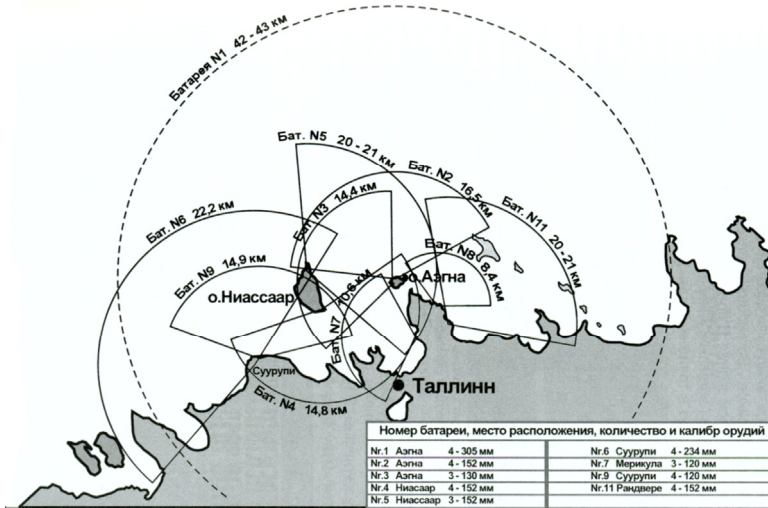## APPENDIX 1: German chart from Oct. 1917, RM 8-110

Kopie aus dem Bundesarchiv

APPENDIX 2: German chart of Russian Defenses on Estonian coast 1917.

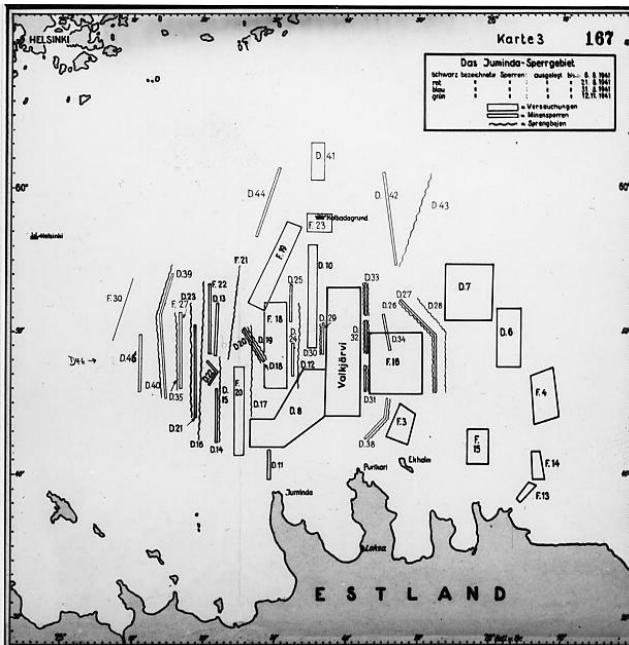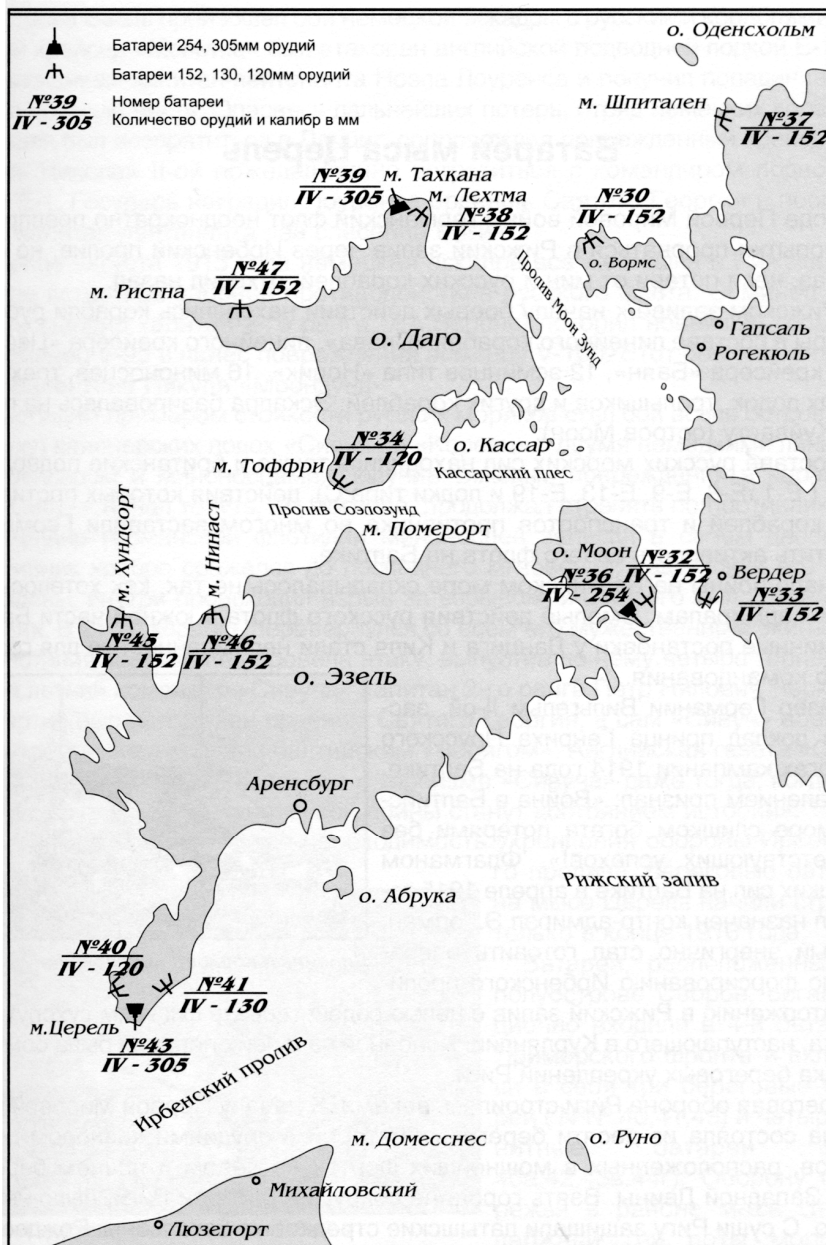## APPENDIX 3: Estonian coast defense chart for Tallinn 1939.

APPENDIX 4: Juminda minefields.

APPENDIX 5: Russian batteries, Saaremaa 1917.

APPENDIX 6: WWI era Russian gun on Finnish coast.