THE WRIGHT FLYER PAPERS

The Acme of Skill

Nonkinetic Warfare

Cheng Hang Teo
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Air Command and Staff College
Wright Flyer Paper No. 30

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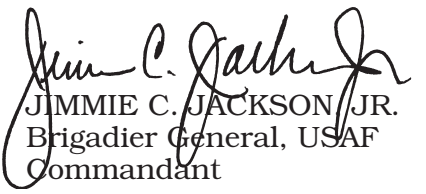
Foreword

It is my great pleasure to present another of the *Wright Flyer Papers* series. In this series, the Air Command and Staff College (ACSC) recognizes and publishes our best student research projects from the prior academic year. The ACSC research program encourages our students to move beyond the school's core curriculum in their own professional development and in "advancing air and space power." The series title reflects our desire to perpetuate the pioneering spirit embodied in earlier generations of Airmen. Projects selected for publication combine solid research, innovative thought, and lucid presentation in exploring war at the operational level. With this broad perspective, the *Wright Flyer Papers* engage an eclectic range of doctrinal, technological, organizational, and operational questions. Some of these studies provide new solutions to familiar problems. Others encourage us to leave the familiar behind in pursuing new possibilities. By making these research studies available in the *Wright Flyer Papers*, ACSC hopes to encourage critical examination of the findings and to stimulate further research in these areas.



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Abstract

Nonkinetic warfare, conflict that does not involve using force to inflict physical damage, is rapidly gaining in importance. Scholars of war even from the time of Sun Tzu have articulated that the enemy's destruction is neither essential nor necessarily the best route to ultimate victory. The insurgency attributes that have characterized many wars since World War II suggest that the objective of warfare has shifted from the kinetic destruction of military forces to the nonkinetic impairment of the enemy's will to fight. Four global trends identified in this paper—economic prosperity, freedom of information, the rise of nationalism, and globalization and interdependence—are possible causes for this shift because they make war a less attractive option than ever.

As the last major conflict between major powers, the Cold War was won with barely a single kinetic conflict between the United States and the Soviet Union—an excellent model of nonkinetic conflict and perhaps a sign of things to come. In the Cold War, the military largely played a supporting role. In an age characterized by the information revolution and globalization, the information and diplomatic instruments of power will rise in importance. Even in a supporting role, the military instrument nonetheless remains relevant, not least because kinetic conflict can never be ruled out. However, the military's nonkinetic potential needs to be developed in order for it to be more effective in today's world. Three ways to achieve this end are to develop an interagency approach to the military, assign a supporting diplomatic role to the military, and develop a comprehensive and coherent information strategy not only for the military, but for all levels of government.

Introduction

The term *nonkinetic warfare* may seem to be an oxymoron. How can warfare be described as nonkinetic? On the other hand, how can something that is not kinetic be described as warfare? This paper requires the reader to discard conceptions of *war* and *warfare* that include only the traditional kinetic sense and instead think about forms of conflict that do not take lives or cause damage. The purpose of this paper is to examine the increasing importance of nonkinetic warfare, both now and in the future, and consider how states and their predominantly kinetic-minded militaries ought to respond. The terms *kinetic* and *nonkinetic* have not been covered to a great extent in military literature, although Sun Tzu during the sixth century BC had already alluded to the nonkinetic approach as the pinnacle of the art of war.[1] After exploring the definitions and theories of nonkinetic warfare, this paper charts the development of warfare in practice and finds that the latest incarnation of warfare, by making the will of the people the primary target, has moved into the nonkinetic realm.

Examining current global trends in the ordering of civilization sheds light on why the utility of the kinetic approach to securing interests and solving problems could be declining at this point in history. The largely nonkinetic Cold War is a noteworthy example of how future major conflicts and long wars may be decided. This paper then explores nonkinetic warfare in its various forms and explains how today's strategic environment favors nonkinetic approaches and methods, just as tomorrow's will. Finally, this paper tries to answer the question of how the armed forces of the world ought to transform in order to be as effective in the nonkinetic realm as they are in the kinetic. The paper concludes that, in addition to kinetic capabilities, a modern state must possess mature nonkinetic capabilities to project power, secure interests, and solve problems. Accordingly, the modern military, as a tool of state policy, must

itself transform to become capable of offering developed nonkinetic capabilities in addition to kinetic ones.

Defining the Terms: Kinetic and Nonkinetic Warfare

It is first necessary to define and differentiate the terms *kinetic* and *nonkinetic* in a military context. A survey of Department of Defense (DOD) resources reveals few explanations of the term *kinetic*. This word, at the time of writing, is absent from the *DOD Dictionary of Military and Associated Terms* and is not explicitly defined in the major doctrinal publications of the Joint Staff, Army, Navy, or Marine Corps.[2] Air Force Doctrine Document (AFDD) 2, *Operations and Organization,* is perhaps the only major doctrinal publication to attempt to define *kinetic* or *nonkinetic*. In a discussion of effects-based considerations for planning, AFDD 2 distinguishes between kinetic and nonkinetic actions:

> Kinetic actions are those taken through physical, material means like bombs, bullets, rockets, and other munitions. Non-kinetic actions are logical, electromagnetic, or behavioral, such as a computer network attack on an enemy system or a psychological operation aimed at enemy troops. While non-kinetic actions have a physical component, the effects they impose are mainly indirect—functional, systemic, psychological, or behavioral.[3]

While this definition is a good starting point for understanding kinetic and nonkinetic action, it could be refined further. AFDD 2 uses *means* to characterize kinetic actions, while using *effects* to characterize nonkinetic actions. This is an incongruent manner of distinguishing these categories of action, as an example will demonstrate: should the act of firing a warning shot into the air be classified as kinetic or nonkinetic? It satisfies both the definitions in AFDD 2—a physical

means (kinetic) and indirect effects with a physical component (nonkinetic).

What is needed is an "apples to apples" manner of defining both terms. This paper proposes that both *kinetic* and *nonkinetic* be defined based on effects rather than means. Using means as a basis for defining actions has a significant weakness: like kinetic actions, nonkinetic actions can utilize physical means, such as airlifting supplies in a humanitarian mission. When using effects as a basis for defining actions, it is worth noting that singular actions can have both tangible and intangible effects, and often do. The line between kinetic and nonkinetic ought to be drawn according to whether the action has the direct effect of physical damage—that is, injuring, killing, or destroying—on an intended enemy. A kinetic action is one that inflicts physical damage on the intended target; a nonkinetic action does not. For example, North Korea's nuclear test-firing ought to be categorized as a nonkinetic action—although it does involve physical destruction, the intended effect on the enemy is in fact demonstration and deterrence. As a final note on terminology, *war* is commonly understood as conflict in the kinetic sense; this paper will follow that usage. Any reference to nonkinetic conflict will be explicitly labeled so.

Warfare in Theory

The Chinese military theorist Sun Tzu, in his treatise on strategy, *The Art of War*, describes the best way to conduct a war:

> Generally in war the best policy is to take a state intact; to ruin it is inferior to this. To capture the enemy's army is better than to destroy it; to take intact a battalion, a company or a five-man squad is better than to destroy them. For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill.

> Thus, what is of supreme importance in war is to attack the enemy's strategy. Next best is to disrupt his alliances. The next best is to attack his army. The worst policy is to attack cities. Attack cities only when there is no alternative. . . .
>
> Thus, those skilled in war subdue the enemy's army without battle. They capture his cities without assaulting them and overthrow his state without protracted operations. Your aim must be to take All-under-Heaven intact. Thus your troops are not worn out and your gains will be complete. This is the art of offensive strategy. . . .
>
> Now there are five circumstances in which victory may be predicted: He who knows when he can fight and when he cannot will be victorious.[4]

Although Sun Tzu's influential work on the art of war is indeed about the way of fighting, it is clear that he did not see kinetic operations as the ideal route to victory. Sun Tzu preferred the cleaner way to win; keeping the state and the armed forces of the enemy, as well as one's own military, intact in any conflict is the ideal. He preferred to win through ideas and strategy without resorting to arms, killing, and destruction. If kinetic operations were necessary, it remained imperative to keep them to a minimum. According to Sun Tzu, if all strategies were to strive for the ideal, they would aim to achieve victory without fighting. Any strategy that results in fighting falls short of the ideal. In Sun Tzu's eyes, therefore, a nonkinetic winning strategy is superior to a kinetic one.

Clausewitz's seminal work *On War* discusses conflict principally in its kinetic form. Clausewitz was conscious of the limitations of war as an instrument of policy. Uncertainty, passion, and chance are inherent elements in war that make it an enigmatic and unpredictable instrument. Clausewitz contends that in war there are always countless unforeseeable minor incidents that "combine to lower the general level of perfor-

mance, so that one always falls far short of the intended goal."[5] Friction, as Clausewitz calls this phenomenon, makes difficult in war what would have been easy in peace and is closely associated with chance.[6] War, out of all human activities, "most closely resembles a game of cards."[7] As a result, guesswork and luck are major factors in the outcome of war.[8] Military strategist Bernard Brodie notes Clausewitz's association of war with human emotion, which "distorts the clear conception of the object."[9] In *On War*, Clausewitz famously characterizes war as an instrument of policy but, oddly, never judges its efficacy. He does state that genius is required to conduct such a complex activity as war "with any degree of virtuosity."[10] Its unpredictable nature, though, suggests that its effectiveness as an instrument of policy is not guaranteed and that its results are mixed. For the immense cost that often accompanies war, the returns of war are not guaranteed.

On nonkinetic operations, it may appear that Clausewitz has his doubts. In the opening chapter of *On War*, he writes:

> Kind-hearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy that must be exposed: war is such a dangerous business that the mistakes which come from kindness are the very worst.[11]

At first glance, Clausewitz may seem to disagree with Sun Tzu's proposition of "overcoming without warring." However, Clausewitz's treatise, as its title states, is indisputably on the subject of fighting (as Liddell Hart has noted—see discussion below). *On War* is not principally about the nonkinetic domains of conflict. Therefore, when Clausewitz discourages the hope that an enemy might be defeated "without too much bloodshed," he is speaking of the conduct of kinetic war,

where war has already begun. Furthermore, closer analysis suggests that Clausewitz's fundamental disagreement is with kindness rather than the lack of bloodshed. Later in *On War*, he writes, "We are not interested in generals who win victories without bloodshed. The fact that slaughter is a horrifying spectacle must make us take war more seriously, but not provide an excuse for gradually blunting our swords in the name of humanity. Sooner or later someone will come along with a sharp sword and hack off our arms."[12] Yet like Clausewitz's kinetic war, nonkinetic means can just as well be used without compunction to achieve the desired ends.

B. H. Liddell Hart astutely notes that lesser students of Clausewitz would "reach the conclusion that in war every other consideration should be subordinated to the aim of fighting a decisive battle."[13] Once again, *On War* was never meant to cover more than the kinetic domain of human conflict. Liddell Hart sees strategy at a higher plane than the conduct of war—war is a supporting element and only one of the various means to the strategic end.[14] He characterizes strategy along the same lines as Sun Tzu: while tactics is about the kinetic domain, the purpose of strategy is the reduction of kinetic operations "to the slenderest possible proportions." The aim of strategy must be to bring about battle under the most advantageous circumstances, which Liddell Hart takes to mean the conditions under which there is less fighting: "The perfection of strategy would be, therefore, to produce a decision without serious fighting."[15]

The history of warfare has been bloody, but since the sixth century BC, scholars of war have suggested that kinetic means of conflict are perhaps one of the costlier routes to victory. Sun Tzu would agree with Liddell Hart that the strategic objective is fulfilled if the enemy is led to abandon his purpose—the enemy's destruction is not essential and certainly neither the easiest nor the optimal route to victory.[16] As the most eminent scholar of the

kinetic method, Clausewitz makes no conclusion on its effectiveness as an instrument of policy but cautions its users about the element of fortune and uncertainty associated with its use.

Warfare in Practice

In order to understand present and future warfare, it is useful to examine how warfare has evolved in the past. A good framework for discourse is the four generations of warfare described by William S. Lind and his coauthors in 1989. According to their schema, first-generation warfare was reflected in the tactics of line and column formations used by Napoleon's conscripted troops. The second generation was based on fire and movement, when firepower largely replaced manpower as the instrument of mass. World War II saw the emergence of third-generation warfare on the battlefield. The blitzkrieg tactics of the German army sought to use overwhelming maneuver to bypass and collapse enemy forces rather than to destroy them, which was the hallmark of the previous two generations of warfare. The authors attribute the evolution of warfare largely to the advancement in technology and ideas in the military realm.[17]

The authors posit that the emerging fourth-generation warfare will be dispersed and undefined, with a nonexistent distinction between war and peace.[18] However, their conception of fourth-generation warfare is based rather narrowly on advancing technology and ideas restricted to the military realm, plus the trends of the previous three generations. In 2004 Thomas X. Hammes expanded the scope of the discussion when he suggested that major changes in political, economic, social, and technical segments of society always precede major changes in warfare.[19] The proliferation of international organizations, the growth of world financial markets, and the information revolution, to name a few developments, have combined to cause the emergence

of fourth-generation warfare.[20] This kind of warfare, according to Hammes, uses all available networks—political, economic, social, and military—to convince the enemy's leaders that their strategic goals are either unachievable or too costly to achieve.[21] Whereas in the previous three generations warfare entailed the destruction of physical military forces, the fourth generation targets the enemy's will to fight. In the fourth generation, the physical engagement of the military becomes just a means to this end.

In fourth-generation warfare as described by Hammes, the objective of warfare has moved from the kinetic destruction of military forces to the nonkinetic impairment of the enemy's will. Fourth-generation warfare has been the choice of the military underdog to great effect. It accounts for the failures of both the Cold War superpowers at the heights of their respective powers, the United States in Vietnam and the Soviet Union in Afghanistan.

What is the appropriate response to this new kind of warfare that targets the intangible will instead of tangible troops? I suggest that any kind of response must involve moving the preponderance of conflict and strategy into the nonkinetic realm because, based on sociopolitical and economic factors that have evolved over the course of human civilization, kinetic warfare today is more of a liability than at any time in human history. This paper argues that the use of war as the primary instrument of policy plays directly into the hands of the practitioners of fourth-generation warfare. As a tool of policy, the utility of war has diminished over the course of human progress. An analysis of global trends in human civilization provides some evidence of this phenomenon.

Global Trends in Civilization

In a constitutional republic or a democracy, the will of the people, by definition, determines whether a

country goes to war. In such political systems, the will of the people is also always a chief center of gravity of the war-making effort, and it determines whether a country stays in a war or whether a nation fights the war with the required vigor. However, civilization has developed in such a way as to make war much less palatable, at least for the common people. In German philosopher Immanuel Kant's essay *Eternal Peace* (1795), he writes, "The republican constitution does offer the prospect of . . . eternal peace. . . . If . . . the consent of the citizens is required in order to decide whether there should be war or not, nothing is more natural than that those who have to decide to undergo all the deprivations of war will very much hesitate to start such an evil game."[22]

Kant's ideas form the basis of what is today called the democratic peace theory. Although this theory has its detractors, it is at the same time widely embraced by many, including various US presidential administrations. Both the current president, George W. Bush, and his predecessor, Bill Clinton, have stated unequivocally their belief that democracies do not fight one another.[23] Two hundred years after Kant, the rise of the constitutional republic is just one of various factors that make war an unattractive option. The development of human civilization in four other areas—prosperity, freedom of information, nationalism, and globalization and interdependence—produces the same effect, such that Kant's prerequisite of a constitutional republic is no longer a necessary condition for making war unattractive.

Prosperity

Economic growth for most of the globe has been phenomenal in the last century. Wealth continues to increase. In the 16 years from 1980 to 1996, the world gross domestic product (GDP) quadrupled. The increased wealth reduces people's tolerance for fighting and destruction because they have more to lose. Scholar

James A. Nathan claims that since the end of the Cold War, "trade has been displacing security worldwide as a means of determining priorities and interests." He quotes former secretary of state Madeleine Albright: "For as long as I am Secretary of State, America's diplomatic influence will be harnessed to the task of helping America's economy to grow."[24]

Thomas L. Friedman's "golden arches" theory of conflict prevention, which notes that no two countries that both have McDonald's have fought a war against each other since each got its McDonald's, is an insightful theory of how prosperity prevents states from going to war.[25] In the book *The Lexus and the Olive Tree*, Friedman points out that 78 days of airpower could achieve in the "McDonald's nation" Serbia what 10 years of full military engagement in "non-McDonald's" Vietnam could not.[26] A closer look at their respective economic data suggests one reason why. Serbia and Montenegro in 1997, just before Operation Allied Force, had a GDP per capita of 1,570 in today's US dollars, almost 20 times that of Vietnam in 1975, which had a GDP of 81 US dollars.[27] To put things in proper perspective, there are surely other factors that influenced the dynamics of each war. However, it remains clear that states with little wealth and prosperity are less constrained by the need to preserve wealth and are less inhibited from involvement in war as a result. States with more have more to lose, and this is a big disadvantage in the conduct of war.

Greater prosperity also increases the value of human life. Loss of life is intolerable today; for example, North Atlantic Treaty Organization (NATO) allies were willing only to use airpower to restore order in the Balkans in Operation Allied Force. The rich countries in NATO did not show convincingly that they were prepared to undertake significant losses in order to end the genocide in Kosovo. On the other hand, a prosperous nation may be tempted to go to war if it thinks that a quick and decisive victory would be in the offing and the costs associated with victory would be minimal.

One could furthermore deduce that states which *aspire* to be prosperous will refrain from war. One theory suggests that the expectations of future trade prospects affect the likelihood of war. When trade prospects are dim or trade sanctions are not expected to abate, war may seem a reasonable option to break out of economic decline. However, when there is expectation of increasing trade and its benefits, states have less reason for war.[28] To go to war risks not only the benefits of current economic prosperity, but that of the future as well.

Examples of the economic devastation of war are abundant through the ages. The Thirty Years' War wreaked economic destruction in Germany, just as the Seven Years' War reduced Austria to virtual bankruptcy. In France the costs of the Seven Years' War were so debilitating that they brought about conditions for revolution.[29] Post–World War II Britain was reeling from the costs of two massive wars so that it no longer had the financial might to sustain its colonies east of the Suez; economic factors were a central cause for the colonial withdrawal.[30]

To be sure, economic prosperity alone does not end all wars. The British writer Norman Angell, in response to criticism that the First World War had disproved his theory of the economic futility of war, writes that "the futility of war will never of itself stop war; . . . only when men realize the futility will it deter them."[31] Friedman contends that nations will think, not twice, but three times before choosing the military option to solve their problems.[32] At the very least, economic interests form a set of factors that weigh against going to war. The greater the economic stake, the more these factors weigh.

Freedom of Information

Mass media and information technology today facilitate the flow of information at a lightning pace and in a way states are not able to control as they previously

could. The common person's access to information is limited only by the amount of time and attention he or she chooses to invest. How does the information revolution in the twenty-first century change the relationship of modern societies to war? The information revolution has caused a diffusion of power from the state to the individual. The Internet and media revolution means that states have lost control of the nature and flow of information within their own societies.[33] They no longer possess the same kind of power they had to shape thinking in society. The individual who desires to receive information about war and transmit his or her views on it possesses the means to do both virtually instantaneously. Scenes of war appear right in the living room as they happen. At the same time, opinion polls in newspapers and television reflect public opinion with similar instantaneity. More crucially, information technology empowers people with the ability to mobilize and make their voices heard. During the Vietnam War, the first antiwar march in 1965 had 25,000 people, growing to half a million in 1969. Antiwar protesters in 2003 numbered more than 2 million over America and Europe—and this was before the war started.[34] If the constitutional republics in Kant's time lacked the means to voice their dissent to war, they definitely have it now, and those of tomorrow will have it in even greater abundance as information technology continues to advance. This phenomenon raises the cost of war in terms of public opinion.

Technology advancement in the field of intelligence, surveillance, and reconnaissance (ISR) has also diminished the prospect of war by taking away from the initiating party the element of surprise. This removes the significant advantage of the first mover and helps the defensive side. Cold War historian John Lewis Gaddis posits that this added transparency is the by-product of the Cold War strategic arms race, resulting in the creation of "a wholly new environment that rewarded those who sought to prevent wars and discouraged

those who tried to begin them."[35] With today's ever-improving global ISR capability, military mobilizations and missile launches are quickly detected and therefore more effectively defended against. This reduces the probability of a swift and decisive victory for those who seek to start wars and raises the cost of starting wars.

Nationalism

The post–World War II era is surely the age of nationalism. From 50 countries at the end of the war in 1945, the United Nations (UN) has grown to 192 member states today.[36] Since the UN was founded, more than 80 nations previously under colonial rule have joined as sovereign, independent states.[37] Henry Kissinger has said that in the emerging post–Cold War international order, "nationalism has gained a new lease on life."[38] At first glance, nationalism implies the notion of competition between states and would seem to increase the likelihood of war. However, nationalistic peoples resist conquest, colonization, or occupation and are therefore very costly to invade and rule over. This was a major reason why the American venture in Vietnam and the Soviet foray into Afghanistan both ended in failure. Those nationalistically inclined populations proved too formidable to conquer.[39] Another example of growing nationalism can be found in Iran. Whereas in 1959 the Central Intelligence Agency (CIA) was able to successfully stage a coup—without the use of any military force—against the regime of Mohammed Mossedegh in order to install the America-friendly Shah, it was prohibitively costly to do the same to Ayatollah Khomeini's nationalist revolution in 1979.[40] Today's nationalistically inclined populations will ensure that any victory by the aggressor will by no means come cheaply—if it comes at all. In today's context, nationalism is not the exclusive domain of states. For example, it can come in the extra-state form of Shi'a nationalism existent in

both Iran and Iraq or the nonstate Islamic nationalism advocated by Osama bin Laden.

Globalization and Interdependence

The striking point about globalization today is not its spread but the accelerating rate at which it is spreading. In this age, anyone contemplating war has to consider not only the effects on those directly involved, but also those second- and third-order effects on those not directly involved. Why does a country like South Korea send aid and peacekeeping troops to far-flung Iraq and Afghanistan, countries which are seemingly geopolitically unrelated to itself? It does so because, in the era of globalization, problems such as political instability anywhere in the world can generate secondary effects anywhere in the world. The Pulitzer Prize–winning author Jared Diamond says that because of globalization, the whole world has become one interdependent "polder," a term used to describe flood-prone reclaimed land; in the Netherlands, the polder requires the cooperation of all segments of Dutch society to keep the water out.[41] Any problem is now the world's problem. The rich interconnectedness of today's world ensures that the destabilizing effects of war will touch not only the direct participants. Many more players will also be affected, further escalating the cost of war.

Friedman improvised on his golden arches theory in 2005 by putting forward the Dell theory of conflict prevention: "no two countries that are both part of a major global supply chain, like Dell Computer, will ever fight a war against each other as long as they are both part of the same global supply chain."[42] He posits that countries woven into a global supply chain such as Dell's stand to lose much economically—and for a long time—if they go to war. Indeed, today's state of global interdependence ensures that each country's interests and well-being are enmeshed with many others'—whether intended or not. The hastening of

globalization would be an even greater restraint on military adventurism than prosperity. Countries that enjoy the benefits of globalization have ever greater incentives not to go to war and face ever greater costs if they do go to war.

Thus even in the absence of Kant's requisite of a constitutional republican system of government, there are already other substantial factors that discourage the use of force. The need to protect wealth and to provide freedom of information for the masses, along with the rise of nationalism, globalization, and global interdependence, all make kinetic options less useable in the competition between interests in this world.

Global Players

However, the war-deterring factors discussed above do not necessarily apply to all actors. In almost a fifth of the world's territories, the people are still living on less than five dollars a day, including those in the world hot-spots such as North Korea, Somalia, and Chad.[43] There will be countries that remain poor, enjoy no freedom of information, and resist globalization. Furthermore, the rise of combative nonstate actors such as al-Qaeda means that there exist asymmetric players who do not need to protect wealth and to whom interdependence with states does not apply. If there is to be any kinetic conflict, it would more likely involve a poor, backward nation, a nonstate actor, or both.

This point is substantiated by the record of wars that have taken place since 1945. In evaluating the status of war since World War II, Martin van Creveld in 1991 observed that the United States has been engaged in conventional wars only in Korea (1950), Lebanon (1958), Vietnam (1964–72), the Dominican Republic (1965), Cambodia (1972–75), Lebanon again (1983), and Iraq (1991). He argues that the United States is inclined to employ military force only in situations where its vital interests are not at stake.[44] Van Creveld also notes that

almost three quarters of all military conflicts since 1945 have been "low-intensity conflicts," which he characterizes as follows: first, they tend to occur in the less-developed regions of the world; second, they rarely involve regular armies on both sides; third, most of them do not rely primarily on high-technology weapons; and fourth, they are bloody and yield high death tolls.[45] Van Creveld also predicts that low-intensity conflict will be the predominant warfare of the future.[46] Political scientist John E. Mueller focuses on what he terms the "nonwars" that have taken place since 1945, pointing out that with a single minor exception—the Soviet invasion of Hungary in 1956—there have been no wars among the 44 wealthiest countries during this time. The wars since 1945, he claims, have occurred almost entirely in the Third World.[47]

There are great implications for the way the world conducts business. The use of military force is no longer likely to be profitable. Any use of kinetic actions is likely to be against poor, failed states or nonstate actors. Those who initiate such actions are at a severe disadvantage because their opponents have nothing to lose. The wealth, freedom, and connectedness that ostensibly favor their owner in war become the proverbial albatross around the neck that diminishes the will to fight. When developed states fight, they contend not only with an enemy that is willing to fight, but at the same time deal with their own constituents who are less willing to do the same. Indeed the track record of leading powers in such engagements, whether van Creveld's low-intensity conflict or Hammes' fourth-generation warfare, has not been good. The United States did not win in Vietnam, Lebanon, and Somalia; France lost in Algeria and Vietnam; and the Soviet Union had to pull out of Afghanistan.[48] The current global war on terrorism fits exactly into this mold: the developed world in conflict with a nonstate actor that tends to operate in weak and failing states.

Since kinetic methods are not preferred in the developed world and are deficient against poor, failed states

and nonstate actors, we must now look to nonkinetic means to secure interests, defend the homeland, and project power. However, I am not suggesting that kinetic methods are of absolutely no use against poor, failed states and nonstate actors. Rather, the indicators point to the notion that fewer kinetic operations may be better than more. Increasingly, the global actors of today and tomorrow need to look to the nonkinetic domain to serve their ends.

The Nonkinetic Domain: Soft Power and Then Some

The nonkinetic domain is wide ranging and far reaching. It consists of the diplomatic, information, and economic instruments of power, as well as the nonkinetic elements of the military instrument. Harvard dean Joseph Nye first coined the term *soft power* in 1990 as the "ability to get what you want through attraction rather than coercion or payments."[49] Three sources of soft power exist: culture, political values, and foreign policy.[50] For example, Spain's military presence in postwar Iraq is a way to boost its diplomatic profile and international reputation in the eyes of the world. Terrorism in particular, Nye says, depends crucially on soft power for its ultimate victory because it depends on its ability to attract support from the masses.[51] However, the nonkinetic domain is more than just soft power. Military deterrence and economic sanctions are examples of hard power in this domain that do not operate on the basis of attraction. They can be as effective as soft power methods in producing desired outcomes. Nye acknowledges that the key to success today and in the future is having the right combination of hard and soft power.[52]

Perhaps the Chinese military already has a grasp of the nonkinetic domain. In 2002 two senior colonels of the People's Liberation Army, Qiao Liang and Wang Xiangsui, published a book called *Unrestricted Warfare*.[53] Though captivated by the American-led coalition's

awesome victory in the first Gulf War, the colonels are unconvinced that abundant wealth and cutting-edge technology alone will tip the scales in war.[54] They suggest that, in the age of globalization and advanced technology, war has become indistinguishable from peace, combatants from noncombatants.[55] They see an expanded domain of security and conflict that includes "politics, economics, material resources, nationalities, religion, culture, networks, geography, environment, and outer space, etc."[56] Foreseeing a new methodology of future war, Qiao and Wang suggest a combination of no fewer than 24 methods of operation to wage war against the enemy.[57] They claim that "it is becoming obsolete to automatically consider military action the dominant means and other means supporting means in war."[58] Against a backdrop of globalization where the distinctions between combatants and noncombatants and between war and the lack thereof are virtually nonexistent, they regard unrestricted warfare, literally translated "no-limit war" (my translation), as the key to conducting warfare.[59]

In the midst of the ongoing information revolution, the information instrument of power deserves to be singled out as a rising and already-major element of nonkinetic warfare. However, there seems to be much confusion about this instrument. Certain students of warfare take information operations (IO) to include the entire domain of nonkinetic operations.[60] Others consider IO too narrowly based on the DOD-defined "core capabilities of electronic warfare, computer network operations, psychological operations, military deception and operations security."[61] Therefore, before proceeding with any further discussion on the use of information as an instrument of power, some clarification is in order.

Darley provides what is probably a more comprehensive description of IO as "a specific purpose and emphasis within an overall plan of action."[62] However, this description is about information at the operational level, which cannot be the be-all and end-all of the infor-

mation instrument. The operational level serves strategy; accordingly, IO serves a strategic level of the information domain. While operational art is the expression of strategy in the military realm, in the information realm IO ought to be the expression of information strategy. IO is about the means of acting out and communicating the message; information strategy is the message itself.

Arquilla and Ronfeldt attribute information strategy to two poles: technological, pertaining to cyberspace affairs; and ideas, pertaining to the harnessing and expression of soft power.[63] However, this paper posits that the technological realm is tied to the means of propagating the message and therefore ought to reside at the operational level; the other pole, ideational, correctly belongs to the strategic level of the information domain. Arquilla and Ronfeldt introduce the concept of the *noosphere*, the realm of the mind, and the term *noopolitik*, the politics based on ethics and ideas.[64] With knowledge fast becoming an ever stronger source of power, what may matter most in the information age is the "story" being told. In this era, instead of the one whose military wins, victory may go to the side whose message wins.[65]

Another prominent feature of the information age is the massive volume of information being exchanged and inundating the consumer. What is actually consumed among the mass of transmitted information depends on the information-filtration process of the individual. Whether information is received, believed, ignored, or distrusted depends on the standing of the sender in the eyes of the beholder.[66] *Reputation* and *credibility* will be the watchwords of power in the information age. In addition to a convincing story, the status of its teller will be important. A convincing story with an unconvincing teller will not convince. Neither will a compelling teller with an uncompelling story compel. The reputation and credibility factor relates closely to the diplomatic instrument of power. An actor's standing in the eyes of the global community,

augmented by the relations it keeps, will determine its success in having its message accepted.

The diplomatic instrument of power becomes ever more important in a globalizing world. The conflicts, problems, and security threats of today and tomorrow possess a transnational nature and exist in global proportions. Empowered by globalization, their purveyors are stateless, agile, and networked.[67] It is no longer sufficient to address them by national means alone; unilateralism will be less effective in a context of globalization. Solutions will increasingly be found in regional and global mechanisms of cooperation and coordination.[68] As such, diplomatic avenues will more and more be central to policy. The same applies to the pursuit of interests and the perpetuation of desired values. Kissinger, referring to the United States, wrote that the test of history will be whether it can turn its predominant power into international consensus and its own principles into widely accepted international norms.[69]

While the kinetic domain is less relevant today, the military instrument of power maintains a considerable role. Even in the nonkinetic domain, the military remains relevant. Its most prominent nonkinetic trait is the ability to deter without the kinetic application of force. A senior statesman, discussing the importance of American military presence to the peace and stability of the Asia-Pacific region, remarked that a military need not be physically used in order to be useful—its mere presence makes a difference.[70] Even if it is not used, it is at the back of leaders' minds and foremost in their calculations. Military power will always play a background role regardless of whether or not it is put to action. A skillful user can wield it effectively without having to bring it to bear on anyone.

The military is more than just an instrument to apply or demonstrate force. Its deployability and rapid response make it the best tool for projecting goodwill—supporting humanitarian aid, disaster relief, and reconstruction. Humanitarian aid and disaster relief efforts in Indonesia after the 2004 tsunami and in earthquake-ravaged Paki-

stan improved public opinion of the United States and its war on terror in those countries.[71] The ability of the military to react quickly and deploy far was crucial in getting timely aid to those regions. At times, getting aid to where it is needed is a race between adversaries. When the usually violent Mahdi Army of the Shiite cleric Moqtada al-Sadr was able to get assistance to victims of a sectarian attack before the Iraqi government and US troops, al-Sadr claimed the soft power that was up for grabs.[72] In most crisis situations, the military remains the most responsive and well-equipped agency to take action.

Taking a Leaf from the Last Long War

In 1979 Pope John Paul II visited his home country of Poland. Formerly Karol Wojtyla, he was the first non-Italian pope in 455 years, and perhaps more bizarrely, the leader of world Catholicism was a citizen from a socialist, atheist state. Gaddis writes that on the day of 2 June 1979, John Paul II "began the process by which communism in Poland—and ultimately everywhere else in Europe—would come to an end."[73] Clearly, Soviet dictator Josef Stalin underestimated the nonkinetic potential of a pope such as John Paul II when he disparagingly asked of the pope, "How many divisions has *he* got?"[74]

The popular perception was that, even though the two protagonists of the Cold War fought numerous wars with the other's proxies, they never engaged in a direct military confrontation. Gaddis asserts that there indeed was one instance of such a confrontation during the Cold War. Soviet fighters flown by Soviet pilots in the Korean War did exchange fire with American fighters. However, not only did the two superpowers consider nuclear war to be too catastrophic to start, conventional skirmishes in the air over a third country were deemed too dangerous to be made known. The Soviets and the United States agreed to cover up the fact that a kinetic encounter ever took place in the

skies over the Korean peninsula.[75] With both sides not willing to allow even a smidgen of kinetic exchange to exist in the public perception, one could, at that point, surmise that full-scale war between them was not likely—and one would be right. For the next 40 years, the two superpowers of the Cold War were content to slug it out in the nonkinetic realm until an outright victor was declared.

With both powers unwilling to fight, what was it that won the war for America? Though it remains unresolved whether the end of the Cold War signified the "end of history," Francis Fukuyama's claim that Western liberalism won an ideological victory over communism does aptly describe the war of ideas between the United States and the Soviet Union.[76] According to Fukuyama, the decline of totalitarian communism in the Eastern European states, China, and finally the Soviet Union left Western liberalism with no competitors in the ideological realm.[77] Fukuyama goes on to predict that this will lead to "the diminution of the likelihood of large-scale conflict between states."[78] Kissinger thinks the victory was won not only in the ideological realm but also on the diplomatic front. Soviet Russia would have been much stronger had the United States not protected its alliances and rebuilt democracies.[79] Yet another major factor was the weakness and vulnerability of the inflexible Soviet command economy, which the last Soviet leader Mikhail Gorbachev tried in vain to reform.[80] Overall, the primary instruments of power involved in the defeat of Soviet communism were the diplomatic, informational, and economic ones.

What then of the military role in this victory? Doubtlessly, the military instrument was applied kinetically, but this was done in support of the grand strategy of containment. When it came to direct confrontation with the Soviet Union, the American military played a largely supporting, nonkinetic, and indirect role. It supported the economic instrument of power through an expensive arms race that the Soviet economy was not able

to finance.[81] Its nuclear arsenal kept the Soviet's missiles at bay through deterrence. The American military instrument also supported the diplomatic instrument by offering nuclear protection to its European allies, thus keeping the anticommunist coalition together.[82] The long Cold War was clearly won in the nonkinetic domain, but though there was no overt use of force, the military instrument had no small role in this war.

Looking back, Gaddis points out that the Cold War was the point in history at which military strength ceased to be the defining characteristic of power.[83] The rapid progression of technology combined with a philosophy of caution in the face of apocalyptic nuclear destruction caused the nature of power to shift. In the intervening years between the end of World War II and the end of the Cold War, the power and means of survival of states transformed to much more than just the capacity to fight and win wars.[84] The Cold War showed in practice what the four global trends mentioned above show in theory: war is a lesser option in power projection today than it used to be. Even so, the Cold War also showed that the military instrument of power is by no means less crucial.

Implications and Recommendations for States and their Armed Forces

If the nature of power is shifting from kinetic to nonkinetic, there will be implications for the armed forces of today and the ways they transform for the future. By no means does this shift in the nature of power suggest that the kinetic domain is no longer relevant. In order for the military to be effective at all, the potential for causing devastating kinetic effects must exist. Even in the event kinetic capabilities are not used, military presence must be seen as credible in order to have any effect on the enemy. Thus the military's kinetic potential is a primary requisite that must be fulfilled before nonkinetic possibilities can be explored.

Few recommendations have addressed military transformation in the nonkinetic realm, but indications are that the military-intellectual community is coming around to the notion. William E. Odom's piece in 1997 was entirely about kinetic power, discussing military force structures.[85] In 2002 then-Secretary of Defense Donald Rumsfeld wrote that modern wars will increasingly require all elements of national power.[86] However, he stopped short of providing concrete suggestions on how the nonmilitary elements of power should be harnessed. Max Boot's ideas for transformation in 2005 contained nonkinetic elements such as human intelligence, media management, and nation building, together with other kinetic capabilities such as emphasizing irregular operations, increasing ground troop levels, and recruiting foreign fighters.[87]

Three recommendations are in order. The first is an interagency approach to projecting military power. While US security policy at the grand strategic level is coordinated by the National Security Council (NSC), there is not a similar interagency organization at the military-strategic level and below to translate and implement grand strategy in a coherent manner. The NSC is primarily an advisory unit whose design is multiagency—its non–White House members include the secretaries of state, defense, and treasury; chairman of the Joint Chiefs of Staff; and the director of national intelligence.[88] The assistant to the president for economic policy, attorney general, director of the office of management and budget, and the heads of other executive departments and agencies are invited to attend meetings when required.[89] Such an interagency model is essential to combining the other nonkinetic instruments of power with the military instrument. The Department of Homeland Security is such an entity, coordinating with myriad agencies including the NSC for the purpose of homeland defense.[90]

There are three possible approaches to an interagency model for military power projection. The first is to set up

an entirely new interagency security-coordination organization—staffed by members of all relevant agencies—which would be empowered to coordinate and direct interagency operations outside the homeland. A second possibility is to inject interagency officials into the military planning staffs at various levels in order to add the required nonkinetic element to military operations. The third is to establish military offices within relevant government agencies to act as liaisons and lend the military access to the other nonkinetic instruments of power. Irrespective of the approach, the critical factor underlying the interagency idea is the interagency mind-set to projecting power and answering challenges. Leaders of military and nonmilitary agencies have to develop the correct mentality for interagency processes and structures. This is a significant leap from present conventional wisdom and, therefore, would probably prove to be the greatest stumbling block to success. A gradual, phased-in approach is likely to be most practical.

The second recommendation is to assign a diplomatic role to the military. An organization that sees much action away from home, the military would not be out of place in this role. In fact, it is an undeniable responsibility for any agency operating outside the homeland. US regional combatant commanders already play a growing diplomatic role through activities such as hosting regional conferences on defense issues, providing training for friendly foreign militaries, and engaging foreign politicians in diplomatic dialogue.[91] Military-to-military relations provide additional and alternative diplomatic channels. Such channels are especially influential in countries where the military either holds sway over the civilian government or controls absolute power in the country, such as Myanmar, Pakistan, Thailand, and Turkey. The military diplomatic channel can be a surrogate means of bilateral contact when formal diplomatic relations turn frosty or break down altogether. Finally, the military can be a good way to express goodwill in

the forms of humanitarian and military aid, as well as to forge people-to-people relations through the bilateral or multilateral conduct of military exercises. Such relations increase diplomatic understanding and goodwill and are a source of soft power. Military leaders at all levels must be highly conscious of the diplomatic implications of military activities overseas. They ought to factor them into their calculations in order to fully exploit the diplomatic potential and at the same time avoid the possible diplomatic pitfalls.

The third recommendation is to develop a coherent information strategy, essential to synchronizing actions at all levels of both government and the military. Arquilla and Ronfeldt suggest that decision makers ought to be "thinking about information strategy earlier, and more often," thereby precluding the ineffective or inappropriate early use of other policy instruments.[92] Furthermore, armed forces for the information age must embrace the information realm, understand the information strategy, and be equipped to carry out the strategy. Troops will be required to be not only information conscious but also information savvy. In the information realm, even the individual soldier, sailor, or Airman can cause strategic effects—recall Abu Ghraib. To ensure that actions at all levels of operations are in accordance with the information strategy, a certain degree of indoctrination—equivalent to training and equipping troops to fight in the information realm—may be necessary. Each individual needs to be confident and possess sufficient conviction such that his or her words and actions become an expression of the message. The question of whether the job of indoctrination belongs to the commanders or a bespoke information corps is minuscule compared to the magnitude of the task. This issue will require much more discussion than this paper can provide if militaries are to pursue this end.

Conclusion

At this point, it is worth emphasizing that this paper does not suggest that the kinetic approach is no longer relevant. Neither does it propose that a strong kinetic military capability is of no use. It does point out that power consists of kinetic as well as nonkinetic elements. Furthermore, at this point in history, nonkinetic elements are becoming increasingly important, while conditions are becoming progressively less favorable for the use of kinetic options. Strength in the kinetic domain remains a necessary but insufficient condition for a successful modern military. The cultivation and strengthening of a nonkinetic aspect to its power will increase the military's relevance in today's context. At the same time, global trends point to the military acting more in a supporting role to the other instruments of power and less as the primary instrument.

Unfortunately, nonkinetic methods are underrated, especially in the military. Compared to kinetic methods, their consequences tend to be indirect and therefore sometimes do not produce immediately observable effects. Kinetic methods and their intended effects are much easier to grasp because they create direct, immediately perceivable effects. On the other hand, nonkinetic means tend to take longer to achieve their ends and therefore easily fall into disfavor. This is particularly true in democratic societies where impatient electorates demand quick results and governments strategize in four- to five-year time frames according to their electoral cycle. Moreover, the indirect nature of nonkinetic methods makes them harder to grasp and the effects harder to attribute. The challenge for modern militaries is to come up with the long-term solutions to achieve eventual victory and yet provide sufficient short- to medium-term successes to satisfy the government and the people in the intermediate. The temptation is to provide all the short-term answers at the expense of the long-term response—a dangerous

recipe. A greater grasp of the nonkinetic domain of warfare and conflict is essential if leaders are to find the correct combination of kinetic and nonkinetic elements in their strategy.

Notes

(All notes appear in shortened form. Complete citations are in the bibliography.)

1. Sun Tzu, *The Art of War*, 77.
2. Among the publications surveyed were Joint Publication (JP) 1-02, *DOD Dictionary*; JP 3-0, *Joint Operations*; JP 5-0, *Joint Operations Planning*; Army Field Manual (FM) 3-0, *Operations*; and FM 3-24, *Counterinsurgency.*
3. AFDD 2, *Operations and Organization*, 87.
4. Sun Tzu, *The Art of War*, 77–79, 82.
5. Clausewitz, *On War*, 119.
6. Ibid., 120–21.
7. Ibid., 86.
8. Ibid., 85.
9. Ibid., 643.
10. Ibid., 100.
11. Ibid., 75.
12. Ibid., 260.
13. Liddell Hart, *Strategy*, 319.
14. Ibid.
15. Ibid., 324.
16. Ibid., 325.
17. Lind et al., "Changing Face of War," 23.
18. Ibid.
19. Hammes, *The Sling and the Stone*, 16.
20. Ibid., 32–43.
21. Ibid., 208.
22. Quoted in Friedrich, *Inevitable Peace*, 251.
23. White House press release, "President and Prime Minister Blair"; and Clinton, State of the Union Address.
24. Nathan, *Soldiers, Statecraft, and History*, xi–xii.
25. Friedman, *The Lexus and the Olive Tree*, 248.
26. Ibid., 253.
27. UN Statistics Division, "GDP per Capita, Current Prices, US$," UN Common Database.
28. Copeland, "Economic Interdependence and War," 39.
29. Mueller, "Obsolescence of Major War," 24.
30. Pickering, *Britain's Withdrawal*, 18.

31. Angell, *The Great Illusion*, 247–48.
32. Friedman, *The Lexus and the Olive Tree*, 251.
33. Nye, *Understanding International Conflicts*, 256.
34. Lee, "How Protesters Mobilized."
35. Gaddis, *The Cold War*, 263.
36. UN, "UN Member States."
37. UN, "Basic Facts about the UN."
38. Kissinger, *Diplomacy*, 19.
39. Nye, *Understanding International Conflicts*, 11.
40. Paterson et al., *American Foreign Relations*, 277, 410.
41. Diamond, *Collapse*, 521.
42. Friedman, *The World Is Flat,* 421.
43. CIA, *The World Factbook 2007*.
44. Van Creveld, *The Transformation of War*, 14.
45. Ibid., 20.
46. Ibid., 205.
47. Mueller, "Obsolescence of Major War," 21.
48. Hammes, *The Sling and the Stone,* 3.
49. Nye, *Soft Power*, x.
50. Ibid., 11.
51. Ibid., 22.
52. Ibid., 147.
53. I omit the rest of the title from the text, as I suspect the words "China's Master Plan to Destroy America" in the translated version are an embellishment for the purpose of sensationalism. Nothing in the book suggests that the authors intend it to be a plan to "destroy" anyone.
54. Qiao and Wang, *Unrestricted Warfare*, 77.
55. Ibid., 25–43.
56. Ibid., 96.
57. Ibid., 123. The methods of warfare are atomic, diplomatic, financial, conventional, network, trade, biochemical, intelligence, resources, ecological, psychological, economic aid, space, tactical, regulatory, electronic, smuggling, sanctions, guerilla, drug, media, terrorist, virtual (deterrence), and ideological.
58. Ibid., 143.
59. Ibid., 191.
60. Robinson, "Death of Information Operations."
61. JP 1-02, *DOD Dictionary*, 257.
62. Darley, "Clausewitz's Theory of War," 73.
63. Arquilla and Ronfeldt, *The Emergence of Noopolitik*, 1–2.
64. Ibid., 4–5.
65. Ibid., 53.
66. Keohane and Nye, "Power and Interdependence," 89.
67. Naím, "Five Wars of Globalization," 29.
68. Allison, "The Impact of Globalization," 84.

69. Kissinger, "Our Nearsighted World Vision."
70. Leifer, *Singapore's Foreign Policy*, 108.
71. Kessler and Wright, "Earthquake Aid."
72. Raghavan, "Mahdi Army."
73. Gaddis, *The Cold War*, 193.
74. Quoted in Churchill, *The Second World War*, 121.
75. Gaddis, *The Cold War*, 60.
76. Fukuyama, "The End of History?" 1.
77. Ibid., 14.
78. Ibid., 18.
79. Kissinger, *Diplomacy*, 802.
80. Nye, *Understanding International Conflicts*, 135, 137.
81. Kissinger, *Diplomacy*, 800.
82. Ibid., 776.
83. Gaddis, *The Cold War*, 263.
84 Ibid.
85. Odom, "Transforming the Military," 54–64.
86. Rumsfeld, "Transforming the Military," 30.
87. Boot, "The Struggle to Transform," 107–17.
88. Sarkesian, Williams, and Cimbala, *U.S. National Security*, 119.
89. White House, "National Security Council."
90. Sarkesian, Williams, and Cimbala, *U.S. National Security*, 121.
91. Reveron and Gavin, "America's Viceroys," 2.
92. Arquilla and Ronfeldt, *The Emergence of Noopolitik*, 73.

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