

Chapter 1 : The 'New Warfare' and the New American Calculus of War --Project on Defense Alternatives

Cyber security is a new form of warfare In this age of digitalisation, attacking and crippling critical information infrastructure is a new form of warfare that needs guarding against with robust defences.

Naval warfare The sinking of the Cumberland by the Confederate ironclad Virginia in marked the beginning of the end for wooden warships. Ironclads and Dreadnoughts[edit] The period after the Napoleonic Wars was one of intensive experimentation with new technology; steam power for ships appeared in the s, improved metallurgy and machining technique produced larger and deadlier guns, and the development of explosive shells, capable of demolishing a wooden ship at a single blow, in turn required the addition of iron armor, which led to ironclads. Although the battle was inconclusive, nations around the world subsequently raced to convert their fleets to iron, as ironclads had shown themselves to be clearly superior to wooden ships in their ability to withstand enemy fire. Mahan argued that in the Anglo-French wars of the 18th and 19th centuries, domination of the sea was the deciding factor in the outcome, and therefore control of seaborne commerce was critical to military victory. Mahan argued that the best way to achieve naval domination was through large fleets of concentrated capital ships , as opposed to commerce raiders. His books were closely studied in all the Great Powers, influencing their naval arms race in the years prior to WWI. In the British warship HMS Dreadnought became the first warship to have both a uniform main battery and steam turbine engines, creating a standard for warships that lasted until the s. As the century came to a close, the familiar modern battleship began to emerge; a steel -armored ship, entirely dependent on steam, and sporting a number of large shell guns mounted in turrets arranged along the centerline of the main deck. The ultimate design was reached in with HMS Dreadnought which entirely dispensed with smaller guns, her main guns being sufficient to sink any existing ship of the time. The Russo-Japanese War and particularly the Battle of Tsushima in was the first test of the new concepts, resulting in a stunning Japanese victory and the destruction of dozens of Russian ships. Following the war, many nations agreed to limit the size of their fleets in the Washington Naval Treaty and scrapped many of their battleships and cruisers. Growing tensions of the s restarted the building programs, with even larger ships than before: This marked the climax of "big gun" warfare, as aircraft would gradually play a larger role in warfare. By the s, battleships had all-but vanished from the fleets of the world. Aircraft carriers[edit] In the s aircraft carriers supplanted battleships as the centerpiece of the fleet. Here, American torpedo bombers prepare to take off during the Battle of Midway in Between the world wars, the first aircraft carriers appeared, initially as a way to circumvent the tonnage limits of the Washington Naval Treaty many of the first carriers were converted battlecruisers. Though several ships had previously been designed to launch and in some cases, the first true "flat-top" carrier was HMS Argus , launched in December By the start of WWII, aircraft carriers typically carried three types of aircraft: Because of the restricted space on aircraft carriers, these aircraft were almost always small, single-engined warplanes. Following WWII, aircraft carriers continued to remain key to navies throughout the latter 20th century, moving in the s to jets launched from Supercarriers , behemoths which could displace as much as , tons. Submarines[edit] Just as important was the development of submarines to travel underneath the sea, at first for short dives, then later to be able to spend weeks or months underwater powered by a nuclear reactor. The first successful submarine attack in wartime was in by the Confederate submarine H. Hunley which sank the frigate USS Housatonic. In both World Wars, submarines primarily exerted their power by sinking merchant ships using torpedoes , in addition to attacks on warships. In the s the Cold War inspired the development of ballistic missile submarines, each one loaded with dozens of nuclear-armed missiles and with orders to launch them from sea should the other nation attack.

Chapter 2 : Monday's Mtg: Is election-tampering a new form of warfare? | Civilized Conversation

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For his textbook Solid States Physics he was awarded with the Prize of the Government of Russia in the field of science. Actually, the first such war is already underway. Terrorism delivered an unprecedented strategic strike America is paralyzed with fear. Terrorism has been around forever. The fact is that an entirely new form of asymmetric warfare has been attempted by international terrorism. I mean the wars in which the Americans forced Iraq and Yugoslavia to their knees with air strikes alone. Entire countries and international organizations, with substantial financial backup, could have been behind the terrorist attacks in the United States on 11 September. Any further delays were impossible because American taxpayers, voters, would have viewed it as weakness by the administration and the president. It is also perplexing that powerful secret services of the United States and other states missed preparations for such a war. It only reinforces the assumption that this asymmetric war is going to follow the rules enforced by international terrorism, and may even spread beyond the territory of the United States. The unexpected methods and forms of violence in the terrorist attacks are evidence of substantial preparation, something only a general staff is capable of. The war was arranged and executed in such a manner that virtually all world media all but complimented international terrorism on its successes. The methods used are copied from contact or no-contact warfare manuals. It turns out that nobody in the world, or in the United States for that matter, has worked out any effective anti-terrorism methods. Neither can we rule out the possibility of the use of chemical or biological weapons against civilians. The American example shows plainly that conventional weapons or high-precision weapons systems are useless against global terrorism. That means forces of civilian defense of a state against all sorts of terrorist acts and emergencies, both natural and technocratic. In my view, this structure should control all visa, passport, and customs control services, air transport, and air defense in peacetime. Besides, I think NATO in its current form should be disbanded in order to fight an effective war on terrorism. The Alliance has outlived its usefulness. This new alliance should use entirely new forms and methods of combating terrorism. We encourage anyone to comment, please consult the.

Chapter 3 : John McCain Calls Hacking Attack “A New Form of Warfare” Variety

OpenDemocracy is an independent global media platform covering world affairs, ideas and culture which seeks to challenge power and encourage democratic debate across the world. Read more.

Their computers froze and thousands of employees were locked out of the company networks. Very soon reports of similar attacks began coming in from Europe, with a few cases reported from the US as well. Everyone feared a WannaCry redux in which more than , computers were affected globally in a matter of days just a few months earlier. However, things seem to die down after the initial flurry of infections. Once forensic teams began to sift through the details, they noticed something interesting. It appeared that other parts of Europe were affected due to collateral damage. Another intriguing point was the ransom demand that followed, for what was by then being called the notPetya attack. It seemed almost half-hearted and sent as an afterthought. Some experts began to suspect that the notPetya could have been a targeted attack on Ukraine that was disguised as a ransomware demand to fool investigators. The US has also blamed Russia for the attack. Attacks are real Irrespective of who carried out the attack, it is important to keep the Ukrainian incident in mind for a couple of reasons. One is that targeted attacks are real, are happening and not all of these need government sanction or backing, there are plenty of private entities which are capable of mounting such attacks. The other crucial point is that with digitalisation of almost all infrastructures, it is easy to cripple CIIs with a well-targeted cyberattack unless they are well defended. The general definition of CII is any information system that is required for uninterrupted delivery of essential services. They are aviation, financial sector, energy, public sector, healthcare, information and communications infocomm services, land transport, maritime, security and emergency services, water supply and media. This will fundamentally address the information asymmetry between buyer and supplier. However, cybersecurity legislation is just one of the ways to stay ahead, he says. Sanjay Aurora, Asia Pacific MD of Darktrace, a cybersecurity company, feels that governments and CII-providers are increasingly adopting AI artificial intelligence based cyber technology to defend some of the most complex environments in the world. Darktrace uses machine learning to identify and respond to cyber threats. CIIs must continue to keep pace with increasingly complex threats. However, there is a need to strike a balance between privacy and security. Due to the impact that a cyber-attack could have, many countries have started to elevate cyber-attacks targeting CII as a national security issue, he says. If all citizens remain vigilant, and follow and maintain good security practices when navigating in and out of the digital world, we will all be contributing towards a safer and more digitally-secure Singapore. Amit Roy Choudhury is a senior technology journalist who writes a weekly piece for GovInsider.

Chapter 4 : Industrial warfare - Wikipedia

In Overwatch, sniper hero Widowmaker requires cold-blooded poise to play at the highest levels. You have to focus if you want your shots to cut through the chaos of battle. During a recent all.

October 04, November 03, The memory sticks were scattered in a washroom at a U. They were deliberately infected with a computer worm, and the undisclosed foreign intelligence agency behind the operation was counting on the fallibility of human nature. According to those familiar with the events, it calculated that a soldier would pick up one of the memory sticks, pocket it and “ against regulations ” eventually plug it into a military laptop. The result was the delivery of a self-propagating malicious worm into the computer system of the U. That attack took place in and was acknowledged by the Pentagon only this August. It also appears that intelligence operatives were used to deliver the worm to its goal. The primary target Its primary target, computer security experts say, was a control system manufactured by Siemens and used widely by Iran, not least in its nuclear facilities. On September 29, Iran confirmed that the worm had been found on laptops at the Bushehr nuclear reactor, which had been due to go online next month [October] but has now been delayed. It denied the worm had infected the main operating system or caused the delay. If the Stuxnet attack on Iran was a limited act of cyber sabotage, on September 28 the U. Cyber Storm III In an exercise named Cyber Storm III, involving government agencies and 60 private sector organisations including the banking, chemical, nuclear energy and IT sectors, it presented a scenario where America was hit by a co-ordinated cyber shock-and-awe campaign, hitting 1, different targets. The results of the exercise have not been released. One of those who believes that cyber war has finally come of age is James Lewis of the Centre for Strategic and International Studies in Washington. Lewis said that while previous large-scale hacking attacks had been an annoyance, Stuxnet and the attack on Centcom represented the use of malicious programmes as significant weapons. It was inevitable someone would work out how to use planes to drop bombs. Militaries will now have a cyber-war capability in their arsenals. There are five already that have that capacity, including Russia and China. He added that a deliberate hack of an electric generator at the Idaho National Laboratory, via the internet, had previously demonstrated that infrastructure could be persuaded to destroy itself. Cyber Command, General Keith Alexander, has recently said that it is only a matter of time before America is attacked by something like the Stuxnet worm. In recent testimony to Congress, Alexander underlined how the cyber war threat had rapidly evolved in the past three years, describing two of the most high-profile attacks on countries: But it is destructive attacks such as Stuxnet that frighten Alexander the most. Agreements needed He favours agreements similar to nuclear weapons treaties with countries such as Russia to limit the retention and use of cyber-war technology. One of the problems that will confront states in this new era is identifying who is behind an attack. They point to a file in the worm called Myrtus “ perhaps an oblique reference to the book of Esther and Jewish pre-emption of a plot to kill them. But it could also be a red herring designed to put investigators off the scent. Clemente points to the fact that the attack used four separate, unpublicised flaws in the operating system of the Bushehr plant to infect it. This appears to be the first instance of a destructive use of a cyber war weapon.

Chapter 5 : Cyber security is a new form of warfare | GovInsider

This new form of warfare has at times been described as an existential threat, and at others as nothing more than an elusive, catch-all term for something that has existed for a long time. What exactly does it mean, and is any of the alarm justified?

By DavidG on January 3, Welcome back from our two week break! It was nice for me to get off of the treadmill for a while. That the United States has been a victim of foreign interference in the election it is now pretty much beyond dispute. This is true even if there is no way to know whether Russian actions significantly swayed the outcome, and no matter the degree of collaboration by the Trump campaign the special prosecutor eventually finds. Moreover, the issue of election tampering will intensify over the next few years. Of course, Russia, the United States, and other countries routinely try to sway politics in other countries, including electoral outcomes. We make key concessions in negotiations to help a friendly government win its next election. We fund the development of civil society institutions overseas and even opposition political parties. During the Cold War, both sides conducted elaborate propaganda and disinformation campaigns. And, yes, we have a sordid record of facilitating regime change, including of democratically-elected governments. What is new to worry about? From what I read, mainly two things: The tools used to interfere in elections have evolved in dangerous ways, and some of our major adversaries notably Russia have a strengthened interest in sewing chaos and public feelings of illegitimacy in Western political systems. But, people at all levels of American government are working furiously on this problem Which types of threats should we most worry about, and what can be done to stop them? I think a good start would be to distinguish different types of interference tools and objectives so we can better distinguish the same old same old political meddling from actual attempts to sabotage our electoral institutions and systems. So, on Monday I will open our meeting by trying to do just that. But, I hope we can talk about larger issues, too. What do we know so far from the public sources? Will GOP ever take it seriously? How common has this sort of thing been – including by USA? How vulnerable are we now and why? Why has so little been done? What are best ways to prevent improper interference? Deterrence with offensive capability? But, no evidence hackers changed any actual votes cast.

Chapter 6 : Israel faces new form of warfare, Arens says

Calling opioids coming into the U.S. from China and Mexico "almost a form of warfare," President Trump on Thursday urged Attorney General Jeff Sessions to investigate foreign sources of fentanyl.

Although this lesson came at a very high price, it has proved difficult to retain. Especially since the end of the cold war, the idea has been in retreat. A new cost-benefit calculus is at work in American policy discourse and practice -- one accepting a lowered threshold for the use of force as an instrument of US policy. Important in shaping this development was the demise of the Soviet Union and the end of global superpower conflict. RMA capabilities are supposed to give the United States the capacity to fight regional wars surgically and to conclude them rapidly with minimal casualties and collateral damage. Much as the geostrategic revolution served to relax concerns about war escalation, emergent RMA capabilities have served to mitigate the fear that regional intervention might lead to "quagmires" reminiscent of the Vietnam War. The new calculus of war The initial transition to a post-Cold War practice of intervention occurred during -- a period spanning the Panama invasion, Persian Gulf War, and Somalia operations. President George Bush outlined the rudiments of a new doctrine in his 5 January West Point valedictory address. The speech avoided "last resort" language with regard to the use of force, adopting a simple utilitarian framework instead: This type of calculation, which does not require that alternatives actually be attempted and exhausted, is standard with regard to many other types of policy instruments. By contrast, the "last resort" principle treats warfare as a unique type of instrument whose potential negative impact on the international system cannot be represented adequately in a narrow or short-term cost-benefit calculation. By adopting such a calculus to govern the use of force, the new framework diminished the special status of military operations and relaxed the presumption against war. A simplified "cost-benefit" approach to employing force has guided all three post-Cold War US administrations -- although they have differed significantly on other issues bearing on military operations. The points of difference have included the importance of multilateralism, the definition of "national interest" narrow versus broad , the propriety of using the armed forces for humanitarian and peace operations, and the effectiveness of limited applications of force. The present administration, especially since the September 11 attacks, is distinguished by a more unilateralist disposition than its predecessors, a re-emphasis on traditional combat and warfighting missions, and an inclination toward more ambitious military objectives -- notably, regime removal. With the exception of the Somalia operations , the US experience in military contingencies between and may give American leaders greater confidence that they can circumvent or preclude the two dangers -- uncontrolled escalation and protracted stalemate -- that had inspired reservations about the use of force during much of the Cold War period. But there are other, longer-term consequences to lowering the threshold on the use of force that are also worthy of consideration: Regional conflicts may not presently risk sudden, inadvertent escalation to general nuclear war, but an increased resort to force can contribute to global repolarization and remilitarization -- that is, a return to true Cold War conditions. This prospect should be weighed when contemplating war for reasons other than defense of vital interests and it should be a factor in calculating the mode and magnitude of any forceful action. The risk of America becoming mired in a Vietnam-style quagmire is much reduced today -- but neither the Vietnam War, nor the Korean War before it, exhaust the forms that a "quagmire" might take. The pre-history of the First World War suggests another type: The dynamic that swept 15 nations into the Great War developed almost imperceptibly over 35 years -- through interlocking military pacts, minor wars, colonial competitions, multiple interventions, and arms races -- before reaching a catastrophe point and suddenly engulfing its participants. And every step of the pre-war journey, except the last ones, seemed manageable to the nations that were taking them. Notably, the precipitating incident was an act of state-supported terrorism involving Serbia and Austria-Hungary. But they reflect the type of dynamics that may eventually undermine that primacy or increase dramatically the cost of exercising it. To appreciate these risks requires gauging and projecting the effects of the new norms and practices on global military competition, regional and global stability, and international system dynamics for example, alliance behavior. Some of these effects are already discernable in the aftermath of the Afghanistan

war. Of course, a longer-term view would be more revealing; a fruitful case study might be US military engagement in the "arc of crisis" stretching from South Asia, through the Persian Gulf, to the Middle East during the period. Also instructive might be an examination of the interplay between US military policy and Russian, Chinese, and Indian policy during the post-Cold War period. What is certain is that a simple cost-benefit analysis of war options cannot tell us the true, long-term cost of lowering the threshold on military action -- no more than the current price of timber, water, or oil can tell us the true cost of depleting scarce resources. The new warfare As noted above, a principal factor that has shaped change in the norms governing military activism is the putative "Revolution in Military Affairs". Prominent among the operational expressions of the RMA are new capabilities for i "standoff" precision attack which encompasses the air power revolution and for ii information warfare which, roughly speaking, combines electronic and computer or "cyber" warfare. This involves attacking so-called "political targets" as well as strategic infrastructure, communication, and industrial targets. And the new strategic warfare capabilities are supposed to be relevant not only to full-scale war, but also to more limited enterprises, such as coercive bargaining. Thus they allow a lowered threshold for the use of force across a broad range of contingencies. Two final elements of the new warfare are supposedly derivative of the recent conflict in Afghanistan: This innovation -- actually a revival of practices common during the Cold War -- is supposed to address shortcomings obvious in the Balkans campaign, Operation Allied Force, namely: The poverty of analysis: All variety of laudatory claims have been made concerning the operational effectiveness and limited collateral effects of the new warfare. The verdict of the US media regarding the new warfare was almost unanimous: But these claims characteristically fail to look beyond short-term achievements and near-term effects. The public discourse on recent wars has tended to focus on technological features, tactical challenges, and proximal political gains such as defeat of the Taliban. Much of the commentary on the new warfare fails to appreciate that war, as an act of state policy, is not about material destruction, per se, nor even about a succession of battlefield successes. It is about strategic outcomes, broadly considered. Even regarding tactical and operational issues, much of the current commentary and open analysis fails to enlighten: First, claims about the new warfare are seldom usefully disaggregated. Thus, for instance, assertions about the effectiveness and toll of the Afghan air campaign fail to distinguish between the relative value and cost of attacks on military and battlefield targets versus attacks on cities and political, industrial, and infrastructural targets. However, such distinctions are critical to finding ways to reduce the inadvertent, collateral effects of war. Second, assessments of the new warfare have tended to be more anecdotal than systematic. And seldom have the operations in Afghanistan been openly analyzed in a meaningful comparative framework. Thus, the high percentage of guided munitions used in the Afghan air campaign is supposed to make it the most accurate of such efforts in history. Overlooked is the fact that the rate of civilian casualties per bomb dropped was higher in Afghanistan than in the Kosovo war, probably by a factor of two or three. This is an interesting paradox that can only be explained by looking more closely at the distinct nature and goals of the air campaign in Afghanistan. Doing so can reveal why increased precision and accuracy does not necessary lead to fewer civilian casualties or less collateral damage. Finally, treatments of the new warfare have tended to be ahistorical. Much of what has been heralded as new is not new at all, but has precedents that are rich in lessons. The tactical alliance with indigenous Afghan ethnic militias, for instance, finds a precedent in American cooperation with the Kosovo Liberation Army during the Operation Allied Force. An even more appropriate precursor is US cooperation with the Afghan mujahedin during the anti-Soviet war of the s and s. The poverty of analysis that has characterized treatments of the Afghan war and the "new warfare" generally may be a symptom of the trauma suffered by the United States on September 11, Or it may be that military analysis was more disciplined and critical during the Cold War because the price of error was so clear, high, and immediate. In order to serve policy, assessments of the new warfare must define and disaggregate its elements and view them in historical and comparative perspective. Moreover, the various elements of the new warfare must be assessed in terms their effects broadly considered. Criteria of military effectiveness must be applied to the individual elements of the new warfare. Beyond this we need to assess short- and long-term collateral effects, the impact of the new warfare on the international norms governing war, and its effects on global military competition including attempts to acquire weapons of mass destruction

and their means of delivery. There is already some reason to doubt the ability of the new warfare to resolve the most trenchant difficulties attending war. Its limits are suggested by the paradox of precision attack leading to chaotic results examined in the next section. And there is reason for concern about how some features of the new warfare may affect the norms governing the conduct of war -- specifically, the normative distinction between civilian and military personnel and targets examined in the final section. Precision attack, chaotic outcomes The techniques and technologies that the United States employed in Afghanistan allowed it to intervene rapidly and pursue quite ambitious operational objectives. They also permitted the operation to proceed on a more unilateral basis than had been the case in either the Balkans or Persian Gulf conflicts. However, success in toppling the Taliban was accompanied by various unanticipated and undesirable outcomes. Post-Taliban Afghanistan quickly slipped into a miasma of warlordism, criminality, and multiple ethnic conflicts. Related to this, Pakistani and Iranian cooperation with the United States grew thin and the United States became implicated in local Afghan conflicts. Subsequently, leading elements of the Al Qaeda terrorist network -- the principal culprits of the September 11 attack -- were able to slip the US noose. More broadly, the Afghan conflict itself slipped the limits that America had hoped to impose, contributing to dangerous escalation in the Kashmir and Israeli-Palestinian disputes. These developments suggest an underlying dynamic that is "chaotic". The negative, inadvertent outcomes of the war could have been limited by means of better, more deliberate pre-war diplomatic and political preparation. This is one of the functions of diplomacy: But the seductive promise of the new warfare is that it allows the United States to circumvent many of the constraints typically imposed by diplomacy and coalition warfare. And, indeed, the United States was able to achieve several immediate campaign goals despite the difficulties of the theater and the tentative character of the allied coalition. The hidden price of this achievement came later -- in the chaos and conflict that followed the collapse of the Taliban. No amount of precision in the delivery of ordinance is likely to curb the broader, chaotic outcomes of war. As noted above, several elements of the new warfare constitute forms of strategic attack. By means of "precision" bombardment or cyber-weapons, such attacks focus on centers of political authority and sources of national strength including industry, communications, and economic infrastructure. The impact both short-term and long on civilian populations of strategic attack can be profound -- even when extraordinary measures are taken to limit immediate collateral damage. Strategic warfare inherently blurs the distinction between "the military" and "the civilian," placing exceptional demands on precision attack and intelligence capabilities. As these capabilities have improved, the goals of strategic conventional attack have grown more ambitious in lockstep. Thus, the trend toward reduced civilian casualties apparent between the Gulf War and Balkans operations seems to have been reversed in the Afghan war. The current emphasis on strategic bombardment is deeply embedded in US air power doctrine, yet the proposition that such attacks have been vital to recent victories does not find strong empirical support. As noted earlier, most open-source treatments of the Afghan war have not attempted this level of analysis. Nonetheless, the chronology of the war and the phasing of the air campaign suggest that battlefield air attacks in conjunction with ground force operations, not urban attacks, were key in routing the Taliban. The increasing role of special operations troops and covert operatives, and the increased dependence on indigenous ethnic militias, may also have the effect of blurring the military-civilian boundary. In addition, the use of ethnic militias or other local irregular troops as proxies raises issue of control and accountability. In the aftermath of the Afghan war, some elements of the Northern Alliance may have committed grave and systematic breeches of the Geneva Conventions, according to the International Committee of the Red Cross and several human rights organizations. At minimum, this could reflect badly on the United States and tarnish the moral authority of the war against terrorism. The demise of the Soviet Union elevated America to a position of unparalleled global military superiority. Today the United States accounts for more than forty percent of world defense spending. In the shadow of the 11 September attacks, US military power may seem more relevant than ever. Although these questions are urgent ones, we cannot hope to answer them wisely without a better accounting of both the "new warfare" and the dynamics associated with military activism in the new era. Commonwealth Institute, 30 September

Chapter 7 : Cyber attack, the new form of warfare - The Hindu

An attack aimed at an Iranian nuclear plant and a recently revealed incident at a U.S. base show the spread of cyber weapons. The memory sticks were scattered in a washroom at a U.S. military.

He stated that he had never planned for the offensive to take the fortress of Verdun or to set the stage for a war-winning operation elsewhere along the Western Front. Routledge, ; first published, p. Verdun et la Somme: Imprimerie nationale, pp. Reichsarchiv, Der Weltkrieg Bd. Die Operationen des Jahres Berlin: Taylor, The First World War: An Illustrated History London: Hamish Hamilton, p. Foley “ Please do not quote without permission 1 force the French government to conclude peace with Germany. To the writers of the German official history, themselves former staff officers imbued with the traditional German ideas of decisive, mobile battle, it was incredible that a Prussian officer could set as his sole goal the gradual wearing down of the enemy. They believed that Falkenhayn had really intended the attrition at Verdun to weaken the French army to such an extent that it would permit a German breakthrough in another section of the French line. Once this had been accomplished, they assumed that Falkenhayn planned to fight a classic battle of maneuver. Some historians have accepted that Falkenhayn intended the attrition of the French army from the outset of the battle, but argue that he never communicated this aim to the unit assigned the grisly task, the 5th Army. Ein Beitrag zur Frage: Wie gelangt man aus dem Stellungskriege zu entscheidungsuchender Operation? Foerster was the director of the Kriegsgeschichtliche Forschungsanstalt des Heeres when he published his article. Foley “ Please do not quote without permission 2 influential The Price of Glory, first published in First, the General Staff Chief did not put his ideas down on paper. Intent on keeping the offensive a tight secret, Falkenhayn relied upon face-to-face meetings to communicate his ideas and to develop his plans. The destruction of the Prussian army archives in World War II has meant that historians have had little means of testing the validity of these varied and often conflicting perspectives. Today, we make clear distinctions between the various levels of war from the strategic to the tactical. Indeed, his intention was to harness what he saw as German tactical strength to offset her strategic weakness. The Christmas Memorandum may well have been constructed after the war, but this piece will draw upon previously unavailable contemporary material and testimonies from 9 Hermann Wendt, Verdun Politisches Denken und Handeln im Kaiserreich Munich: Combat and Mobilization on the Western Front, Washington: Cambridge University Press, pp. Background As he drew up his plans for victory in , Erich von Falkenhayn faced a challenging strategic situation. Since the failure of the Schlieffen Plan in , the German army had faced overwhelmingly superior enemies on many fronts. Instead, Falkenhayn hoped to use limited military success as a springboard for political success. These files were captured by the Soviets in and only recently returned to Germany. Princeton University Press, p. Greenwood, and Robert T. Foley, German Strategy and the Path to Verdun: Erich von Falkenhayn and the Development of Attrition Cambridge: Partially reprinted in Paul R. Foley “ Please do not quote without permission 4 For Falkenhayn, the main contest was in the west. First, coming from a Junker family with estates in the east, the General Staff Chief was naturally a Russophile. Consequently, he believed peace between the two countries could be easily negotiated once the Russians were shown the hopelessness of their cause. Additionally, he believed that the British were propping up a greatly weakened France. Thus, Falkenhayn wanted to concentrate his efforts in the west in an effort to divide the two western allies. If France could be convinced to negotiate a peace with Germany, than Russia would soon follow suit, leaving Germany free to focus of her real enemy, Great Britain. They felt that, with minor reinforcement, they would be able to defeat completely the Russian army in the field, which would allow Germany to dictate peace on her terms to a defenseless Russia. Eine biographische Studie Berlin: Genese und Funktion des Hindenburg-Mythos Cologne: Musterschmidt, ; and Afflerbach, Falkenhayn, pp. Foley “ Please do not quote without permission 5 Despite the opposition he faced from Hindenburg and Ludendorff, as well as a substantial portion of the officer corps, Falkenhayn stuck the conclusions he had reached in November He remained convinced that the traditional methods by which the German army won its wars would have to be altered. The armies facing Germany were simply too large to be defeated in one or two great battles, as pre-war thinking dictated. This

led him to conclude that Germany would not be in a position to dictate peace terms to her enemies, but would have to find a means by which one or more of them could be induced to come to a separate peace with Germany. However, while Falkenhayn may not have changed his conclusions and, though he ultimately survived the challenge to his leadership, the experience had a large impact on his tenure as Chief of the General Staff. The conflict weakened his authority within the army, and the experience made him reluctant to share his radical strategic ideas with his subordinates for fear of provoking another such feud. Both of these factors made an already reticent Falkenhayn all the more secretive when it came to articulating his plans as the war progressed. Convinced that battles could no longer be decisive in and of themselves, he aimed to use battlefield success to influence Russian politics. Falkenhayn needed to threaten something that the Russian government held dear, the loss of which would be unbearable. Knowing the famed Russian contempt for life, the General Staff Chief recognized that punishing the Russian army alone would not be sufficient to force the government to negotiate. Instead of concentrating on the Russian army, Falkenhayn focused on threatening territory. He believed that if the Russian government were faced with the prospect of losing Congress Poland they would be compelled to come to the negotiating table. Thus, the 22 Robert T. Leo Cooper, pp. Die Operationen des Jahres Mittler, , pp. Foley " Please do not quote without permission 6 strategic effect of his offensive in the east in would come not from destroying the Russian army, but from occupying or threatening to occupy Russian territory. Despite the great achievements of the Austro-German offensive in the east during the summer and early fall, including some 3 million Russian casualties and the capture of all of Congress Poland, German diplomats did not translate this battlefield success into political gain. Although Falkenhayn was unable to knock Russia out of the war in , the offensive in the east did stabilize the situation there. In April , the Austro-Hungarian front was close to collapsing. By September, the Austro-German had advanced deep into Russia and the Russian army was seriously weakened. Indeed, the German high command believed that the Russian army would be incapable of offensive action for the foreseeable future. Foley, German Strategy, pp. Allen Lane, p. Therefore, no great annexations. Farrar, Divide and Conquer: Columbia University Press, pp. Falkenhayn, General Headquarters, p. Foley " Please do not quote without permission 7 offensive in that he hoped would split the allies and end the war. The pressing question for the General Staff Chief was how to accomplish this. The front line was densely occupied by these well-equipped enemies. Entente breakthrough attempts in had shown how difficult it would be to pierce the trench line. Moreover, once this first line had been broken through, it would be extremely difficult to defeat the large Entente armies. The General Staff Chief was more than ever convinced that he would have to come up with a unique approach if victory was to be gained. Moreover, German intelligence believed that the morale of the British army was high, even if the army was inexperienced. Cambridge University Press, Foley " Please do not quote without permission 8 Finally, the British army could merely withdraw across the English Channel to avoid a major defeat. In November , the Intelligence Section of the German High Command drew up an assessment of the French army, which concluded that the French arm was , men weaker than it had been in , despite the fact that the class of recruits had been called to the colors early. The French birth rate had been declining since the mid-th century, and it was now clear that France simply did not have the manpower reserves to make good her wartime losses. German intelligence expected the French to be forced to call up the and Classes of recruits by June Thus, the intelligence officer of the German 6th Army reported: Some soldiers believe it will not get better, but only worse as a result of the failure in September and the high losses. It will be difficult to get the soldiers to attack. Throughout his time as Chief of the General Staff, Falkenhayn had been receiving regular reports from a highly placed German intelligence agent in Paris, an Austrian named August Schluga Freiherr von Rastenberg. Schluga had been a German agent since , first based in Austria and later in France. He had managed to supply German intelligence with the deployment plans of the Austrian army in and the French army in and again in August He was well connected with members of the French government and Ministry of War. Foley " Please do not quote without permission 9 Indeed, Falkenhayn increasingly believed that the French were reaching the end of their limits in terms of manpower and political willpower. As the government was answerable to the people, its weakness was the people. Indeed, French politics before the war, with its frequent changes of government, seemed to support this view. In its conclusion, he wrote:

Soon [the French government] will be faced with the question of whether, despite all outside help, the ending of resistance is a more fitting path for the future of the nation than the continuation of this hopeless war. On the basis of prisoner debriefs, the intelligence officer of the 6th Army wrote in December

Report from the battle of Alpha 7 and the new form of warfare that it revealed. You have impressed upon me the importance of these reports being short and to the.

He was in a good position to dictate such terms. It had taken only a few short weeks for the Wehrmacht the German army , under his control, to crush the army of the French Third Republic. Top Allies unprepared The Maginot Line: The BEF had sailed for France believing that they and their French ally were well equipped and well trained to fight a modern war. During World War One, the armies of the two Allies had dug in for what became a long, drawn-out conflict. And in , influenced by this experience, the British and French leaders of World War Two were still expecting to fight a war in which the defensive would dominate. Although the two armies had more than 3, tanks between them, these were largely cast in a supporting role. The events in May and June proved that this outdated vision of war could not have been further from reality. This time, unlike the Allies, the Germans intended to fight the war offensively, and win quickly. Accordingly, convinced that they were facing a repeat of the German strategy of , Allied commanders moved the bulk of their forces from the Franco-Belgian border into defensive positions within Belgium to await the continuation of the German attack. Rather than repeating the World War One Schlieffen Plan, the Germans in advanced with their main thrust through the Ardennes Forest, in order to smash the vulnerable flank of the Allies. As 29 German divisions advanced through the Netherlands and Belgium in the north, 45 further divisions, including about 2, tanks in 7 divisions, burst through the Allied right flank and drove towards the English Channel. Although the French army put up token resistance for several more weeks, their spirit was broken and the German advance south from Belgium was swift and decisive. Despite desperate attempts by Winston Churchill to bolster French resolve, the defeat of the British and French armies in May effectively spelled the end of French resistance. The Allied armies, completely unprepared for the rapid, mobile operations of the Germans, had simply been out-fought at every turn. Top New form of warfare? Blitzkrieg seemed to be based around the pervasive use of new technology. After all, during the disastrous campaign in Belgium and France, it had seemed as if German tanks and aircraft were everywhere. This view that the Germans used technology, namely the tank and the dive-bomber, to create a new and unique form of warfare has often dominated understanding of how the Germans fought in World War Two. Contrary to the beliefs of the Allied military establishment of the day, however, blitzkrieg was not a brand-new way of waging war. In fact, although it is a German word, the term itself was created by an English newspaper sometime in . The so-called blitzkrieg of was really the German doctrine of with technology bolted on. And German strategists, most notably Alfred von Schlieffen, had concluded that Germany could not win a long, protracted war against such opposition. Thus, in order to win, Schlieffen knew the German army would have to defeat its opponents quickly and decisively. Always outnumbered by its enemies, it would have to match quantity with quality. Schlieffen set about creating a doctrine that would allow the outnumbered German army to outfight its opponents. This doctrine stressed speed of manoeuvre and attacking the enemy where he was weakest, and usually this meant attacking the flanks. Schlieffen also stressed the need to keep the enemy reacting to German moves. In other words, he foresaw the need to maintain the initiative. To accomplish this, he advocated the use of the flexible command system pioneered by Helmuth von Moltke the Elder. Recognising that battlefield conditions changed rapidly and that orders often became overtaken by events, the German army encouraged its commanders to make decisions without waiting for orders from above, thus allowing them to take advantage of fleeting opportunities as they arose. Above all else, this doctrine created aggressive and flexible leaders. In , German units inevitably outfought their opponents whenever they encountered each other on the battlefield. One element that was lacking from the German army in was the ability to move long distances quickly. Had the German army been mechanised at the outbreak of World War One, it is likely that the outcome of the war would have been very different. Throughout the remainder of the war, German officers searched for a process by which the stalemate of the trenches could be broken. In March , they found such a means. The biggest problems in World War One, however, were at the lower, tactical level. Thus, by decentralising command and

by increasing the firepower of the infantry, they created a large number of platoon-sized units capable of independent action on the battlefield. These units had the freedom to fight as they thought best, without having to refer constantly to a higher commander. While the Allies relied upon tanks to break through the stalemate of the trenches in 1918, the Germans used a largely infantry force empowered by a sound tactical doctrine. After their defeat in 1918, German military intellectuals began reshaping the army. Under the direction of Hans von Seeckt, commanders fashioned the doctrine that the Wehrmacht was to employ in World War Two. Repelled by the waste and indecisiveness of trench warfare, they returned to the ideas of Schlieffen, and in 1921 the army published its new doctrine, *Command and Combat with Combined Arms*. And as military technology, including that of tanks, motor vehicles, aircraft and radios, was developed during the 20s and 30s, so it was grafted onto this doctrinal framework. Innovators such as Heinz Guderian and Erich von Manstein recognised that the protection given by tanks increased the ability of the German army to manoeuvre in the face of enemy artillery, and that this enhanced speed and mobility. Thus, unlike the Allied armies, the German army in 1939 had an offensive doctrine that emphasised speed of decision-making, speed of manoeuvre and decentralised action. From the operational ideas of Schlieffen they placed the emphasis on speed, flank attacks, encirclements and decisive battle. The experience of World War One had convinced German leaders that these ideas needed to be applied not only at top operational level, but also at the tactical level - by combined-arms teams capable of independent fire and manoeuvre. Tanks, motor vehicles and aircraft merely enabled the Wehrmacht to apply these principles more efficiently. With this doctrine, despite being outnumbered in tanks and combat aircraft, they were able to outfight the Allies at every turn in 1940, and cause the rapid and total collapse of Allied resistance.

Chapter 9 : BBC - History - World Wars: Blitzkrieg

New form of warfare? Contrary to the beliefs of the Allied military establishment of the day, however, blitzkrieg was not a brand-new way of waging war. In fact, although it is a German word.

This new form of warfare has at times been described as an existential threat, and at others as nothing more than an elusive, catch-all term for something that has existed for a long time. What exactly does it mean, and is any of the alarm justified? Essentially this meant using irregular forces more than regular, relying on guerrilla tactics and ambushes more than frontal assaults, and blurring the boundaries between the civil and military spheres. Yet, as was soon pointed out, all warfare is to a degree asymmetric, because states rarely have identical capabilities or strategies. Efforts to give the concept a precise definition struggled because it was possible to describe any capability as asymmetric. The same is now likely to happen with hybrid warfare. The term can have both a general definition, which could if pushed encompass most forms of warfare, or else a specific definition, which points towards some of the current practices being adopted by Russia. Because one part of the mix – information operations – has been assumed to be successful in recent years, this has been the aspect that has acquired the most attention. It is time to take a critical look at this concept of hybrid warfare and question whether it has worked as well for Russia as is commonly supposed. The origins of the term The term gained currency after Israel was caught out during the Lebanon War by the combination of guerrilla and conventional tactics adopted by Hezbollah. It came to refer to an approach drawing on a wide range of instruments, including terrorism, insurgency, criminality and conventional operations, along with the extensive use of information operations. But he also showed interest in how irregular forms of warfare might begin without an evident state of war, the potential use of armed civilians, plus the importance of indirect methods and information. Operations in Ukraine appeared to show hybrid warfare in action, especially with the formation of the separatist militias in the Donbas, the role of Special Forces and the attention paid to the information aspects of the campaign. Here, unlike Syria, Russia sought to keep its role covert. Not so new The concept of hybrid warfare starts with distinct types of military or military-related activity and then looks to how these can be combined in ways that will complicate enemy responses. Put this way, there is little new in the concept. After all, in past wars a range of capabilities have been employed, including economic blockades and propaganda. Surprise attacks have normally depended on a degree of deception, and with drawn-out attritional wars, anything that might eat away at the enemy is considered worth trying. Commanders have combined classical forms of conventional warfare with partisan campaigns on the one hand and forms of civilian destruction such as air raids on the other for a century. Past experience explains why these campaigns are not simple. Without a competent and extensive command structure, it can be difficult to pull together the different strands of activity so that they reinforce rather than contradict each other. More seriously, it is vital to distinguish between capabilities that are necessary to achieve the objectives of war – which normally means reasonably disciplined and substantial forces able to take and hold contested territory – and supporting capabilities that can disorient and demoralize an opponent and erode the ability to sustain a conflict over time such as economic measures but do not by themselves provide for political control. This is particularly important when considering information warfare, which for many commentators appears to be the key ingredient in contemporary hybrid warfare. It involves using social media to spread false messages and create misleading impressions to weaken opponents, especially among their own public. The confirmed Russian efforts during the US Presidential election and evidence of comparable attempts to influence the upcoming German elections reflect this concern. Not as effective as you might think But a degree of caution is necessary here. First, the means by which humans receive and process information, as individuals or in groups, are complex and not so easy to manipulate. The idea that an enemy can lob precision-guided thoughts into the collective mind of a population is far too simple. While this can be done using proxies and subtle forms of propaganda, in the end the sources and their messages have to be credible. The information being supplied to Wikileaks in came from hacking, so was not simply made up and, to the extent that it had an effect, fitted in with other portrayals of Hillary Clinton. When information campaigns rely more on deception and lying they

tend to be less successful. In Ukraine, Russian efforts at deception were by and large ineffectual, as they became progressively transparent. The controversy surrounding the shooting down of MH in the summer of 2014 was allowed to drag on far longer than would otherwise have been the case because of the persistent refusal of Moscow to accept any responsibility, despite the evidence against them. In the end the safest assessment may be that information operations still better described as propaganda can reinforce a positive position but are unlikely to be of much help in reversing a negative one. If anything it is a lesser form of warfare when compared to the more focused traditional forms, in which major powers sought to achieve victory simply through a succession of battles until the enemy could fight no more. The possibilities of popular resistance and, possibly more important, the risk of escalation to nuclear war have made it increasingly hard to rely solely on conventional armed forces. Those engaged in conflict will use whatever comes to hand.