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- The White House **www.whitehouse.gov**
- US Department of Defense **www.defenselink.mil**
- State Department **www.state.gov**
- British Foreign and Commonwealth Office **www.fco.gov.uk**
- International Atomic Energy Agency **www.iaea.org**
- Defense Threat Reduction Agency **www.dtra.mil**
- Organisation for the Prohibition of Chemical Weapons **www.opcw.nl**
- Federation of American Scientists **www.fas.org**
- Carnegie Endowment's Nonproliferation Program **www.carnegieendowment.org/npp/**
- Arms Control Association **www.armscontrol.org**
- Center for Strategic and International Studies **www.csis.org**
- Center for Nonproliferation Studies, Monterey **http://cns.miis.edu/**
- Mountbatten Centre for International Studies, Southampton **www.mcis.soton.ac.uk**
- Nuclear Threat Initiative **www.nti.org**

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12 Conventional Power and Contemporary Warfare

JOHN FERRIS

Chapter Contents

Reader's Guide

This chapter assesses what conventional power is today. It analyses how, and how far, conventional forces shape the contemporary world, whether by fighting wars or by backing state policy in peace. This chapter also considers trends in their development. It examines how far conventional force has been 'transformed' in recent years, and how it functions in areas ranging from distant strike to urban warfare. This chapter compares the role of conventional power relative to other forms of force, such as WMDs and terrorism. It ends by discussing the conventional strength of states in the world, and trends in its distribution between them, with particular reference to emerging powers.

Power and War: A History

In romance, this is war. States fight, therefore armies enter *decisive battle*. One wins, the other loses, the victor makes great gains, immediately, and both return to their seats. Sometimes war is like a waltz, but mostly not. Often, it is long and destructive, costing both sides more than they gain. Even the victor suffers unintended and undesired damage. Battles are inconclusive, or victories have no value. Enemies will not surrender, or else recover from defeat and force you to battle again. They refuse to fight by your rules, or evade your strength, attack your weaknesses, and force their will on you. In the competition of war, intentions and effects become confused, and paradox rules. Politicians imagine armies are military scalpels for political surgery, but in war, one operates with a battleaxe and without a medical licence on a patient who is trying to amputate one's arm; in the dark.

This chapter examines the present and emerging state of conventional military power, including its nature, distribution, what it can and cannot do, what is changing and what is not. One may understand these trends and their trajectory only by considering the record of conventional war, especially in recent years. Nor can one look just at the states which most often fight such wars, or have the biggest toys. They are not the only players in the game. Second or third rate powers shape conventional war as much as advanced ones. They all do so by their weaknesses as well as their strengths.

When refined, raw power becomes armed forces, which have been remarkably small in size and hard to maintain. Sometimes, states regularly field hundreds of thousands of soldiers (in China between 453 and 221 BCE; the Mediterranean basin between 330 BCE and 380 CE; Europe between 1660 and 1870)—millions in the twentieth century. Yet these periods are unusual, because the maintenance of large armies erodes the wealth of nations and the power of states. In classical Greece, armies usually were less than 15,000 men, rarely more than 50,000; so too Europe from 380 to 1660 CE, most of Asia through most of history, or European empires of the nineteenth century. Since 1989, armies again have slipped in size. The greatest power on earth can send barely 200,000 soldiers on a single expedition beyond its borders. Navies have been even smaller, because they are a rich man's weapon, dependent on industry and wealth. Expensive to build and maintain, fleets vanish without a regular programme of shipbuilding. Few states have maintained a large navy for long; and these have commanded the seas as armies rarely have the land. Seapower is the child of wealth and resolve; so too, airpower. Military power has social roots, many forms, and a competitive nature—your system compared to the enemy's in specific circumstances. The edge of the razor is comparative advantage, your strengths, and your ability to force them on the enemy. Numbers and technology matter, but not enough to win every time. A belligerent able to take heavy losses without surrendering can beat one with high technology and low willpower. Able armies with no material edge can whip larger enemies. Politics and willpower can defeat firepower and technology, or vice versa. Small elite forces can crush large half-trained ones, or not. It all depends on the circumstances.

Until 1945, the most effective form of military power was conventional force. It was the weapon of choice for the strong, yielding particular advantage over the weak. It was commonly used between major states which were adjacent to each other, particularly between 1570 and 1945. It could inflict more precise and powerful damage than irregular

BOX 12.1

The Intricacies of Power

Conventional power is an alloy, formed from the interaction of material factors (geography, demography, and economy) and the administrative capacity and political structure of a state—its ability to command a people and tap their resources. These elements are linked dialectically. The first defines the potential power of a state, the second how much of it can be tapped, and how well. Their relationship converts material power from crude to finished form—from resources to forces. Overwhelming strength in one element may not a great power make, nor weakness in one destroy it. A poor country may remain a great power because of the size and skill of its armed forces, its geopolitical position, the stability of its institutions, or the ability of its statesmen; thus, Prussia, 1740–1866, and Japan, 1900–41. A rich country may not convert its wealth to power, and so matter less in world affairs than possible: namely the Netherlands, 1715–89, Japan, and most Western European states since 1960. Rich states rarely tap their resources systematically for strategic purpose, which bolsters the position of anyone willing to do so, rich or not. In power, resolve matters more than wealth.

Power is a concrete quality; the resources a state taps for strategic purposes, as against those it might do, but does not. It takes different forms in diplomacy, a short campaign between two countries, or a prolonged and total war of attrition involving most members of a state system. Usually, institutions are the main factor in power, because they turn raw into refined strength—a hard task, dominated by marginal superiority. For most of history, a state able to jump from tapping 1 per cent of its potential power to 2 per cent might so double its military capacity. In 1509, Venice fought every other state of Italy, Spain, and Germany, as Britain did in 1782 against half Europe and its American colonists. They were beaten, but the remarkable thing is how little they lost. The relative edge provided by institutions dulled from 1870 because, ironically, they became more effective, numerous, and common. Advanced states adopted many systems (conscript armies, general staffs, central banks, military industrial complexes) which more effectively turned wealth into power. Thus, brute demographic and industrial strength was the key predictor of power in the First and Second World Wars. To tap 1 per cent more of one's power than did a rival offered little advantage when even mediocre states could exploit 20 per cent, though greater differences might exist and did matter. In any case, the value of institutional superiority rose again after 1945, at least so far as developing states were concerned. The secret of Israel's battlefield success has been the fact it possesses techniques like conscription and a quickly mobilized military reserve while its neighbours do not. The same factor underlies the formidable defences of Singapore, where freeways double as emergency landing strips for fighter aircraft.

forces and keep battle from your home, yet it had limits. Sometimes conventional war is unavoidable or an effective way to achieve one's ends. Merely to avoid defeat is good. More is possible if one is strong or smart, or the enemy weak or foolish—preferably both. Yet, as in any competition, the use of conventional force has unpredictable outcomes. Decisive battles are like strikes of lightning—they happen, rarely. Their impact can be dramatic: Prussia unified Germany and dominated Europe through successive victories in 1866 and 1870. The greatest of world powers have emerged through long runs of decisive victories over many enemies—Rome between 250 BCE and 100 CE, Arabs in 632–750, Mongols in 1206–1368, and England between 1690–1919. These circumstances are significant, but not

common. The classic example of a decisive battle is Cannae in 217 BCE—yet its victor lost that war. The average outcome of war is attrition, slow and costly to both sides. Conventional war is like gambling. All that is sure is an entry cost, and some combination of risk and gain. Some people love the risk, forget the odds, and think the pay-off certain; others fear to play; skill matters, and the strength of your hand; so does chance.

KEY POINTS

- Conventional power stems from an interaction between material and institutional factors.
- Conventional forces take many forms, reflecting social and political norms.
- They succeed by exploiting comparative advantages over competitors.
- The outcome of their use is unpredictable. War tends to be attritional.

New World Orders: 1945, 1989, 2001

Between 1815 and 1945, Western military systems proved superior to all others at once. Europeans conquered the earth, creating its first unified political and economic system, and then destroyed each other. From the wreck emerged a new world order, defined by decolonization, the cold war, and nuclear weapons. The industrialized states were divided between two stable alliances, unequal in economics or politics but balanced in destructive capability. They had the deadliest weapons and waged the greatest arms races ever known, with conventional and nuclear, chemical and bacteriological weapons of mass destruction (WMDs). A war between them carried the risk of suicide. This made conventional strength just one part of power, imposed an upper limit on the rationality of force, and reshaped world politics. These alliances spent unparalleled amounts of money on weapons they never used, for fear nuclear bombs would render 'victory' meaningless. Each negated the other's strength. The industrialized states possessed absolutely far more power than in 1939, but in relative terms, their influence in the world declined sharply. Decolonization was the primary political force on earth; the cold war was a local phenomenon of the industrialized world. No longer did power on one continent determine it everywhere. The European world empires shattered, breaking the world into bits. Power had to be struggled for in each region. Success in one did not determine events in another. The USSR and the United States dominated the industrialized world, but neither picked up the pieces of imperialism. They simply established ties with regional successor states, some of which became stronger than most advanced countries.

Since 1945, the major industrialized states have not fought each other nor, excepting the guerrilla wars which accompanied decolonization, many countries at all. War rarely has been fought by the strong nor practised at the state of the art. The centre of world power was not the centre of world war. That was Asia and Africa, where most states lacked the economic or administrative abilities to fight total wars or win quick and cheap victories.

Most of these conflicts stemmed from the end of imperialism, whether wars of national liberation to overthrow it or of succession between new states, striving to determine their strength, relations, and frontiers against others. They tailed off by 1975. Wars in Africa were prolonged, indecisive, and destructive, because neither side could tap its resources well for military purposes. In Asia, some conventional wars were long and costly, but usually both sides halted long before their resources were exhausted. Three-week wars costing thousands of lives were common, but not three-year ones with hundreds of thousands of dead. Asian regimes pursued limited aims with limited means. Conventional war was an important, but uncommon, aspect of international affairs. In these Third World wars, many states had leading edge weapons but few used them well. They featured military styles ranging from the Space Age to the Stone Age. Some campaigns were slower and costlier than the Somme, others quicker and cheaper than the fall of France. On occasion human wave assaults beat mechanized armies. There was no dominant style of war because no one set of military conditions ruled. The relationship between victory on the battlefield and success at the peace table was complex. Rarely did force achieve great aims, or precise ones—far less so than had been the case in the heyday of Europe over the previous century.

In 1989, with the collapse of the Soviet bloc, the distribution of power in the world altered again, as did its nature. Western states, overwhelmingly superior in military technology, cut their military spending by 25 per cent, and assumed they could master the new world order. They soon were disillusioned. The end of the cold war prompted the collapse of several states and another wave of wars of succession. In most of Asia, strong non-Western states became more powerful, continuing to dominate their regions and acquire WMDs. Most Arab powers, however, slipped in status, because they no longer gained free weapons from superpowers. In the Middle East, the United States used force for *realpolitik*, crippling Iraq and checking Iran. Otherwise, power became decoupled from policy. When Western states actively used their power, they did so in an odd way. Their peoples, reluctant to fight except for vital interests, still sometimes wished one foreign party would cease to bully another and deployed token forces to achieve that end. The results were tragedy and farce. Western states remained uncertain whether to use force and how. They pursued international acts of charity through multilateral military means, driven not by reason of state but by public opinion and humanitarianism, aiming not to defeat a foe but to do good and no bad. Such ends were hard to achieve or even to pursue. Western outrage or troop movements did not make bullies mend their ways. Tiny but ruthless powers defied Western states for years, as in ex-Yugoslavia and Somalia. Regimes in Iraq and Serbia gained political strength by defying the West, which often was divided, as it faced localized but unlimited wars, marked by ethnic cleansing and mass murder. The West found it hard to help the weak, whether in Rwanda or Bosnia. Other states were equally impotent. Israel abandoned much of the West Bank in response to the *intifada*. Russia could not crush insurgents in Chechnya. India failed to end a civil war in Sri Lanka, as did African forces in Sierra Leone, Liberia, and Sudan.

Then, on 11 September 2001, Al-Qaeda launched an act of 'propaganda by the deed', to rally Muslims against the United States. An unconventional terrorist attack inflicted greater damage than almost any conventional one in history, including Pearl Harbor. This tied together every level of force, from terrorism to WMDs, and plugged power back into

politics. Rich states, fearing for their security, took their firmest military actions for years. Between 2001 and 2004, their military budgets rose on average by 40 per cent, three times the level of defence-related inflation. The United States ceased to swing between isolationism and internationalism. It undertook massive rearmament, bolstered its conventional power, declared policies of unilateralism and pre-emptive attack against anything it deemed a great threat, and occupied Afghanistan and Iraq. The lonely hyperpower, pillar of the world order, was wounded. It pursued absolute security, which many states saw as a threat to themselves. Its General War on Terror used all types of power to reshape all forms of politics everywhere in the world, at once. This affected the distribution of power, and its use.

KEY POINTS

- Several forms of a unified world political system have existed since 1800. Conventional force played a different role in each one.
- Conventional power was used frequently between 1815 and 1945. Western superiority underwrote European imperialism.
- After 1945, major states rarely used conventional force against each other, but did so more often against weaker states, which fought each other frequently.
- Since 1945, the power of conventional force has been limited by WMDs, and the greater power of guerrilla warfare.

Power and Hyperpower

If riches made strength, Europe would be the greatest power on earth, the United States second, and Japan third, all close together; but the issue is the marriage of will and wealth. One may divide conventional military powers into four groups: the United States, advanced states (industrialized, capitalist, mostly liberal democratic, ranging in size from Singapore to Germany), developing powers (with small to large industrial bases, and mostly authoritarian governments, like Brazil, China, India, Iran, Pakistan, Russia, and Turkey), and weak states (most of those in Africa, and some in Asia). Weak states have little offensive power; their strength is the difficulty of occupation. Any rich country can speedily increase its conventional forces, and so change the distribution of strength in the world or any of its regions, but their will to power varies, judging by declared policies and performance since 1989 and 2001. Most European states, unwilling to change their conscript systems and disinclined to intervene abroad, have large armies at home but little power to project beyond their borders. In functional terms, their conscript systems are ceasing to be military services and becoming social ones. These states are unlikely to be attacked by conventional force or to fight each other. With out of area capabilities small, they are most likely to use force against the weakest of weak states, in humanitarian interventions. Britain and France, however, can launch sizeable expeditionary forces, second only to the United States. If they complete their declared policies, they may maintain that status for decades, and the ability to shape major events abroad. Australia and Canada retain smaller but notable expeditionary capabilities. Advanced states in Asia, like Singapore, South Korea, and Japan, maintain powerful defensive capabilities to contain immediate threats from neighbours. Conventional power matters more to Israel, and it makes greater sacrifices for that, than any other nation on earth except North Korea. Many developing states tap far more of their resources for forces, and are far stronger in their own regions, or the world, than any rich country except Israel, South Korea, and the United States. Russia and China remain the world's second and third strongest conventional powers, while others have large forces and some offensive capability. All these states, however, are one or many steps behind the state of the art, and have reason to be cautious about using such forces.

Americans have a taste for, and the infrastructure to exercise, power across the world, and a declared policy of pre-empting great threats. Their post-9/11 expansion in military spending has stalled, but at far higher levels than in 2000. No other state in history ever has had the absolute and relative conventional power it possessed in 2005. Overwhelming strength at sea and in air, strike, and, soon perhaps, space, dissuades any head-on challenges in these key areas. The United States has as many aircraft carriers as the rest of the world combined, able to launch ten times as many aircraft. Its air force, the only one with the most advanced equipment, like stealth technology, matches every other on earth together. This capacity underwrites Pax Americana just as seapower did Pax Britannica. It augments nuclear power as a means to deter attack and sustains the United States' loose leadership over all advanced countries, the structure through which it exerts political influence. That, in turn, creates a key phenomenon in contemporary politics, that rich states will not fight each other and often will cooperate. Yet these edges are of limited value in land combat—indeed, the cost needed to develop them may weaken American power in that sphere. Its relative advantage lies in distant strike, compellance, deterrence, and dissuasion, and its weakness in close quarter combat and occupation. The United States could smash the air and naval power of almost any developing country, but could not successfully occupy most medium-sized ones. Threats of force serve Washington more than its use. These are just some of the paradoxes of conventional power in the contemporary world.

KEY POINTS

- Overwhelming conventional power, along with nuclear weapons, makes the United States the world leader. This strength is more useful to support dissuasion and compellance than in war.
- Many rich states have powerful conventional forces at home. Some have great expeditionary capabilities.
- Some developing powers have powerful conventional forces at home. None can project it far from their borders.
- Most states have weak conventional forces.

Military Affairs: Revolution and Counter-Revolution

Since 1989, American military policy has been driven by efforts to ride a revolution in military affairs (RMA). Its major policy statements, Joint Visions 2010 and 2020, advocate forces with 'order of magnitude' improvements in precision, speed and lethality. The aim is comparative advantage: 'frictional imbalance', 'decision superiority', and 'full spectrum dominance—achieved through the interdependent application of dominant maneuver, precision engagement, focused logistics, and full dimensional protection'. The means are a marriage between precision weapons and information technology, the use of 'information superiority as a key enabler and our capacity for innovation'. Advocates of the 'new American way of war' assume this marriage will transform the knowledge available to armed forces, their nature, and that of war. Knowledge will not merely shape the battle—it will be a battlefield. Intelligence and communication, not command and discipline, will be the heart of armed forces. They will act without friction on near perfect knowledge, through the fusion of command, control, communications, intelligence, surveillance, and reconnaissance (C4ISR). They will jettison traditional hierarchies, adopt interconnected and flat structures based on the internet, and conduct netcentric warfare (NCW). Some of these ideas push strategy from the age of Clausewitz to that of the Borg. A commander in one exercise, 'Millennium Challenge 02', noted the aim was 'machine-to-machine talk', so he could 'create an air tasking order with one push of a button. I can see the entire battle in a way that if there's something I don't like, I can fix it'.

The RMA is being applied in many ways. At present, the main American form of operations, 'Command and Control Warfare', turns the 'Air/Land Battle' approach of the 1980s into a form of blitzkrieg, seeking to wreck the enemy's 'information dependent process', so to shatter its ability to perceive and command. War, the next generation, or 'Rapid Decisive Operations', is expected to open with the pursuit of a 'Superior Information Position (Fight First for Information Superiority)' and become 'knowledge-centric'. In both cases, theory says, victory in knowledge destroys enemy command, and then fire kills its body. More radical voices assume these aims can be achieved by the system itself, without command or commanders. They conceptualize war as Nintendo and strategy as shooting, focusing on 'sensors to shooters' systems, in which C4ISR directly links millions of observers and 'one shot one kill' weapons. To be seen is to be shot, to be shot is to be killed, and to be fast is to win. Visionaries imagine a world in which war is started by humans, but terminated by machines. If any of these advocates are right, conventional force has more power as a tool of state and the leading powers greater superiority in it, than since the heyday of European imperialism.

These ideas were tested in three recent conflicts. They failed in Kosovo during 1999, where forces suffering from political interference, overcentralization and confusion between levels of command, engaged an enemy with good strategy, camouflage, and air defence. Airpower did little damage nor did the allies achieve clear victory. In Afghanistan and Iraq during 2001–3, the conversion of military to political success also proved hard. Still, larger forces, better used, unleashed on worse foes, coordinated command and intelligence with unprecedented skill. This multiplied the strength of all forms of centralized firepower and rapid, precise, and long-distance weapons. Fleeting chances which once would have been lost were exploited—sometimes aircraft hit a ten by ten foot box twenty minutes after its detection by any source. A soldier with a laser range-finder could send the co-ordinates of a target to a command site hundreds of miles away, which fed those co-ordinates onto the bombs of an aircraft in another locale—even changing them in flight. Aircraft received target orders as they reached the edge of Baghdad. These leaps in quality, and in the sheer quantity of aircraft and precision-guided munitions (PGMs), let strike forces matter far more than ever before, equalling armies in land warfare. Iraqi command was shattered, and its forces in open country broken without firing a shot.

Yet victory did not flow straight, or simply, from the RMA. Its keys were air supremacy, vehicle and body armour, the incompetence of Iraqi command, and the psychological effect of the power and invulnerability of coalition artillery and tanks. A Marine colonel noted some of his tanks survived seven RPG rounds, and 'became the unkillable beast and caused them [Iraqis] nightmares'. Even at the peak of success, classic problems of information overload, friction between headquarters, and inexperienced personnel swamped coalition commands. Information dominance existed at higher levels, but never reached forces on the ground. For all the talk of NCW and C4ISR, command and intelligence were no better than in 1944–5. Fortunately, the enemy was worse—the German Army might have smashed an army exhibiting the flaws of 2003. Land and air forces fought separate battles, rather than fusing them. Close air support failed. Distant strike succeeded only when the machine performed without friction. Any friction yielded failure; no system is always perfect. Iraqis did not systematically lure attackers into intense combat in urban centres, but when that happened, the American system collapsed, and its forces had to fight the old-fashioned way. Fortunately, they were better at it than the Iraqis. Thus, on 2 April 2003, Task Force 3–69, the battalion-sized spearhead of the American Army, crossed the Euphrates River into, without knowing it, an enemy 800 per cent stronger, with 8,000 men, and 70 armoured vehicles. It beat them. An enemy which fought by its own rules, however, light infantry willing to die or able silently to steal away, proved greater problems. Close-quarter battle shaped land war as much as distant strike, and mattered far more against guerrillas. The Taliban and Ba'athist enemies were mediocre, by the standards of developing states, in the quality of forces, generals, and political organization. The main lesson from these three campaigns is that Western powers cannot easily defeat any enemy with competent leadership, a decent army, and fair public consent for example, Hezbollah. Nor are Americans the only people who can learn lessons and improve their performance.

These tests show the limits to ideas about transformed forces. Those ideas assume the United States always can play to its strengths, and never will have to defend its weaknesses. They posit a world without strategy, or strategists, a one-dimensional and one-sided struggle. One throws high-technology conventional forces into intense combat against a weak enemy without initiative. It plays to one's strengths. A fine-tuned, high-performance, machine with perfect knowledge and command works perfectly, without any effort being made to hamper its effect. It is convenient when an enemy chooses to be foolish and weak, but that is its choice, not yours. A smart but weak foe may refuse any game where you can apply your strengths, and make you play another one. A tough and able foe might turn the

characteristics of your game into a strength of its own, by attacking any precondition for your machine to work and imposing its rules on you. By doing what suits them, they will change their strengths and weaknesses—and yours.

The RMA has value, but has been oversold. It has done many things, but not everything. It has multiplied American strengths but not reduced its weaknesses. The RMA has increased the value of high technology and firepower in conventional war, but for little else; where these things matter, they do more than ever; where they do not, nothing has changed. Its advocates assume that conventional power has grown steadily more powerful, and everything else weaker, that the RMA has universal force across all arms, instead of strength in some and weakness in others. Their arguments are linear, looking at only one development, instead of the reciprocal relationship between several of them. The revolution is getting better; so is the counter-revolution.

Thus, strike weapons enable a new version of gunboat diplomacy, by letting one destroy select targets from a distance, to make a political point, or support coercive diplomacy. They enable conventional forces to hit harder, further, and more accurately than ever before; they have reshaped operations at sea and in the air, and what one can do with them; but that is not all of war, nor is it entirely new. Since 1933, air forces have applied NCW to some aspects of combat—Fighter Command was the world's first netcentric force, before the internet existed!—as have navies since 1955. These command and intelligence systems were sophisticated. They could do far more than was done with them—weapons systems were restrained by limits to weapons, not systems. In 1917, allied intelligence constantly located U-boats, prompting immediate air or surface strikes, which failed because units were slow and their ordnance weak. By 1943, intelligence on U-boats was little better but allied forces far more able to kill. In 1944, Allied air forces could strike any target reported immediately, but not accurately; in 2003, aircraft launched instant, precise, and devastating strikes based on information acquired ten minutes earlier by headquarters 10,000 miles away. The RMA stems less from changes in C4ISR than in weapons. Technology enables transformation; that in 2003 it transformed the power of aircraft far more than that of armies is suggestive. In land warfare, command and intelligence never have worked as they do at sea or air.

Perhaps conventional forces are midway through a decades' long transition from one set of forms—armies, navies, and air forces—to another: close-quarters land forces, navies, strike weapons (whether based on land, sea or air), and space power. If so, some services may not survive as they presently are. If no combat aircraft have pilots, air forces and artillery might merge, and together dominate blue water, where no large surface warships will be able to survive the hostility of the United States, or perhaps several other countries. But this transition is far from over and it will affect armies least of all—perhaps not much. No recent piece of technology except the atom bomb or nerve gas has changed land warfare as greatly as did bayonets, quickfiring artillery, machine guns, tanks, anti-tank guns, or aircraft. In the foreseeable future, land warfare will involve an equal and overlapping combination of close quarters and distant firepower, as it has done since 1940—or 1916.

At one and the same time, the strike capacity of advanced states has risen as has the power of terrorists against them, while nothing has changed in close-quarter combat or guerrilla warfare. Nor can any one master all these domains at once.

KEY POINTS

- Conventional forces take many forms, and their strength is hard to compare.
- High technology forces can strike blows of unprecedented precision and weight, which has transformed seapower, airpower, and all forms of distant strike.
- The power of armies has not been transformed for close-quarter combat, or against guerrillas.

Arts of War

Military power cannot evade economics. To buy one thing is not to buy another. The entry cost for the RMA is high; to pay it will incur opportunity costs at the operational and strategic levels. This situation forces choices on all states, each with a mixture of costs and benefits. The United States will take an unassailable lead in transformed forces, because it cares about them while no one else can keep up in depth and breadth. A head-on competition by anyone simply will make it become stronger against everyone, albeit at cost in other areas. Even a military budget equal to almost every other state on earth has limits, and technology is expensive. So to make anyone else think twice about competition, the United States will keep the entry cost to the RMA high. This will cause problems for its friends as well as its enemies. The transformation of power may unintentionally weaken some advanced states, just as the development of the Dreadnought sank seapowers unwilling to keep up, like France and the Netherlands. Nor is the new American way of war a model for everyone. In transformed power, the United States will be a giant and everyone else a dwarf. Transformation will give no one else quite the same bag for a buck. It will be less cost efficient for weak than for strong states. Its pressure on defence budgets will reinforce the tendencies towards demilitarization in Europe, while complicating life for all other advanced powers. They will transform far less than the United States, but aim to have some component able to work with it and to monitor its activities. This will give them edges over enemies which cannot adopt such innovations, but not revolutionary ones. Israel does not need transformation to master Arab armies. It will not silence North Korean artillery in range of Seoul.

Comparative advantage will take many forms. The United States will own seapower, airpower, and strike, with everything that promises. Even forcing enemies to asymmetry has advantages, as unconventional means often solve problems less well than conventional ones. Thus, between 1914 and 1945 surface fleets let one use the sea, while submarines merely limited one's power to do so. Of course asymmetry can be more successful. Air defence systems cheaply cripple the power of aircraft. Asymmetric means are unlikely to wreck (as against degrade) American strengths in the air or blue water, but the story is different on land. American choices for transformation will leave its enemies with strong cards to play—indeed, it will strengthen some of those they hold. Between 1870 and 1989, the standard form of armies was large conscript forces, able to deliver and absorb heavy

punishment. Given their costs in money and skilled personnel, transformed armies will be smaller professional services, with unprecedented reliance on firepower and technology. Like eggshells armed with hammers, they will be able to inflict damage, but not to take it; closer to the model of artillery than infantry. When they are good they will be very good. Every cog of its machine sometimes may work well at the same time, reducing friction to the lowest level possible. They will be better than ever at anything dominated by firepower, but worse at anything else. They cannot take heavy losses; they cannot easily deploy their strengths or shield their weaknesses in close-quarters combat. Once, an army able to defeat an enemy was big enough to occupy it—now, one easily can be powerful enough to crush a foe but too small to hold its territory. Nor do special forces change this situation. These units are useful, but not new, essentially equalling the light infantry or cavalry routinely maintained by many states over past centuries, their mobility multiplied by airpower.

Again, until 1945, nothing limited the upper edge of force except one's ability to get there. If one could annihilate an enemy, one did. No longer is that true, because of the mixture of images, ethics, and opinion aroused by modern media. In Vietnam, doubly so in both Gulf Wars and Kosovo, a desire to minimize the deaths of enemy civilians, even of soldiers, shaped the use of force by Western states. This limits power and confuses its use, as one tries to avoid the upper level of permissable force. Indicatively, legal advisers serve on Western military staffs, so to ensure that international law shapes the selection of targets for strike weapons. Because they are the safest means to navigate near the tolerated limits on force, precision and control are the fundamental gains from transformation. These gloves would come off, however, if any people thought its vital interests at stake—then conventional weapons might wreak mass destruction, to the surprise of the unwary attacker who provoked it. Events in Lebanon during 2006 illustrate all these issues. Meanwhile, terrorists drive their devastation into levels once occupied to conventional forces, precisely because images of ruthlessness and power play to their home demographic.

Developing states will respond to their environment by maintaining large and good forces for close-quarter combat. One lesson from Iraq and Kosovo is the difference a decent army and second-rate kit makes. This is not a new lesson. Over the past century, developing states like Turkey, Vietnam, and Japan developed armies able to inflict heavy punishment while absorbing even more, making willpower a decisive theatre and often beating richer but less resolute enemies. In ground war, defenders will be most strong and attackers least so, home field advantage will matter, and Western armies must deal with cities. Between 1980 and 2000, in Mogadishu, Beirut, and Grozny, Israeli, American and Russian armies larger and better equipped than their foes were caught in costly and inconclusive combat, where battlefield triumph produced political defeat. So too, American forces in Iraq since 2004. Urban combat sucks up time and resources. Compared to battle in the field, it requires more men to conduct and costs more casualties, it divides the value of training, technology, and firepower and multiplies that of morale and the ability to take losses; it creates unpredictable consequences which turn victory to defeat. Civilian casualties, refugees, and relief efforts shape victory or defeat as much as tactics. Official American doctrine on 'Joint Urban Operations' approvingly cites Sun Tzu as saying, 'the worst policy is to attack cities'. It recognizes that urban combat dulls every American edge, while civilian deaths may trump success on the field. In 1968, for example, television coverage helped turn 'the US tactical victory of Hue' into 'part of the strategic defeat of the Tet offensive'. Western forces will not enter urban warfare unless every other military option is exhausted, and the choice is assault or political defeat. These are dicey options. Urban warfare, and the price of occupation, are the functional equivalents of WMDs for weak states. They will deter attack.

Developing countries also will aim to negate high-technology forces through asymmetric strategies. The first step for an able enemy in a war with the United States would be to jam any communications on the electromagnetic spectrum. This would damage American power far more than their own, and perhaps stall its entire machine of war, given its unprecedented reliance on thick and fast communications. That would have happened in 2003 had Iraq been able to jam Geographical Positioning Systems, a central node in C4ISR and an easy target. One also can attack more precise targets, such as the ability to use PGMs. On 6 October 1973, after all, Egypt negated Israeli airpower by guiding through radar systems surface to air missile systems for which the enemy was unready. The effect lasted for only a week, but a week is a long time in the politics of modern war. More broadly, electronic war, cyberwar, psychological warfare, media manipulation, black propaganda, and deception will be central features in postmodern conflicts. The nature of power in these mind games is unclear, but they offer ample room for imaginative asymmetry, and the potential for pay-off. Sooner or later, some state will let slip the bytes of cyberwar, with uncertain effect. It may be Y2K revisited. It may combine terrorism and WMDs—consider the consequences of wrecking the computers controlling a nuclear power plant. A first strike may be so advantageous that it creates an imperative to move first, adding a new twist to deterrence. The United States is the leading power in these areas, but also the most vulnerable.

Above all, the final asymmetric response of enemies to American conventional power will simply be to pick up its pieces and go home—to WMDs or terrorism.

KEY POINTS

- The RMA is not for everyone. It will help the United States more than any other country.
- Transformed fighting services have weaknesses and strengths.
- When they can play to their strengths, they will succeed.
- Rational foes play to their strengths and your weaknesses. Developing countries may trump the RMA through asymmetric strategies, WMDs, urban warfare, guerrilla warfare, terrorism, or good forces with low technology.

Military Balances

Sometimes, conventional power is easy to calculate. Each side fights the same way and has so many archers or armoured fighting vehicles (AFVs); you multiply the quantity by some co-efficient representing assumed quality, and Bob's your uncle. Today, simply to gauge conventional power is problematic, because its forms vary and are changing. Perhaps one can measure power in PGMs for all states, simply by multiplying their quality and

quantity by some coefficient representing C4ISR. So too with blue water navies, as they are rare and commentators agree on what makes power for them (that story ends at the brown water mark). Such measurements are harder with armies. Those of developing powers have a strong but short punch, great on their borders but not beyond; perhaps best measured by the number of combat soldiers they could deploy on their frontier. These figures are considerable: North Korea or China could throw millions of soldiers to their main frontiers, India, Pakistan, or Turkey 400,000. Conversely, rich states have armies with longer range but less weight. Their strength is best measured by the combat troops ready for expeditionary service: where Germany, Canada, and Australia might deploy 3,000 soldiers each, France and Britain, 20,000, and the United States, 140,000. World conventional power rests on a combination of a blue water fleet and an expeditionary capability, in which the United States stands alone in its class, Britain and France punch above their weight, while Australia, Canada, and India are the only bantams. To compare these different forms of force is like gauging apples and oranges; the point is precisely where the struggle occurs. In Fukien, the Chinese army would reign supreme; fifty miles off shore, it would drown. France is a great power in Africa, not in Asia. These issues can be illustrated by examining some instances of power.

China and India have much air and maritime equipment of 1970s Soviet vintage. Their conventional power will turn on how far and well they replace it, and to what ends. China has far more old kit than India, some of it creaking: in 2005, 25 per cent of its fighters were MIG 19s, which the Soviets removed from first line service by 1965! India's problem is more easily solved, because no great power blocks its aims. The competition with Pakistan is unlikely to end, but is one-sided. Pakistan strains its resources to remain in the game. Its forces are good, but India has 200 per cent more infantry, 150 per cent more tanks, 300 per cent more guns, and 250 per cent more aircraft, at par. Pakistan can exploit India's greatest weakness, the political fractures of a multinational state, but it really could endanger its rival only with active help from China or the United States. Indian cooperation with Washington trumps that ace. Indian politicians and soldiers distort the danger of Pakistan, because a weak external enemy suits their interests. India, however, does not seek to conquer its neighbours, however much it wishes them subordinate—few things could be more disastrous for India than conquering Pakistan and having to rule its people. Meanwhile, India already can project force far from its shores. It aims to be one of two dominant powers in the Indian Ocean, alongside the United States, and has some means to do so. Its naval bases are good, as is its locale for land-based aviation. Its old carrier and twenty-five decent destroyers and frigates form the equivalent of a carrier battle group, albeit a weak one. This power will rise notably after 2010, as it junks old kit and acquires new, above all purchasing an ex-Soviet carrier, building an Indian one at home, and developing the Indo-Russian BraMos cruise missile. So long as it acts on its declared policies, India has and will keep the world's fourth greatest fleet, if qualitatively below the top three. It cannot sail against American opposition, but then neither can the British or French. So long as India continues its drift towards alignment with the West, and the moderate but sustained investment in new forces of the past generation, it will be a major but regional seapower. That will strengthen its influence throughout the Indian Ocean littoral and Asia, but to what effect remains uncertain. Since 1949, India has found power and strategy hard to deal with. It uses power merely as one means to demonstrate its status, rather than as a tool to pursue specific interests. India, the least of the great powers, punches below its weight. It has more power than it can use.

China has less than it needs. It has a clear sense of power and strategy and great ambitions, which it can achieve only with greater efforts. It aims to absorb Taiwan and regards the American containment of its coasts as a threat. Yet it can do little about that. Over past

BOX 12.2

The Future for Power Relations

Future power will turn on the military application of industry. China and India have large sectors in those areas—China's aviation industry alone has 560,000 workers, versus 72,000 for the largest American defence contractor, General Dynamics—government-run, and burdened with the deadweight of failed socialism. Until recently, their quality was low, which leaves problems for the future. In 1998–9, China split its arms industry into smaller pieces, to become more competitive. Time will tell. In India, the production of indigenous aircraft and the acquisition of foreign ones have been delayed for a decade as firms and state tinker with details of contracts, though this happens in rich nations too. The only developing state with an advanced military industrial base is Brazil, which produces large numbers of good aircraft and AFVs—on a continent where conventional power has little positive influence. This capacity will matter more in coming years if Brazil seeks to acquire power to match its wealth. Over the past century, many developing countries have built good armament industries, resting on effective links between businesses and bureaucrats, and built decent kit. They entered the state of the art, learning to copy and then innovate, by forming liaisons with weapons producers in many states, buying large amounts of material and acquiring more through espionage, making some arms under licence and more through reverse engineering, training labour to build munitions and designers to make them. In 1921 all Japanese warships and naval aircraft were versions of British equipment, gained through purchase or joint ventures. Over the next twenty years, it developed good naval and aeronautical industries through hard work and copies of all the kit it could buy. So too, Soviet tanks of 1941 stemmed from development of Western technology purchased a decade earlier, just as its aircraft industry of 1951 relied heavily on American designs acquired by aid and espionage.

Many developing states do the same today aided, as ever, by the hunger of arms firms for profits in a harsh market. Russia leads in the transfer of military technology, but many others follow suit. The United States, conversely, tries to slow the transfer of military technology, which can only damage its interests. India has licences to build or has entered into joint ventures with Russia on much leading edge equipment, like the Sukhoi-30 MKI aircraft and the T-90 tank, while China is acquiring leading Russian aircraft, missiles, destroyers, and submarines. After losing hard-won expertise in military industry between 1979 and 1990 through revolution and Western sanctions, and being forced to rely on espionage and reverse engineering, Iran has built indigenous fighters and tanks, good however derivative in design. These states depend on access to foreign technology; but each tries to work with many partners, through which it builds advanced AFVs, aircraft, and cruise missiles, and to leapfrog past time-consuming stages of technology. Their civil economies have some able elements in high technology. In twenty years, any or all of these states may have established good military industrial complexes, and closed the gap with leading economies, even in the key areas of defence electronics and information technology. Though the edge will remain with the rich, China and India may well then be the world's second and third strongest economies and conventional powers, and growing fast.

decades, Taiwan has had the single-handed maritime and air ability to block Chinese invasion. In 2000, its 450 modern fighters outclassed China's 2,500, including 1800 MIG 19s. China, however, is fast acquiring better aircraft, augmented by rapidly increasing strength in surface to surface missiles (800 in 2005), with cruise missiles under development. By 2020, or earlier, this power will outweigh Taiwan's defences, no matter what technology Washington sells it. Then, the competition will be the United States, precisely on terrain where it is strong and China weak—sea and airpower. Since 1949, China has pursued the maritime strategy of a continental power—to keep rivals far away through land-based force and a brown water navy. In 1985, hundreds of land-based aircraft and submarines created an outer perimeter 200 miles from its shore, within which scores of destroyers and frigates and 1,000 attack boats defended its coast. That was an effective strategy for defence, but cannot easily be retooled for offence. China hopes to push that perimeter towards Japan and Taiwan, but is painfully slow in gathering the means, such as cruise missiles, better aircraft, and bigger ships. Its fleet has shrunk over a generation, as much kit is junked and little acquired. Nor can an Indian-sized investment in seapower achieve Chinese aims. Its efforts are unlikely to bear much fruit before 2020. For decades afterward, the sea and airpower of an American—Taiwanese alignment can easily pin China on its coast, if they wish. Only if and when Taiwan joins China will it break that barrier and, boosted by land-based forces on that island, freely reach blue water; and so become a world power.

These calculations are confused by a further issue. Sino-Japanese relations are unstable. Their interests easily can clash and their leaders evince mutual suspicion. In 2004 Tokyo openly defined China as a possible military threat, while Chinese submarines entered Japanese territorial waters. No major power is more affected by the rise of China than Japan, and none could do more to counter it. Fifteen years ago, Japanese defence industries claimed that, if unleashed from the peace constitution, they could capture half the world's market for tanks, defence electronics, and warships. While this claim is unlikely, Tokyo could easily and immediately become the world's second sea and airpower, so changing the balance of power in east Asia. That region is the crucible for the next new world order.

KEY POINTS

- The distribution of conventional power is changing.
- Western countries are in relative decline.
- Potential new world powers are emerging, especially China and India.
- The impact of these changes will vary with the desire of states to tap economic power for strategic purposes, and the skill of their policies.

War, What is it Good For?

Wars occur from combinations of intention and error. They are unusually likely when the nature and distribution of power are changing rapidly, as states misconstrue their strength while declining ones strive to hold what they have and growing ones to take more. Those

circumstances exist today. A classic confrontation is looming between rising and declining powers. Mexican stand-offs rule Asia: between India and Pakistan; North Korea vs South Korea, Japan, and the United States; and Beijing vs Taipei and Washington. North Korea starves itself so to maintain the conventional power to affect regional politics, augmented by strong hints of nuclear capability. Chinese power waxes steadily, but is not yet significant in WMDs or maritime power. Since 1949 China has aimed to maximize its power, and often has provoked high-risk incidents, in the belief that teaching lessons to neighbours is a good thing, while it can control the worst cases— characteristics shared, to lesser degrees, by the United States. Both these countries believe they are on the defensive over Taiwan, and respond to aggression in a tough and self-righteous manner. Meanwhile, as the Soviet collapse reshaped power in east Asia, so would any resurgence of Russia—or Japan.

The Middle East is governed not by stalemate but vacuum. Numerically speaking, several Arab states, particularly Syria and Egypt, match Israel in the main categories of land and air force, while others make some of the largest purchases of advanced weaponry on earth. Excluding the Jordanian army and Hezbollah, however, these forces are poor in quality, while Israeli ones are excellent. The best indicator of the regional military balance is the fact that Israel is reducing its army in size by 25 per cent. Israel is the military master of the Arab world, and will so continue for years to come. It can overawe its neighbours and wreck any threat, yet it cannot directly translate that strength into political power. Israel and America cannot use conventional force to block the biggest dangers to them, such as the rise of a jihadist regime in Saudi Arabia, though that could aid them in containment, as occurred earlier with Iraq and Iraq. Meanwhile, the military weakness of Arab states, the rising turmoil within them, and the war between Americans and jihadists, make that region even less stable than usual—far and away the most chaotic on earth. It is framed by three powers which might use their able conventional forces as threat or tool in cases such as a collapse of Iraq. Iran, aiming to become a great power, certainly becoming a greater one, faces danger and opportunity in two fragmented states on its frontiers occupied by Americans. Turkey and Pakistan stand ready for action in the wings.

In these cases, conventional force is part of power, but not its whole. It does not primarily define the balance between Israel, the United States, and Iran. Its tough neighbourhood may drive Japan to increase its conventional power, but Tokyo has more to gain from nuclear weapons. Expedience may overcome its inhibitions on that issue. China can strengthen its hand against the United States through conventional force to match American strengths, asymmetric force to degrade them, politics, or WMDs. The latter options are its best chances for success. Just as the United States intermittently discusses the idea of integrating conventional and military forces, other states may use nuclear weapons as a quick fix for unavoidable conventional weakness. For most developing states, WMDs offer the simplest military solution to strategic problems—the only possible one for some, like Pakistan, haunted by insecurity and threats to its survival. If China had the assured capability to destroy five American cities, Washington's policy toward Taipei would change, though this also might drive Japan nuclear—and Taiwan. For China in Taiwan, and Iran in Iraq and Afghanistan, political influence is a better tool of policy than armies, just as terrorism is a tool of policy by other means.

Bigger questions loom behind these matters, like the use of WMDs in conventional war. When only one side has chemical weapons, it routinely uses them, but not nuclear weapons. How far can states equipped with WMDs use conventional force against each

other? They often have done so, but the rules for these games remain obscure. All major belligerents in Europe during 1939–45 were equipped for gas warfare, but did not use it; so too in the Gulf War of 1991. Nuclear powers have fought each other, most notably India and Pakistan in the isolated region of Kargil during 2000; Soviet pilots shot down many American air intruders over their territory in the 1950s and fought allied airmen in the Korean War, and Israeli ones in the war of attrition during 1970. Again, the single greatest factor in world politics since 1989 has been the relationship between overwhelming American power, and its erratic use. Will Washington continue to follow the Bush doctrine? How will other states respond to a world order created by a wounded hyperpower? Its present search for absolute security will make all its rivals insecure, looking for ways to defend themselves or escape the firing line. Its power and threats have frightened many hostile states into changing their ways, like Syria and Libya, but they will convince any serious rival that it must neutralize that threat, by being able to endanger America. The dominant concept in the public rhetoric of Chinese strategy, opposition to hegemony, once was a code word for resistance to the USSR; today it is the United States. So too, when a leader of the Iranian Revolutionary Guards, General Jafari, claims his forces will work against 'global arrogance'. American success in conventional power will drive any rational enemy to abandon head-on competition, and pursue asymmetry or WMDs; and the latter are easier to build and have a more certain deterrent effect.

Conventional power is a great but limited tool of state. Once it was a sword for the strong against the strong; now, it is most valuable as a weapon against the weak. It remains the main shield for most states, but the sword of choice for few. It is more useful as a negative than a positive tool: to stop others from moving, as against doing so oneself. It is a fundamental means to demonstrate resolve, or support any strategies of dissuasion and compellance, though no more so than nuclear power or diplomatic influence. Any state threatened by conventional force must match it or die. Such forces can save oneself, aid one's friends, destroy one's enemies, and, occasionally, strike like lightning. Still, their relative utility has slipped steadily over the past century, as has the willingness of great states to use them. Conventional force has not been able to achieve specific results predictably or cheaply. The outcome of its use has more uncertain than ever before. Often, it has caused complex collateral damage, or trapped its users in the mire of world war, or guerrilla conflict. Conventional force will be more talked about than used. When deployed, it will face characteristic problems, or victory traps. If one uses cruise missiles for diplomacy, a few civilian deaths will mess your message. No matter the cause—*raison d'etat*, or humanitarian intervention driven by internal opinion and international duty, whether single-handedly, in coalitions of the willing, or under UN control—Western states will use conventional power primarily where the entry cost seems low and chances for success high: that is, against weak or failing ones. This raises immediate questions. Can outsiders end a civil war? Does occupation cause resistance? Will Western publics tolerate the violence necessary for victory except for defence of vital interests? Nor can armies be used on any great issue without raising the issue of WMDs.

Conventional force affects the policies of single actors, and the system as a whole. Many consequences of conventional power lie outside that plane, in what it drives states to do elsewhere. Its impact is most critical in deterring people from using an obvious tool, and in driving them to develop others. In theory, levels of force are divided; in reality, they are intertwined. The pure game of conventional power is played in a narrow field between two limits: WMDs, and terrorism and guerrilla warfare. To be too good in this game is not a blessing. Too much success will drive one's rival off this field to play on others. A rational enemy plays to its strengths, not yours. Conventional power remains a strong card, perhaps the king of trumps in a game where the ace is unplayable, but it cannot take every hand. Perhaps it can take only one out of thirteen. The trick will be learning how to play that card only when it can take the game; and to know when that game is worth the gamble.

QUESTIONS

1. Did the United States win, or did Iraq lose, the Gulf War of 2003?
2. How does seapower matter today, why, and to whom?
3. What use are airpower and precision weapons to the United States, compared to nuclear power?
4. How does conventional force matter to the countries of western Europe?
5. What is a decisive battle? How common are they? How many of them have happened since 1945?
6. How important is 'information dominance' in conventional war? Compare and contrast its value in distant strike and urban operations.
7. Compare and contrast the conventional military power of Israel, Iran, and India. What good does it do them? What are the limits to its value?
8. How far and how fast can the transfer of military technology help China to further its strategic aims in Asia?
9. How far can states equipped with WMDs engage in conventional war?
10. Is attrition the normal state of conventional war? Is indecisiveness its normal outcome?
11. How, and how easily, can conventional forces defeat terrorists or guerrillas?
12. What can, and cannot, Western states do with expeditionary forces?

FURTHER READING

Good modern accounts of the history of conventional war

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- Andrew Scobell, *China's Use of Military Force: Beyond the Great Wall and the Long March* (Cambridge: Cambridge University Press, Cambridge, 2003).

Authoritative treatments of conventional forces and weapons are included in the International Institute for Strategic Studies, The Military Balance, and the various publications of Janes.

Terry Terrif, Aaron Karp, and Regina Karp (eds.), *The Right War? The Fourth Generation Warfare Debate* (London: Routledge Press, 2006), contains a wide range of comments on the relationship between conventional and guerrilla forces.

WEB LINKS

- Useful websites on modern military matters include the Air War College Portal to the Internet **http://www.au.af.mil/au/awc/awcgate/awcgate.htm**, which includes copies of many semi-official and official American publications, and links to many other government websites.

The most valuable private websites, including much official and non-official material and useful hot links, are those of the Center for Strategic and International Studies **www.csis.org/**, Global Security **www.globalsecurity.org/**, and the RAND Corporation **www.rand.org/**.

Visit the Online Resource Centre that accompanies this book for lots of interesting additional material http://www.oxfordtextbooks.co.uk/orc/baylis_strategy2e/.