Modern Conventional Warfare: An Overview

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What has been happening to conventional warfare; how does it stand in relation to other forms of war around the world; and where may it be going in the future? Partly because fifteen years are not enough to provide a true perspective, partly for other reasons that will become clear in a moment, the best starting-point for answering these questions is not the end of the Cold War (1989), as was proposed by the organizers of the present conference. Instead, the starting point of paper will be the end of World War II (1945); and the perspective it takes, the widest one possible.

Since 1945, and particularly in view of the vast increase in the number of independent polities, conventional wars, here defined as armed conflicts openly waged by one state against another by means of their regular armies, have become the exception rather than rule. Ignoring numerous skirmishes too small to be called wars, such as the 1969 “Football War” fought by Honduras and El Salvador and the border clashes that took place between Peru and Ecuador in 1995, a list of such conflicts would be more or less limited to the following. First are the three Indian-Pakistani wars of 1947, 1965, and 1971. Next come the five Arab Israeli wars of 1948, 1956, 1967, 1969-70, and 1973. Others were the Korean War of 1950-53; the Indian-Chinese War of 1961; the Iran-Iraq War of 1980-88; the war between Ethiopia and Somalia (1978); the Chinese attack on Vietnam (1979); the Falklands War (1982); the Kosovo Campaign (1999); and, of course, the two wars against Iraq (1991 and 2003). Even if we add the so- called “Cargill War” of 1999 (when 500 Pakistani irregulars entered a few hundred yards into India and had to be expelled), and the Israeli-Syrian clash of 1982 (which,
lasting all of three days, was but a by product of the invasion of Lebanon), the total number of armed conflicts worthy of the name “conventional war” still stands at just nineteen.

Concerning the importance or unimportance of these wars, something may be deducted from the fact that, during the same period, the number of sub-conventional wars—here defined as conflicts waged by, or against, non-state organizations and ranging all the way from terrorism to clashes between armed militias—stood at well over a hundred. The mightiest Empires that ever existed—the British, the French, the American (in Vietnam), the Soviet (in Afghanistan) tried their hand at this kind of war and failed; from Iraq to the Sudan, and from the Philippines to Chechnya, other wars of this kind still surround us every day. As the events of 9-11 showed all too clearly, as of the beginning of the twenty-first century not even the most important targets in the most powerful countries are out of reach. Far from being small, harmless affairs, some sub-conventional conflicts were so ferocious, and led to such enormous casualties, as to border on genocide; Algeria, Vietnam, and Afghanistan being particularly good cases in point. Compared to these conflicts, the role played by conventional wars has been quite small. In the future, it may be expected to decline further still.

Geographically speaking, what conventional wars did take place during the period in question were not spread evenly over the globe. Instead, almost all of them took place in what the British Geographer, Halford Mackinder, a hundred years ago used to call “the rimlands”;¹ namely, the huge crescent that starts in the Middle East, passes through the horn of Africa, proceeds through South Asia, and ends in northeast Asia (Korea). To this rule there were only two exceptions, i.e. the Falklands War on the one hand and the NATO Campaign against Bosnia on the other. Of these two, the former was waged in such a remote region, and over such an unimportant issue, as to make many people wonder why it had to be conducted at all—unless it was done in the name of that highly potent factor, “honor”. The latter was “fought” with the aid of a forty to one advantage (counting combat aircraft only)

against an enemy so small, and so utterly incapable of hitting back, that the Coalition did not suffer even a single casualty.

Though other factors also played a role, by far the most important reason behind the small number of conventional wars, as well as their geographical location, is nuclear proliferation. Since 1945, when the first two atomic bombs were dropped, the number of countries with nuclear weapons in their arsenals has increased from just one to ten; namely, the US; Russia; Britain; France; Russia; China; India; Pakistan; Israel, and North Korea. At least as many countries are capable of producing them quickly should they want to do so, and will presumably do so if they feel that their security is seriously threatened. Out of those, several are working in this direction even now and are expected to go nuclear in the near future. In fact, by the early twenty first century any country sufficiently developed to build and maintain considerable conventional armed forces should also be capable of begging, stealing, or manufacturing nukes.

The result, nuclear proliferation, has often been decried in the professional literature, particularly that which originates in the United States. The fears expressed concerning rogue states, unintentional escalation, and accidental war are not entirely without foundation. On the other hand, we now have sixty years’ experience to show that, wherever proliferation takes place, large-scale conventional war has come to an end; never before has mankind developed a weapon and then refrained from using it for such a long time. This was true even when, as in the case of Stalin towards the end of his life and possibly Mao Tze Dong, the leaders in control of the weapons were mentally disturbed. Even when, as in the case of the U.S and the U.S.S.R during the Cuba Missile crisis, the number of delivery vehicles in the hands of one side exceeded those of the other by perhaps fifty to one. And even when, as in the case of both South Asia and the Middle East, the people of the region hated each other so much that they did not even shrink from suicide-bombings.

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3 For several dozen articles on this subject, as well as statements by leading American personalities, see Coalition to Reduce Nuclear Dangers, “Nuclear Proliferation Dangers”, available at http://www.clw.org/pub/clw/coalition/libloose.htm.
Since any country capable of creating powerful conventional forces is now equally capable of manufacturing nukes, without exception the conventional wars that took place during the period in question were waged between, or against, third and fourth rate military powers. Gone are the days when eight mighty empires (the US, the USSR, Britain, France, Germany, Italy, Japan, and, as a matter of courtesy, China) fought engaged in a life-and death struggle for world-supremacy. Gone, too, are the days when, out of those eight, four suffered such catastrophic defeats as to force them to surrender, six were invaded, and seven had their capitals either occupied or bombed. It would indeed be true to say that, in the period since they went nuclear, no country that did so has suffered a major conventional attack anywhere near is frontiers. As to the reasons behind this development, they are too obvious to require elaboration.

Since large, powerful countries have ceased to wage conventional war against each other; and since what conventional wars are still being waged tend to take place between or against small, unimportant ones; no wonder that the size of campaigns has been declining. This is true both in terms of numbers and in respect to the ground that they covered. Since nuclear proliferation did not take place at the same time everywhere, the process has been uneven. Some regions, including all of those where large numbers of modern conventional weapons may be produced (North America; Western Europe, Russia; Japan) have not seen a conventional war for decades on end. In others, notably the Middle East and South Asia, third-rate powers such as Israel, the Arab States, India and Pakistan were still waging large campaigns against each other long after the Superpowers and their close allies had ceased doing so. As a result of this shrinking process, the German invasion of the USSR, with involved over 3,000,000 troops operating across a front 1,000 mile long, did not have a successor and presumably never will. The days when wars covered entire continents and oceans (the German march to Stalingrad and back, 1941-45; the North, African Campaign, 1940-43; the “Battle of the Atlantic”; the “battle of the Pacific”; and the like) are over. So is the time when 12,000 sorties were flown on a single day (6 June 1944). Instead of the Battle
of Normandy we now have Somalia; a place where the U.S Marines, coming ashore, were met by nothing more dangerous than representatives of the international press.

By the standards of World War II, World War I, or even those of the second half of the nineteenth century, our remaining military ventures resemble engagements more than they do full-sized campaigns. In 1939-45 entire army groups, each made up of a million and more men, confronted each other both on the Eastern Front and on the Western one. At the start of the nineteen nineties the largest usable formation was the corps; ten years later it was probably the division. From North America through Europe to the Middle East, the movement towards smaller numbers and units still continues so that future conventional wars are perhaps most likely to be fought by brigades. The two wars that the U.S fought against Iraq provide perfect cases in point. Now the U.S is the largest power by far, dwarfing everybody else. It commands about a quarter of the world’s total wealth, spends as much on its military as do the next twelve countries combined, and is the only one whose forces possess a global reach. Nevertheless, with the budget deficit already running at four percent of GDP, there is every reason to think that, should it try to expand its forces, it will face very serious financial and social difficulties. Hence the trend towards smaller conventional wars will surely continue; as the Bible puts it, when the oaks catch fire what should the moss on the wall do?

Another cardinal reason behind the declining size of conventional war—which, in terms of troops used, has now reached the point where, quantitatively speaking, it has been reduced to perhaps 5 percent of what it used to be at peak—was its growing cost. In part, the increase was the result of the switch from conscripts to professional forces. Starting during the 1970s, as far as developed countries are concerned it is now all but complete; by a rule of the thumb, and assuming no change in the salaries of officers, professional soldiers cost three times as much as conscripts do.

Much more important than this factor was the tremendous technological progress that took place in weapons and weapons and weapons systems fielded by the main industrialized states and sold, or given, by them to their weaker allies and clients. Thus, at the peak of
World War II in 1944, the U.S experienced no difficulty in building as many as 300 military aircraft per day, turning them out in huge batches as if they were matches; the ability to turn out other items such as “Liberty” ships was equally impressive. Sixty years later major weapon systems, ships and aircraft in particular, had become so expensive, so complex, and so few that, like fake antiques, they had to be virtually hand-crafted. One outcome of this was that weapon systems, having entered service, are likely to remain there for decades on end. Another is that not even the US was willing to abandon vast numbers of weapons or sell them for scrap as it had done both in 1918 and 1945. Instead, in the aftermath of the 1991 Gulf War, each tank, APC, and artillery piece had to be laboriously gathered, cleaned, restored, and sent home. As to future procurement plans, they called for 300 new fighter-bombers (F-22s) to be purchased over fifteen years, no less; each time Congress, shocked by cost overruns, cuts the number the Air Force may purchase those that remain on the program become even more expensive. The ability of other developed countries, let alone developing ones, to afford and deploy modern weapon systems is much more limited still so that when a major one is lost it is seldom replaced. In consequence the armed forces of many of the countries in question have been reduced to mere shells of their former selves. Often they are hardly even suitable for being put on parade.

Concerning the nature of that technological progress, the most important developments may perhaps be summed up as follows. Having got under way during the First World War, and continued during the Second, motorization proceeded apace, causing all armies to become mechanized and almost doing away with infantry as the former queen of the battlefield. Unfolding simultaneously from 1944-45 on, there was the introduction of jet engines for aviation. Developing much more power per pound of weight than than their predecessors, jet engines permitted vast increases in the size, weight, and performance of military aircraft of all kinds. Until, by century’s end, the most advanced fighter bombers, such as the F-15 I, had become capable of carrying almost as much ordnance almost to the same distance as the largest bombers in World War II.

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Other outstanding advances included the development of helicopters and their incorporation into the order of battle for transport, observation, liaison, search and rescue, casualty-evacuation, and, last not least, ground attack. Then there were entire families of ground to ground, ground to air, air to ground, air to air, sea to air, sea to sea, and cruise missiles as well as a few anti-ballistic ones; precision guided-weapons (including, besides missiles certain kinds of artillery rounds) and the electronic countermeasures to them; various kinds of sensors capable of picking up the “signature” of enemy personnel and weapons; earth-circling satellites to extend war from the air into outer space; Remotely Piloted Vehicles (RPVs) and Unmanned Airborne Vehicles (UAVs) which, in the years after 2000, themselves began to carry missiles; and finally, in the form of computers and data-processing and transmitting systems, the vast command and control networks needed to keep the entire lot together.

In theory, these and other technological advances, as well as the appropriate changes in organization, doctrine, and training, should have resulted in enormously enhanced military performance. It is, of course, true that an army dating to, say, 1975 could have cut through its 1945 predecessor like a knife through butter in the same way that an army dating to 2004 could have easily dealt with one of 1975. On the other hand, and if only because the most important weapon-producing countries kept an eye on each other and often came up with designs specifically aimed at countering those of the other side, gaining a technological advantage that would prove both significant and lasting was not easy. Even now that the U.S has become the sole remaining superpower, silver bullets--meaning weapons so superior as to be capable of leading to a quick and easy victory--remain about as elusive as they had been in 1939-45, a time when countermeasure followed countermeasure and any advantage gained by one side was often cancelled out in a matter of months or, in some cases, even less.7

To the extent that superiority was achieved, almost invariably it proved short-lived. Indeed it could be argued that, at least until 1988 (the year when the Iraq-Iran War finally came to an end) the most important features of conventional war had remained pretty much as they had been from the end of World War II on. Specifically, the most important weapons—from fighter-bombers through tanks to artillery barrels—had only undergone limited change. As a result, the relationship between attack and defense remained as it had been, more or less; in other words, the factors that had caused Clausewitz to declare the defense the stronger form of war\(^8\) continued to operate. Unable to occupy or hold ground, the growing power of air forces as well as guided and unguided missiles did not render land forces obsolete, as some had predicted would happen. As a result, maneuver by land forces remained very important and so, of course, did the various kinds of terrain in which it took place. So important were these factors that the 1980s saw the rise of entire doctrines—variously known as maneuver warfare, third-generation warfare, and air/land battle\(^9\)—which were based precisely on that assumption. Meanwhile, the fact that both maneuver warfare and air/land battle were little more than replays of the cooperation between Stukas and Panzers that had characterized the Wehrmacht at its best was conveniently overlooked.

Whereas, during this period, some battles were much more costly than others—compare, for example, the 1973 Arab-Israeli War with the one fought by the same belligerents six years earlier—a fundamental shift in the balance between annihilation and attrition probably did not occur. Take concepts such as base and objective, front and line of communication, internal and external lines, direct and indirect approach, mobile and stationary war, and the like. All remain as useful to the analysis of contemporary strategy as they had been in the days when Basil Liddell Hart first published his classic work on that subject (1929), and all will presumably remain useful in the foreseeable future. One outcome of this was that the literature on conventional warfare froze. Instead of developing new ideas it became repetitive. Too often, it lost itself in detailed consideration as to how this or that new weapon might affect operations; indeed the fascination with technology itself became one reason that prevented a thoroughgoing reappraisal of warfare. Though many writers

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tried, none succeeded in attaining the stature of the above-mentioned Liddell Hart whose book on strategy went through a new edition each time a major armed conflict broke out anywhere in the world. As a result, few could come up with anything better than the standard cant about future conventional operations becoming faster, more effective, and more complicated;\textsuperscript{10} whereas, in fact, not even these predictions were always fulfilled.

Another reason why, during this period, military performance in conventional war did not improve as much as might have been expected was rooted in the nature of logistics.\textsuperscript{11} During most of history, by far the most important commodities required by armies on campaign were food and fodder. Grown by the inhabitants or simply available in the fields, these commodities could be obtained almost everywhere; in regions where they could not, such as deserts, forests and mountains, campaigning was very difficult and often impossible. The advent, during the years between 1870 and 1914, of industrialized warfare, including, above all, quick-firing weapons with their insatiable demand for ammunition, changed in this situation in a fundamental way, as did the introduction of motor vehicles with their equally insatiable demand for fuel. From then on, with each passing decade, the relative importance (by weight) of food and fodder went down, and with it the ability of armies to live off the land and enjoy the resulting strategic mobility. From then on, with each passing decade, more and more of an army’s supplies had to be produced in factories far in the rear, stored in bases, transported to the front, and distributed to the troops to be consumed or expended.

Beginning in the 1920s, when the railways began a slow but steady decline, the most important means that linked armies to their bases were convoys of motor vehicles. Without those convoys, the best-known of which was the Red Ball Express deployed by the U.S Army in France in 1944, the campaigns of 1939-45 would have been inconceivable. During the decades after 1945 weapons technology continued to make vast strides; by contrast, and at least in so far as land forces were concerned, the means of transport that supported them stagnated. Of course there were countless improvements in detail such as high compression

\textsuperscript{10} One of the few exceptions was R. Simpson, \textit{Race to the Swift: Thoughts on Twenty-First Century Warfare}, \textit{Washington D.C.}, Brassey’s, 1985.

\textsuperscript{11} See on this most recently M. van Creveld, \textit{Supplying War: Logistics from Wallenstein to Patton}, Cambridge, Cambridge University Press, 2004, 2\textsuperscript{nd} edition, pp. 252-59.
engines, tubeless tires, containers, and the like. Developments in electronics also made it much easier to trace individual items as they passed through the logistic pipeline much in the same way as scanners and bar codes allow airlines to check the whereabouts of individual pieces of luggage. Still, in the end lorries remained lorries and could only do what lorries had always done, i.e. move supplies over reasonable roads and at very great cost in spare parts, fuel, and personnel. Neither transport aircraft, nor helicopters, nor newfangled devices such as hovercraft or fantasies such as the land-walking machines proposed by some visionaries could take their place; consequently logistic limitations did as much to shape war after 1945 as they had done before that date. In spite the advent of precision-guided weapons, which in theory should have saved ammunition and eased the logistic burden, this continued to be the case during the 2003 War against Iraq too.¹²

Important developments, nevertheless, began to take place from about 1990 on. Just where the origins of the so-called Revolution in Military Affairs (RMA) may be found, and when it got under way,¹³ are questions we can safely leave to historians. Suffice it to say that, as a result of simultaneous advances in the field of computers, sensors, and communications, there took place vast improvements in command and control. Spreading from the top down, the new technologies permitted everybody to communicate with everybody all the time. Not only were commanders able to follow their units in real time, but they were given the option of gaining information and giving instructions in the form of pictures as well as words. Enemy intelligence, often picked up automatically from a distance (or else from outer space) and translated into electronic signals, could be instantly relayed, distributed among as many headquarters and officers as were needed, displayed, stored, and instantly retrieved when required. Once this had been done, the same revolution in microelectronics that had made the above developments possible also enabled targets to be tracked and hit by precision-guided weapons. Including, above all, such as could be delivered from the air, whether from aircraft

or, to a limited but growing extent, from UAVs; both of which, directed by the new command and control networks became more flexible than ever before.

Again, in theory the outcome of these developments ought to have been a vast improvement in military performance. In practice, whether or not such an improvement took place has been somewhat obscured by the fact that, to date, there have been only three occasions when the new technology was used on any scale. We might as well admit the truth: namely, that the campaigns of 1991, 1999, and 2003 were all waged against opponents so small, so backward, and so lacking in military power as to be almost incapable of putting up resistance. Suppose a historian whose task is to evaluate the performance of the German Wehrmacht. Instead of looking at World War II as a whole, he (or she) has focused solely on the campaigns it waged against Poland, Denmark, Norway, the Netherlands, Belgium, Luxemburg, Greece, and Yugoslavia. Clearly, doing so, he would have ended up with some pretty strange ideas.

As Friedrich Nietzsche once said, a great victory will make the victor stupid (and the loser malicious, but that is beside the point). If only for that reason, it is necessary to serve urgent warning against the belief that the victory gained by the U.S in its second war against Iraq proved the success of the RMA and the fulfillment of its promise, as many analysts have claimed. Rather, all it did prove was that when an elephant steps on an ant, the ant will be crushed—especially if it does not have a single ally in the world, and especially if it has already been stepped on once before.

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Thus, taking all factors into consideration, and in spite of all the countless billions that have been and still are invested in it, it would be fair to say that there has been less to the development of conventional warfare since 1945 than meets the eye at first sight. As the 1967 and 1973 Arab-Israeli Wars—which have been compared to the 1940 German Blitzkrieg against France and the Battle of Kursk respectively—the Indo-Pak Wars, and the Iran-Iraq War in particular demonstrated, until the late nineteen eighties technological
advances led to many changes in detail. However, they did not lead to a revolution in armed conflict; the most important elements remained very much as they had been.

Driven by the ongoing RMA, the period from 1989 to 2004 saw more far-reaching changes, particularly in the field of command and control and particularly as far as the balance between air and land power is concerned. The catch is that each and every one of the campaigns that this period witnessed was waged by mighty coalitions against extremely weak opponents; hence they did not really provide many lessons for the conduct of conventional war as a whole. Presumably such lessons will have to wait until two modern states capable of producing and fielding the most advanced military technology engage each other in a full-scale conventional war. The nuclear reasons spelt out above, however, are causing such a war to appear less likely every day.

Globally speaking, as conventional war became smaller and much more expensive, both its importance and the political results that it could yield declined. Not only did nuclear proliferation limit it to weak states, but it was accompanied by a very large number of conflicts fought between, or against, political organizations that were not states. As those conflicts evolved and multiplied, a very large number of terms were used to describe them: be they brushfire war, or insurgency, or guerrilla, or low intensity conflict, or asymmetric conflict, or terrorism (the most recent one), or whatever. Whereas the threat of nuclear escalation limited conventional warfare from above, sub-conventional war did the same from below. As a result, it has been caught in a vise.

In the face of nuclear powers such as North Korea, let alone Russia, China, or India, or Pakistan, conventional armies and their weapon systems were largely useless—a fact which itself induced some of these countries to acquire nuclear weapons. As the aftermath of the occupation of Iraq by the Americans in 2003 proved once again, in the face of sub-conventional war those weapons and those armies were also very largely useless. Existing systems such as Abrams tanks, B-1 and B-2 bombers, ballistic missiles, and so on and so on will not put an end to the kind of terrorism that is now rife not only in Iraq but in many other parts of the world as well. Neither will future systems such as the F-22, F-40, or any other
number of potential Fs. Seen in this perspective it would hardly be too much to say that the
most recent conventional war, far from leading to shock and awe and demonstrating its own
power, only showed how hollow its claims have become. This presumably does not mean
that this kind of war will disappear all at once. But almost certainly it does mean that its life,
and that of the armed forces and weapon systems designed for waging it, is limited.

Extrapolating from the above, and assuming no new and revolutionary events upset the
trends that have now persisted for almost sixty years, concerning the future the following
may perhaps be said.

First, compared with the role played by nuclear deterrence on the one hand and
various forms of sub-conventional war on the other, that of conventional war is clearly
decreasing and will continue to decline.

Second, what wars of this kind still take place will rarely, if ever, involve the most
modern armed forces on both sides; indeed the very fact that the forces on both sides are
modern will constitute the best guarantee to prevent them from fighting each other in earnest.

Third, such wars will continue to be limited mainly to the “rimlands” where the
majority of states sufficiently large and developed to form relatively powerful armed forces,
but unable or unwilling to build nuclear ones, are concentrated.

Fourth, the scale of operations, as well as the number of troops and machines
involved, will continue to decline even as their complexity and sophistication increases and
in direct proportion thereto.

Fifth, command and control systems will continue to evolve. They will permit much
greater flexibility and speed; on the other hand, by increasing a commander’s temptation to
wait until he has all the information and threatening to overwhelm him, they may be
counterproductive.
Sixth, conventional war will be increasingly dominated from the air. However, this is not necessarily good news for the air force; partly because manned combat aircraft are on their way out, and partly because many of their unmanned successors will be operated by the other services.

Seventh, as long as weapons continue to kill by firing metal or launching it into the air, and as long as vehicles of every sort continue to rely on the internal combustion engine, logistics, and with it problems of distance and terrain, will keep playing a major role. Logistics will do much to dictate the movements of armed forces, often preventing them from operating as fast, as deeply into enemy terrain, and as decisively as the current hype about the RMA and its derivatives might lead some people to expect. As the current fighting in Iraq demonstrates all too clearly, they will also continue to constitute a weak link; indeed one could argue that, compared to this factor, everything else is secondary at best.

In view of all this, many questions arise. In particular, one might well ask how many tens or even hundreds of billions the U.S should continue to invest in preparing for conventional wars practically all of which take place so far away, and on such a small scale, as to be visible only on TV. On the one hand, that kind of war represents a leftover from the pre-nuclear age. On the other, as the unrest in Iraq is demonstrating even while these lines are being written in May 2004, the armed forces designed for fighting it are hopelessly unable to cope with asymmetric opponents and, to that extent, almost totally useless. Disregarding the numerous technicalities that have changed it and will continue to do so in the future, probably the best way of looking at conventional war is to realize the fact that it is declining and draw the necessary consequences from this fact. Fail to do this, and the only certain winner will be the national debt.