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REDEFINING LAND POWER FOR THE 21st CENTURY

William T. Johnsen

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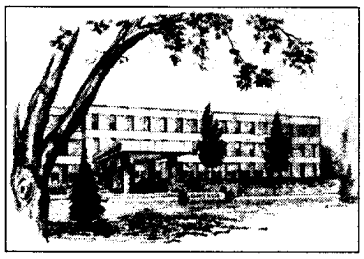

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Parochial partisanship and a lack of clear understanding of the individual components of military power or of their collective interrelationships have spawned debates over the future force structures of the U.S. Armed Forces. No official definition or general articulation of land power currently exists, but if national leaders are to have a fuller understanding of land power, its central role in the growing interdependence of military power, or the policy options that land power's versatility brings to security policy planning and execution, such explanations are imperative. Therefore, the author offers a definition of land power to meet the demands of the 21st century. He also places land power within the overarching context of total military power and highlights the growing interdependence among the components of national power, the strategic and operational versatility it offers policymakers, and its interrelationships with air and sea power.

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REDEFINING LAND POWER FOR THE 21st CENTURY

William T. Johnsen

May 7, 1998

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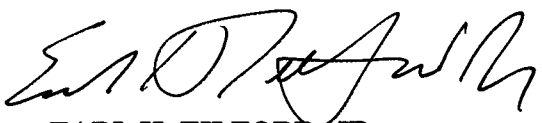
FOREWORD

Divisive debates over the future force structures of the U.S. Armed Forces have continued despite the Report of the Commission on Roles and Missions for the Armed Forces (May 1995) and the more recent reports of the Quadrennial Defense Review (May 1997) and the National Defense Panel (December 1997). Part of the reason for the bitter nature of these debates is due to parochial partisanship. Part is due to a lack of clear understanding of the individual components of military power or of their collective interrelationships. This latter conclusion may be particularly true for land power.

Responsibility for this misunderstanding does not always fall at the feet of outside observers. No official definition or general articulation of land power currently exists. And, because land power is self-evident to most who wear Army or Marine Corps green, they see little need to explain land power to a broader audience. But, if national leaders are to have a fuller understanding of land power, its central role in the growing interdependence of military power, or the policy options that land power's versatility brings to security policy planning and execution, then such explanations are imperative.

To help fill this conceptual gap, Dr. William T. Johnsen offers a definition of land power to meet the demands of the 21st century. While defining land power is his primary purpose, he also places land power within the overarching context of total military power. Additionally, he highlights the growing interdependence among the components of national power.

In placing land power is such a context, Dr. Johnsen seeks to spark an enlarged debate about land power, the strategic and operational versatility it offers policymakers, and its interrelationships with air and sea power. To this end, the Strategic Studies Institute offers this contribution to the ongoing debate.



EARL H. TILFORD, JR.
Acting Director
Strategic Studies Institute

BIOGRAPHICAL SKETCH OF THE AUTHOR

WILLIAM T. JOHNSEN joined the Strategic Studies Institute in 1991 and currently serves as an Associate Research Professor of National Security Affairs. He also held the Elihu Root Chair of Military Studies at the U.S. Army War College from 1994-1997. An Infantry officer before retiring from the U.S. Army, Dr. Johnsen served in a variety of troop leading, command, and staff assignments. He also served as an Assistant Professor of history at the U.S. Military Academy, and as an arms control analyst at Supreme Headquarters Allied Powers Europe (SHAPE). In addition to his SSI studies, he has published a number of journal articles on U.S.-European security issues. His most recent SSI studies include *U.S. Participation in IFOR, The Future Roles of U.S. Military Power and Their Implications,* "More Work in the Augean Stables" in Thomas-Durell Young, ed., *NATO's Command and Control Structures,* and *Force Planning Considerations for Army XXI.* His current research focuses on issues that surfaced during the Quadrennial Defense Review, especially those affecting the Army. Dr. Johnsen holds a B.S. degree from the U.S. Military Academy and an M.A. and Ph.D. in history from Duke University. He also is a graduate of the Armed Forces Staff College and the U.S. Army War College.

REDEFINING LAND POWER FOR THE 21st CENTURY

> . . . every age had its own kind of war, its own limiting conditions, and its own peculiar preconceptions. Each period, therefore, would have held its own theory of war . . .
>
> Carl von Clausewitz, *On War*[1]

INTRODUCTION

Whether the United States is entering an era marked by a "revolution in military affairs" or continues in the strategic interregnum of "the post-Cold War," a new theory of war will have to be developed to fit "the limiting conditions" and "peculiar preconceptions" that are emerging. To develop this new theory will first require defining land power and understanding its context within military power in the 21st century. That a definition of land power might be needed at this point in the evolution of warfare may seem odd. Readers outside the military, for example, may be surprised to learn that such a definition does not exist.[2] To many military practitioners, especially soldiers, the concept of land power is so ingrained that it is largely transparent. It has existed since our first ancestors used their fists, rocks, and sticks to defend themselves from attacks by predatory neighbors.

But the concept of land power may not be as self-evident as it first appears. For instance, the terms land power, armies, land forces, and land warfare oftentimes are used interchangeably. But, these terms are not synonymous. Moreover, interpretation of these terms, like beauty, often lies in the eye of the beholder, and soldiers, sailors, airmen, and Marines frequently have different perceptions. Even within large segments of land forces, interpretations will vary considerably depending upon whether one is a soldier or a Marine; has a strategic, operational, or tactical bias; is

from a combat, combat support, or combat service support branch; or serves in a particular unit or theater. These differing perspectives too frequently lead to divisive debates that reinforce convictions rather than clarify issues that will help make U.S. military power and its land component more effective.

Given these ambiguities and the dramatic geo-strategic and technical changes that are influencing modern conflict, this is an opportune time better to define land power. In doing so, it is important to remember that defining land power is much more than an academic exercise. If truly we are entering what many refer to as a "revolution in military affairs" (RMA), a fuller understanding of the critical dimension of land power is imperative.[3] Even if more evolutionary change in warfare is underway, grasping how land power must change will still be important. Moreover, if senior military and defense advisors cannot adequately place land power in the context of the emerging international security environment, national leaders may not understand how best to employ the military instrument of power. Nor may politicians be inclined to fund new and essential capabilities for meeting anticipated demands.

Defining land power also will help elucidate the growing interdependence of air, land, and sea power. This understanding should assist decisionmakers in determining how best to orchestrate the key components of the U.S. Armed Forces to promote and protect national interests. In short, before land power can be employed with utmost effect, military advisors and political officials must understand what land power is, what it is not, and what capabilities it offers in conjunction with the other components of military power.

To that end, this essay first offers an elaborated definition of land power. Second, the monograph examines the national and military elements of land power. Third, it assesses the strategic and operational versatility of land power. Fourth, the study examines the growing interdepen-

dence of the components of U.S. military power. Finally, by offering conclusions and recommendations, the essay hopes to spark an expanded debate on land power and its potential for promoting and protecting U.S. national interests in the 21st century.[4]

CONTEXT

Before defining land power, it is important to put the term in appropriate context. Just as military power is but one instrument of national power (the others being diplomatic, economic, and information),[5] land power is but one component of military power. At the strategic level, moreover, decisive results generally require orchestrating more than one component of military power (usually in concert with other instruments of national power). Thus, despite the claims of their more extreme advocates, rarely will land, air, or sea power, alone, be sufficient to promote, let alone protect national interests. Granted, cases may arise where one form of military power may play a dominant role. But for reasons that will be explained more fully later, those occasions will be rare.

The term "conflict," as opposed to warfare, generally will appear in this monograph. Conflict is a broader term that better describes anticipated conditions that range from peacetime competition (e.g., economic rivalries, diplomatic friction, and ideological antagonisms) through general war (to include the use of weapons of mass destruction [WMD]). Because modern militaries are being called upon to perform a variety of roles to meet these wide-ranging challenges, land power must be couched in similarly broad terms. While deterring and, if necessary, fighting and winning wars undoubtedly will remain the ultimate responsibility of the U.S. Armed Forces, focusing on that narrow perspective unnecessarily constrains the application of military power and its subordinate components. The broader connotation of conflict also encompasses efforts to shape the international security environment. Moreover, it includes the extensive

range of contingency operations that may respond to crises short of major theater war.[6]

In the future security environment, the employment of the U.S. Armed Forces will extend beyond conflict situations. Under the current defense strategy of shape, respond, and prepare, U.S. military power and forces oftentimes will be used in situations short of conflict. For example, most shaping activities (e.g., Partnership for Peace, combined exercises, military-to-military contacts, and humanitarian assistance) and many conflict prevention and resolution activities (such as arms control, confidence building measures, and many forms of peace operations) will involve the employment of military forces rather than the application of military force. Such cases fall under the general rubric of military operations.

Modern conflict will continue to be waged predominantly in the long-standing physical dimensions of air, land, and sea. Increasingly, however, outer space and cyber-space will assume greater importance in peace, crisis, and war. While these two dimensions are important, they are not yet ready to be considered components of military power in their own right. Although air power advocates may argue that air and space are simply a continuum that should be referred to as aerospace,[7] this conclusion will remain a bone of contention. Space overarches all physical dimensions, and land and sea power already exploit the possibilities inherent in space, and their use of space undoubtedly will increase.

Similarly, it is too soon to conclude definitively that the use of cyber-space will be a discrete dimension of conflict. Information may be viewed more appropriately as a tool that supplements, complements, and, indeed, permeates the existing components of national and military power. To consider information as a separate dimension or an independent component of military power eventually may prove counterproductive, especially if information becomes an end, rather than a means to an end.[8]

LAND POWER: A DEFINITION FOR THE 21st CENTURY

In defining land power, a number of approaches could be used. On the one hand, specific components of military power could be defined in terms of the types of forces employed: land forces equate to land power, air forces to air power, and maritime forces to sea power. Such an approach is far too restrictive and fosters unnecessary inter-service squabbling. Moreover, it fails to take into account the capabilities of modern forces. Aircraft drop bombs or fire missiles at ground targets. Army air defense systems protect ground forces and bases, but they attack objects in the air. Amphibious assaults spring from the sea, but are directed against land objectives. Aircraft can attack targets at sea.

On the other hand, a definition could stem from the particular medium in which operations are conducted. But this approach would quickly become dysfunctional. For example, Army helicopters fly through the air, but their fires facilitate ground maneuver. Ships sail the sea, but carrier-based aviation operates in the air, and sea-launched cruise missiles strike targets on land. And, while airplanes fly through the air, much of their weaponry is directed at the ground.

Alternatively, a definition could focus less on where a force operates and concentrate, instead, on where the effects are realized. For example, Air Force or Marine aircraft perform interdiction or close air support missions to influence ground operations. Similarly, a Tomahawk Land Attack Missile (TLAM) is launched from a naval surface or sub-surface platform, but its effects are brought to bear on land. And, obviously, most land force systems effect ground operations. Thus, focusing on where effects occur increases the scope for examining land power and makes possible a more inclusive definition, to wit:

Land Power:

The ability in peace, crisis, and war to exert prompt and sustained influence on or from land.

The explanatory words have been chosen with care. As indicated earlier, land power means more than land forces. It is a broader term that synergistically subsumes a wide array of forces, organizations, and capabilities, as well as the mobilization, industrial, technological, and sustainment bases that support them. "In peace, crisis, and war" illustrates that land power has tremendous utility beyond its ultimate responsibility of fighting and winning wars, and suggests great versatility. "Prompt influence" signifies the critical capability for land power to respond quickly to emerging crises. Obviously, "sustained influence" must be the goal if land power is to make lasting contributions.[9] The phrase "on and from land" offers two key, but distinct points. "On land" is more self-explanatory: power will be used to exert influence over people, property, and events on land. Exerting influence "from land," on the other hand, infers that power can be exerted beyond the confines of terra firma, influencing events on the seas and in the air.

This last distinction is not a ham-fisted attempt to steal "turf" away from air and sea power. As will be discussed below (Interdependence), it highlights that in the modern age the capabilities of the components of military power are converging rather than diverging. Therefore, the capabilities inherent in each component are able to extend beyond the bounds of their traditional medium to affect outcomes in other dimensions.

ELEMENTS OF LAND POWER

Land power stems from a wide variety of factors. For convenience, these determinants will be divided into the

Elements of Land Power

National Elements
- Geo-strategic Conditions
- Economic Power
- Population
- Form of Government
- National Will

Military Elements
- Ground Forces
  - Army, Marines

national and military elements that, in aggregate, contribute to land power.

National Elements. At the national level, a broad range of factors contribute to land power. Historically, for instance, *geo-strategic conditions* have exerted considerable influence over which component would be the most dominant form of military power. Continental powers historically have relied primarily on land power.[10] States or empires with extensive access to the seas frequently maintained a considerable sea-based force and sought to establish themselves as sea powers.[11] At the dawn of the 21st century, however, distinctions over whether the United States is a continental or a maritime power are increasingly irrelevant. The United States has global interests. Because of the diverse geography and geo-strategic conditions of where U.S. national interests lie, the United States will have to possess all components of national military power. Thus, the more pertinent question is not which form of military power should predominate, but what proportion of forces and power will be most effective in meeting the specific conditions of a particular event or crisis.

Economic power obviously has a defining influence on the ability to build and sustain military power. This stems not only from the general state of the economy, but extends into how much of that economy is devoted to military power, in general, and land power, in particular. The extent of the military and civil industrial base (especially the degree to which the civilian base can be converted easily to military use) also will contribute to or detract from land power. So, too, will the ability to generate and sustain technological innovation over time. Finally, the economic infrastructure,

particularly communications, transportation, and financial networks, will influence the ability to project land power.

Population and the ability to mobilize that population for economic and military ends also will affect land power. Obviously, the traditional markers of size, distribution, demographics, class structure, and education will influence the degree of economic power and personnel available for military use.

The *form of government* affects the nature of land power, as well as how it may be employed. Authoritarian political systems, for example, may depend heavily upon land power to maintain their regimes. Thus, they pose a threat to their populations, as well as to their neighbors. This may result in bifurcated force structures capable of offensive operations against neighbors, as well as gendarmerie or heavily armed security forces for internal control. Conversely, democratic governments may have little or no call to use their military domestically other than for disaster relief or support of civil authorities. Externally, despite the notion that democratic nations have less propensity to use military power, they will resort to force when their national interests are at stake. And, they will structure their forces for offensive, as well as defensive purposes.

The *national will* to use land power, particularly in the modern age, will have a significant influence on its eventual employment. In sum, the best manned, equipped, and trained force in the world can be largely irrelevant without the national will to wield that potential; or, at the least, not to oppose its use.

Military Elements. The *core of land power* obviously stems from the ground forces (Army and Marine; active and reserve components) that are available. But ground forces, alone, do not represent the full extent of a nation's land power. Instead, land power should be conceived in terms of ground forces operating jointly with the other elements of the U.S. Armed Forces, in coalition with allies and partners, in conjunction with government agencies, and in collab-

oration with international organizations to promote and protect national interests.

The *institutions that generate and sustain those forces* are equally important to land power. In short, the recruiting, training, equipping, maintaining, and sustaining functions that generate and undergird the capabilities of the fighting force are equally essential for creating and sustaining land power. Also important are the doctrinal procedures and systems that create and sustain the common cultural bias that allows forces to operate most effectively. Less well-understood, but absolutely critical to an effectively functioning force, are the leadership, discipline, and morale that bind the force together. Also, for a nation with global interests, the ability to project forces to the point of crisis in sufficient time to act effectively and to sustain those forces constitutes a key element of land power.

The *human dimension* of military power deserves special emphasis.[12] This category goes beyond population and numbers. Modern militaries, but especially their land power components, depend heavily on the ability of innovative, adaptive individuals who can react quickly to rapidly changing conditions. To be successful, land forces must recruit and retain high quality personnel, who are trained and molded into cohesive teams. This cohesion stems from individual and collective morale and esprit de corps that creates a synergistic whole far greater than the aggregate of individual talents.

Without this reservoir of talent, land power cannot hope to prevail. Indeed, land power, more than the other components of military power, depends upon human interaction and innovation for success. Assuredly, all components of military power rely upon high quality personnel; but there is one key difference. Air and sea forces essentially are built around weapons systems or support platforms which require people to operate them. Land forces, conversely, tend to recruit people and then equip them.[13] In large part, this philosophical approach stems

from the condition that land power, quintessentially, is concerned with changing or controlling human will.

This human dimension gives land forces tremendous versatility. Moreover, the human dimension inherent in land power (and its forces) is vital for performing missions and tasks that are personnel intensive or require close human interaction (e.g., peace operations, humanitarian assistance, reassurance, or support to civil authorities.) And, one must point out, air and sea forces cannot perform many of these missions and tasks effectively, if at all.

THE STRATEGIC AND OPERATIONAL VERSATILITY OF LAND POWER

Defining land power and describing its key elements provide only a start in understanding the concept. A more detailed explanation of the strategic and operational versatility inherent in land power, and the wide range of options that it offers decisionmakers, is critical for grasping its fuller dimensions. Only by gaining such an understanding will it be possible to place land power in its proper context within all components of military power.

First and foremost, land power can be employed effectively across the entire spectrum of conflict (Figure 1) and throughout the range of military operations (Figure 2) from support to domestic authorities to peacetime engagement activities to shaping the international security environment, to responding to smaller-scale contingencies to joint and combined operations in a major theater war. Moreover, because of the ability of land forces to work with agencies of the U.S. Government, international organizations, and nongovernmental and private volunteer groups, land forces also offer great flexibility in crises along the lower portion of the conflict spectrum.

This versatility is best demonstrated, perhaps, in land power's contribution to the important roles that the U.S. military can be expected to perform in the 21st century.[14] In

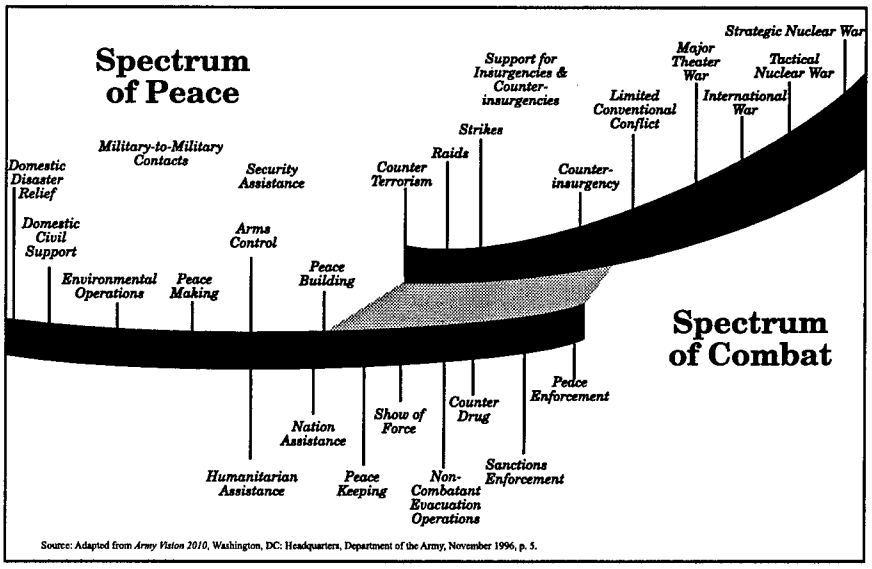


Figure 1. The Military Spectrum of Conflict.

shaping the international security environment, for instance, land power offers the highest level of U.S. commitment to allies, partners, and friends.[15] Forces that contribute to land power also offer great flexibility in undertaking activities that build trust and confidence between the United States and potential adversaries. The presence of air and sea power also can reassure allies or deter opponents. However, although air and sea power are viewed as important, they are also transient demonstrations of U.S. resolve. Furthermore, many nations, particularly continental nations or powers who do not have a long tradition of relying on air or sea power, view land power as the ultimate guarantor.[16]

This is not to argue that air and sea power do not contribute to shaping activities. U.S. air and sea forces, for example, are key contributors to humanitarian assistance operations. Few organizations in the world have such capability to move massive amounts of supplies as quickly and as effectively to the point of natural or man-made crisis. Equally, air and sea power, individually or in combination

	Military Operations	General U.S. Goal	Examples
COMBAT	*War*	Fight & Win	Large-scale Combat Operations: Attack / Defend / Blockades
NONCOMBAT	*Operations Other Than War*	Deter War & Resolve Conflict	Peace Enforcement / Noncombatant Evacuation Operations (NEO) / Strikes / Raids / Show of Force / Counterterrorism / Peacekeeping / Counterinsurgency
		Promote Peace	Antiterrorism / Disaster Relief / Peacebuilding / Nation Assistance / Civil Support / Counterdrug / NEO

Source: Joint Publication 3-0, *Doctrine for Joint Operations*, February 1, 1995, p. I-2.

Figure 2. Range of Military Operations.

with the other components of national military power, help promote stability in key regions of the world through exercises, information sharing, and military-to-military contacts. Air and sea power also provide capabilities needed to prevent or reduce conflicts and threats.

Land power will continue and likely increase its long-standing contribution to deterrence.[17] This will be due largely to the fact that many regional powers that may confront the United States are predominantly land powers. And, one must recall, deterrence depends as much upon an adversary's perception as it does on friendly capabilities and will.[18] This is not to argue for land power's dominance in deterrence. Certainly, the nuclear portion of deterrence provided by air and sea power will remain critical to U.S. deterrence capabilities. And, they will continue to make major contributions to conventional deterrence. This point simply underscores land power's ability to deter across a wider portion of the conflict spectrum than may be the case with the other components of military power.

Land power offers similar versatility in fulfilling the compellence role. Land power can respond to low-level conflict, conduct all missions associated with peace

operations, participate in smaller-scale contingencies (such as raids, strikes, or limited campaigns) or help prosecute a major theater war. Naturally, the effectiveness of land power's contribution will vary with the conditions, as will those of air and sea power. The emphasis here is that land power can compel effectively across the entire conflict spectrum, providing national leaders an extensive set of options for responding to a particular event or crisis. Equally important is understanding that to many potential adversaries land power represents the ultimate form of compellence.

The importance of shaping, deterrence, and compellence roles oftentimes overshadows the support to the nation role. Once again, most of these tasks fall to the forces that comprise the basis for land power. The other components of military power contribute, but the reality is that the capabilities inherent in air and sea power and the environments in which they operate limit their ability to perform most support roles. Thus, the greatest portion of these missions and tasks fall to land forces, specifically the Army.[19]

In sum, land forces can perform effectively all anticipated roles that the U.S. Armed Forces may be called upon to perform. Moreover, because land forces are highly effective throughout the entire spectrum of military conflict, they offer national officials the greatest versatility in meeting the anticipated demands of the future security environment. Indeed, land forces can execute missions and tasks that air and sea power can effect only marginally, if at all. (See Figure 3.) This versatility translates into more options available to decisionmakers as they formulate and execute policies.

Land power's versatility translates into more options available to decisionmakers as they formulate and execute policies.

Of course, land power is not without its limitations. When

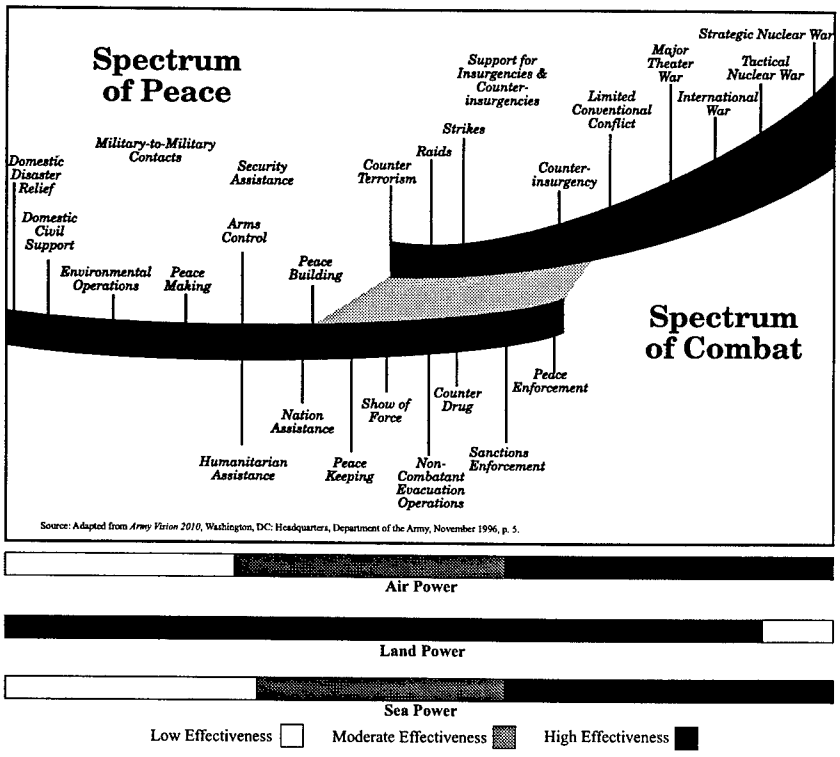


Figure 3. Effectiveness across the Military Spectrum of Conflict.

projected beyond home shores or overseas bases, it depends upon air and sea power for deployment, as well as long-term sustainment and support. Without friendly control of the air and seas, land force operations are difficult, if not impossible, to carry out and sustain.[20] When engaged in most smaller-scale contingencies and, certainly, major theater war, land power depends heavily upon the capabilities that air and sea power bring to the conflict.

Employing ground forces also can present a number of obstacles. Because land forces represent the highest perceived level of U.S. commitment—domestically, as well, as externally—conditions may have to reach crisis proportions before adequate land power is used. This may inhibit earlier employment which might have eased circumstances before they erupted in full-blown crisis. Or,

deployment of insufficient land forces may encourage an aggressor to act before forces are fully capable of responding. Thus, the employment of land power demands thoughtful and carefully considered policy decisions by civilian authorities.

The perceived potential for higher levels of casualties among ground forces (versus, e.g., individual pilots) also may inhibit the use of land power. Certainly, concern for friendly casualties has always influenced the application of military, but especially, land power. Since the end of the Cold War, particularly when U.S. ground forces have been committed when less than vital national interests have been at stake, anxiety over U.S. casualties has reached significant levels. Whether this trend will continue is an open question, but it is possible that such concerns could spill over into crises where important or vital U.S. interests are involved.[21] And, as the Khobar Towers bombing in Saudi Arabia (1996) and the supposedly inadvertent Iraqi attack on the U.S.S. Stark (1987) illustrate, air and sea force are not invulnerable to such casualties.

On balance, however, land power offers considerable strengths. Land power, in concert with air and sea power, can conduct prompt and sustained joint and combined operations during peace, crisis, and war. Land power also is fundamental for implementing the current (and projected) defense strategy of shaping the international security environment, responding to the full spectrum of crises, and preparing now for an uncertain future. It offers significant contributions to the key roles of supporting the nation, shaping geostrategic conditions, and deterring or compelling adversaries. Land power also offers the greatest operational and strategic flexibility across the spectrum of conflict, throughout the full range of military operations, and in all roles that the Armed Forces of the United States can be expected to perform.

INTERDEPENDENCE.[22]

Interdependence

Orchestrating the appropriate components of military power in ways that achieve desired results.

Land power cannot be understood in isolation. As indicated earlier, the synergism that results from the appropriately orchestrated components should guide the application of U.S. military power. This orchestration is termed interdependence, which is best illustrated, perhaps, using the metaphor of a tapestry. The respective Services represent the threads that make up the tapestry. Thus, they are essential for creating the tapestry. Individual threads, however, cannot create a picture. Even collectively, a picture emerges only when the threads are woven in a carefully planned and executed pattern. Extending the metaphor to demonstrate the extensive capabilities inherent in interdependent operations of the Services, any number of threads and patterns can be combined to create endless varieties of pictures.

Ironically, orchestrating these multiple capabilities will be both easier and harder as the clear distinctions between the components of military power continue to blur. For example, from ancient times through the mid-20th century, states exercised sea power primarily against other ships. Granted, limited operations could be undertaken against coastal fortifications and ports, and amphibious operations occasionally were conducted. But the application of sea power on land was limited to a fairly narrow coastal strip. Today, carrier based aviation and cruise missiles extend the reach of sea power asymmetrically deep into the hinterland and airspace of most states. Amphibious operations can reach well beyond shorelines to strike deep into littoral areas, as well. Thus, sea power extends into the air and ground dimensions of military power.

Similarly, in its infancy, air power was primarily concerned with reconnaissance against ground forces. Quickly, however, the ability to attack ground targets from the air opened up the possibility of influencing land combat.[23] Eventually, the range of aircraft permitted air forces to strike deep into an opponent's territory directly to attack its war-making potential. These capabilities also allowed similar missions far out to sea. The advent of intercontinental bombers, atomic weapons, and missiles provided air power strategic reach—in the air, on land, and at sea.

In the last half century, land power also has moved well beyond the confines of ground operations. Today's armies possess missiles that range the upper reaches of the atmosphere to counter opposing aircraft and to provide ballistic missile defense. Many armies also hold significant air power in the form of transport and attack helicopters. Indeed, the dividing line between close air support of ground operations provided by fixed-wing combat aircraft and helicopters continues to blur. And, the addition of ground-to-ground missiles of increasing range, precision, and lethality may further reduce air power's role in supporting land warfare.[24] The likelihood of helicopter-to-helicopter or helicopter to fixed-wing combat aircraft engagement further smudges the dividing line between air and land power. Land power also provides security for air bases, and, historically, land power asymmetrically has denied enemy air forces operating bases.[25]

Similarly, land and sea power are interlinked. Land power historically has defeated sea power by taking enemy harbors and sea ports from the land.[26] Additionally, ground-based anti-ship missiles have considerable potential to influence operations at sea; especially in the littoral regions. That influence undoubtedly will increase as technology improves.[27]

The critical issue facing future national leaders and military planners, therefore, is not identifying which

element of military power—air, land, or sea—will dominate the future security environment. Indeed, such arguments and discussions—usually conducted with intense passion—engender much ill-will and usually are counter-productive. Simply put, in most cases along the conflict spectrum, more than one type of force and power will be required. The key question will revolve around how best to blend the components of military (and usually national) power to provide the desired result?[28]

This broader view of military power and the relationships among air, land, and sea power is reflected in Figure 4. This notional diagram conveys a number of key concepts. First, military power is composed of the three subordinate

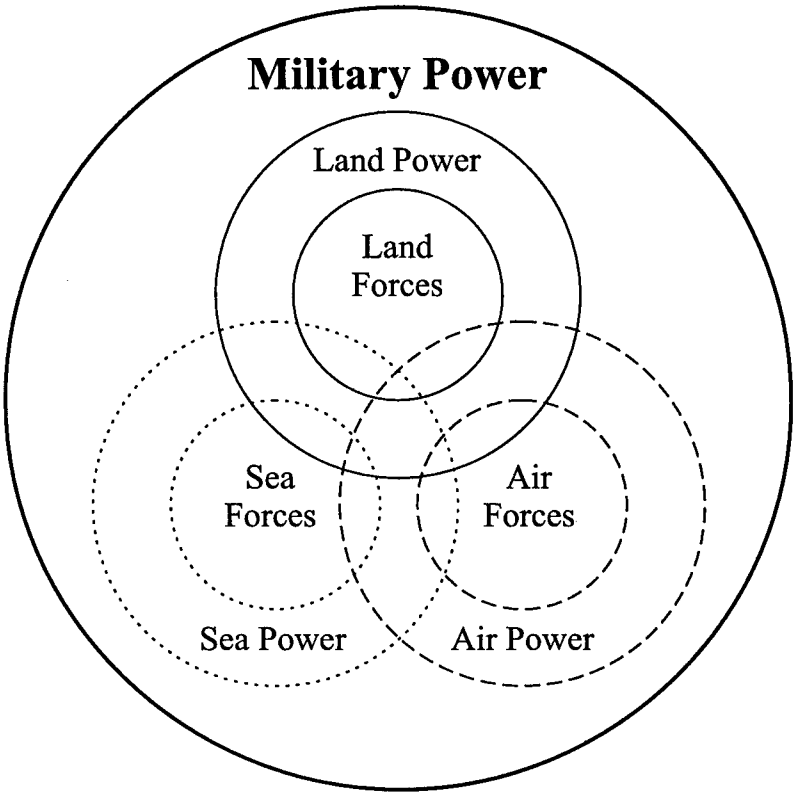


Figure 4. The Components of Military Power and Their Interdependence.

components of power: air, land, and sea. Second, specific force types provide the basis for component power, but they do not automatically equate to power (i.e., land forces are subsumed within but do not equate to land power). Third, the intersection of a force type with another component indicates that forces can contribute to other components of military power, as well (e.g., air forces with land or sea power). Fourth, the elements of power are interdependent; thus, military power stems from the synergistic and mutually supporting interaction of the three components.

Although not portrayed on the pictograph (for reasons of clarity), but equally important for understanding how power can be generated and applied, are the other instruments of national power (political, economic, and diplomatic). These instruments could intersect the outer circle of military power, or one or more of the components, depending upon the particular conditions. But, again, the message should be clear: it is the blending of suitable tools, not an individual instrument, that usually leads to success.

Obviously, in such a notional chart, air or sea power could have been depicted as the central point. The actual distribution of responsibilities would vary according to the missions, tasks, desired outcomes, and specific conditions, such as: potential opponent, terrain or environment, forces at hand, time available, and national policy objective to be attained. In certain cases, therefore, it might be possible for one type of force or element of military power to predominate in a particular mission. For example, in conducting Operation Deny Flight over Iraq, air power –whether land- or sea-based—plays a predominant role. In Haiti, land and sea power initially cooperated closely, but after landing the 10th Mountain Division, air and sea elements switched to a supporting role, and the operation relied predominantly on land power. The

The relationship among the components of military power is dynamic and will adjust to fit the conditions of a particular situation.

latter example emphasizes that the relationship among the components of military power is dynamic and will adjust to fit the conditions of a particular situation.

Despite the interdependence that will characterize most modern military operations, planners still must be able to capitalize on the strengths and minimize weaknesses of the individual components of military power. To do this, they must understand the capabilities inherent in each type of military power, how they best can be orchestrated to produce desired outcomes, and how to prevent an adversary from exploiting potential vulnerabilities.

Under certain conditions, one element may predominate over others. For example, conflict in restricted terrain such as mountains and cities, especially where "collateral damage" is a concern, may limit most activity to land forces. Similarly, within certain smaller-scale contingencies, such as humanitarian assistance, peace support, peace enforcement, or counter-insurgency operations, land forces may have much more utility than technologically-based forces, which may be better suited to punish or compel. Equally, air and sea power have areas that will remain largely their preserve. Control of the air and sea will remain largely the functions of forces that contribute to air and sea power. Large-scale air transportation will be an air power capability, as sea transportation will depend upon sea power. And, unless circumstances or technological developments change dramatically, sea power will provide the means to carry out amphibious operations.

Notwithstanding the increased interdependence of the elements of military power, policymakers and military practitioners must ensure that they do not take the principle to unnecessary extremes. The ultimate objective of military power is to achieve national policy objectives with greatest efficiency and, more importantly, effectiveness. Pursuit of a joint operation simply to ensure that all services get "a piece of the action" is highly counterproductive, and can be catastrophic.[29] At the risk of repetitiveness, the

capabilities required to execute a particular task or mission should drive the types of forces selected. To avoid unnecessary overlap or redundancies, it should be acceptable to keep all or portions of a mission within a single service if that contributes to greater simplicity in planning and execution.[30] Where capabilities do not exist within a single service or component of military power, then a blend of capabilities from the relevant forces should be orchestrated to achieve the ultimate objective(s).

Furthermore, despite the increasing interdependence of the components of military power, complete overlap will not exist for the foreseeable future. Each component will retain unique capabilities that cannot be matched completely by the other components of military power. A key requirement will be to identify which unique capabilities will be required, to determine how best to retain them, and understand how they might be applied. At the same time, where overlapping capabilities exist, military officials must identify which ones will provide needed reinforcing capabilities and which ones can be eliminated.[31]

CONCLUSIONS: LAND POWER—A MEANS TO AN END, NOT AN END

As the preceding discussion indicates, defining land power for the 21st century is an important issue. A good definition expands individual understanding of land power. Along with an explanation, the definition illuminates land power's contribution to military power. A more detailed understanding of land power also highlights its versatility and the options that such versatility offers national leaders.

Defining land power from the perspective of where effects are brought to bear increases the breadth of examination and understanding of the term. It also broadens the concept of where and how land power might be applied, as well as the extent to which land power can be applied. Moreover, it offers a better grasp of how land power can

interact with the other components of military and national power.

Of all the components of military power, land power offers the widest application across the conflict spectrum. Equally, land power operates most effectively throughout the full range of military operations. These qualities enable land power to contribute significantly to all roles that the U.S. Armed Forces can be expected to perform in the 21st century. Given anticipated trends, of all the components, land power is best suited for shaping the international security environment. And, in crisis land power is the ultimate arbiter of events on land. In sum, land power helps promote and protect U.S. national interests every day, in peace, crisis, or war.

Perhaps land power's greatest contribution to overall national military power is its inherent versatility. This versatility stems from the types and range of activities land power can undertake, and the ability of land forces quickly to adapt existing organizations to meet the demands of a particular mission profile or rapidly changing tactical, operational or strategic conditions. This versatility offers national leaders a range of options for handling opportunities or crises that cannot be matched by the other components of military power, which are limited by the dimensions in which they operate or the nature of their equipment. While land power can be similarly limited, the fact remains that people and the things they value reside on land; only temporarily are they in the air or on the water.

Land power's versatility is especially pronounced along the lower portions of the conflict spectrum. Here, operations rely less on a technological response from a "system of systems" that masses deadly effects and more on human interaction, which land power is best-suited to supply. This may be especially true for most peacetime engagement and shaping activities. Similarly, less threatening, but ubiquitous low-level conflicts rely on the human capacity to react quickly to a highly fluid and nuanced environment to

produce decisive results. Furthermore, in many smaller-scale contingencies, sometimes substantial numbers of personnel may be more effective than technological solutions (e.g., people are more effective than laser guided bombs at separating and then developing effective working relations between formerly warring parties).

But defining land power is not an end unto itself. A good definition also is the first step in building a concept for understanding how land power meshes with air and sea power to create interdependent operations where the whole is greater than the aggregate capabilities of the three. Thus, while the central thrust of this analysis has been to define land power and better to grasp its capabilities, a consistent sub-theme is that this understanding serves a higher purpose.

That sub-theme has *not* been to exaggerate the capabilities inherent in land power or to divide the "military power pie" into better defined, but increasingly irrelevant pieces. Rather, the discussion has placed land power in its appropriate context, underscored its strengths, acknowledged its weaknesses, and elaborated its interdependence with air and sea power. All of this is intended to assist national leaders in making informed decisions on how best to orchestrate the components of military power to achieve national and military objectives.

Rarely will such orchestration be easy. It will be necessary to strip away the more extreme or aggressive claims of advocates of a particular component of military power, and to identify which capabilities are best suited for a particular task. Because of the dynamic nature of conflict and conditions, such deliberations will be necessary for nearly every new mission. Thus, these "jurisdictional battles" will have to be fought repeatedly. And, while they must be debated, they cannot be allowed to degenerate into inter-Service "turf battles" so common over the last half century.

Complicating these efforts is the fact that roles and missions equate to budget authority and programs. As budgets remain stagnant, or more likely continue to shrink, inter-Service rivalries over which component of military power can best meet the needs of the nation are unlikely to abate. And, while competition can be good for the Services and the nation, descending deeper into parochialism over which individual component of power can dominate all mediums is counter-productive. Instead, analysts need to develop a more unified understanding of the relationships between and among the components of military power.

This interdependence of the components of military power will become increasingly pronounced, indeed, imperative if the United States is to respond effectively to the anticipated demands of the 21st century security environment. Only by thoroughly understanding land (and air and sea) power will the U.S. Armed Forces be able to move beyond the current concept of joint operations into the realm of interdependence. And, given, anticipated budget constraints and demands of the international security environment, interdependence will be a necessity.

But in evolving toward interdependence some key cautions bear emphasis. First, interdependence does not mean the complete merging of Services or the disappearance of unique forces. There will continue to be missions or tasks that only soldiers, airplanes, or ships can accomplish. Thus, in a drive to interdependence we must ensure that these unique capabilities are retained.

Second, interdependence means more than simultaneous use of all forms of power. It means orchestrating the appropriate components of military power in ways that achieve desired results. In some cases, this may mean that a single component of military power will dominate. In others, it will require the careful orchestration of two or more components to achieve decisive results.

Third, the driving factor for the employment of the various components must stem from the objective to be

achieved and the prevailing conditions, not simply to ensure that particular forces or components of power participate. Missions and tasks must be assigned based on the optimum mix of capabilities required to achieve the specified military objective, not according to some predetermined or artificial formula. Especially, missions and tasks should not be meted out solely to ensure that each component participates. Under certain conditions, especially where the unique capabilities of ground forces are needed, land power may predominate. Under others, it will perform a supporting role. In still others, where air and sea forces possess critical capabilities that ground forces do not, land power may play little or no part.

Fourth, true interdependence requires keeping the components of military power, to include the forces that contribute to them, in appropriate balance. This will not be easy. The combination of American infatuation with technology and the political windfalls (i.e., well-paying jobs) to be reaped from hundreds of billions of dollars of defense contracts may skew procurement toward high-technology systems. The rising costs of acquiring such technologically sophisticated equipment, when coupled with the likelihood of flat or shrinking defense budgets, may squeeze out funds for land forces. The fact that soldiers and their equipment usually lack similar high-tech appeal will compound this dilemma. This could throw the components of military power out of balance, thereby jeopardizing the ability of the military instrument to fulfill its roles.

While important, these cautions are not major hurdles. They can be addressed. How and when they are examined should be part of the expanded debate over land power and its role in interdependence. And, these debates are needed. But if informed decisions are to be made by national leaders, it is imperative that these debates focus on the merits of the arguments and not on narrow-minded bias.

Let the real debate, not parochial posturing, begin with this proposed definition of land power.

ENDNOTES

1. Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter Paret, Princeton: Princeton University Press, 1984, p. 593.

2. Joint Publication 1-02, *The Department of Defense Dictionary of Military and Associated Terms* (hereafter JP 1-02), Washington, DC: Government Printing Office (hereafter GPO), March 24, 1994, does not contain a definition of the term land power. A search of official Army documents reveals numerous uses of the term, but no definition. Nor did a search of the internet yield a definition. Although not exhaustive, the search indicates a gap in that needs to be filled. JP 1-02 does contain a definition of "land control operations: The employment of ground forces, supported by naval and air forces, as appropriate, to achieve military objectives in vital areas. Such operations include the destruction of opposing ground forces, securing key terrain, protection of vital land lines of communication, and establishment of local military superiority in areas of land operations." *Ibid.*, p. 211. JP 1-02 also is available on the internet at http://www.dtic.mil/doctrine/jel/doddict/.

3. For overviews of the RMA, see Commander Graham Ramsay, RN, "The Revolution in Military Affairs: A Primer for the Uninitiated," Research Report 9-96, U.S. Naval War College; James R. Blaker, "Understanding the Revolution in Military Affairs: A Guide to America's 21st Century Defense," Progressive Policy Institute, Defense Working Paper No. 3, January 1997; Elliot Cohen, "A Revolution in Warfare," *Foreign Affairs*, Vol. 75, No. 2, March/April 1996, pp. 36-54.

4. This debate can be part of the dialogue called for by the National Defense Panel. See, cover letter, Philip Odeen to Secretary of Defense William S. Cohen, in *Transforming Defense: National Security in the 21st Century. Report of the National Defense Panel*, Washington, DC, December 1997, last paragraph.

5. Joint Publication 1, *Joint Warfare of the Armed Forces of the United States*, Washington, DC: GPO, p. III-11. See John Spanier and Robert L. Wentzel, *Games Nations Play*, 9th ed., Washington, DC: Congressional Quarterly Inc., 1996, pp. 293-384 for a discussion of these instruments and their employment. Broad consensus exists on the diplomatic, economic, and military instruments of power. Whether information is truly an instrument of national power is still an open question in this author's opinion.

6. This formulation conforms to the current defense strategy which is contained in Secretary of Defense William S. Cohen, *Report of the Quadrennial Defense Review*, Washington, DC, May 1997, Section III,

pp. 7-16. The shorthand for the strategy is: shape, respond, prepare now. As will be discussed below, land power offers a wide range of capabilities and, therefore, options to policymakers in carrying out this strategy.

7. "Aerospace: Of, or pertaining to, Earth's envelope of atmosphere and the space above it; two separate entities considered as a single realm for activity in launching, guidance, and control of vehicles that will travel in both entities." JP 1-02, p. 7.

8. These conclusions do not diminish the importance of information operations or information warfare. But, information will complement, not supplant the other forms of warfare.

9. It is important to note that this language conforms to the requirements set out in Title 10 USC, Section 3062. The specific type of influence will vary from reassuring allies and friends to shaping the international security environment to deterrence to compellence to, if necessary, absolute control of territory.

10. For example, Russia, Germany, China, India, and France.

11. For instance, Great Britain, The Netherlands, and the United States. Interestingly, Spain, Japan and the United States also have generated considerable land power. Britain and The Netherlands offer, perhaps, the best example of heavy reliance on sea power, followed by the United States in the late-19th and 20th centuries. For a critique of Britain's reliance on sea power at the expense of land power, see Russel F. Weigley, *The Age of Battles: The Quest for Decisive Warfare from Breitenfeld to Waterloo*, Bloomington: University of Indiana Press, 1991, pp. 88, 162-163, 321, 338-339, 449, and 539-540 (I am indebted to Colonel John Bonin for bringing this information to my attention.). Traditional continental land powers include Germany, Russia, and the Hapsburg Empire. Granted, continental powers occasionally struck out to sea (e.g., France in the 17th and 18th centuries and Germany in the early 20th,) but their strategies and operations focused almost entirely on land power.

12. Colonel Joseph Cerami first called my attention to the need for examining the human dimension.

13. I am grateful to Colonel Everette Roper for this insight.

14. For a discussion of the future roles of U.S. military power, see William T. Johnsen, *The Future Roles of U.S. Military Power and Their Implications*, Carlisle Barracks, PA: Strategic Studies Institute, April 18, 1997.

15. For a description of events that contribute to shaping activities, see the *National Military Strategy of the United States of America. Shape, Respond, Prepare Now: A Military Strategy for a New Era*, Washington, DC: GPO, 1997, pp. 12-14. Specific examples of recent import include the preventive deployment of U.S. Army forces to Macedonia (1993 to the present) to provide stability in the Balkans, as well as the deployment of nearly 10,000 soldiers in Combined Task Force (CTF) Kuwait.

16. As my colleague, Colonel Leonard J. Fullenkamp, aptly points out: "What made Pax Britannica credible was not just the great English Navy, although it was important. What made England great was the certainty that on the heels of crisis came the 'thin red line' of British troops that would make good on England's promises."

17. For a discussion of the reasons behind this trend, see Johnsen, *The Future Roles of U.S. Military Power and Their Implications,* pp. 7-8.

18. One, more modern example of the deterrent effect of land power from the perspective of an opponent can be found in the origins of the Korean War. North Korean Dictator Kim Il Jung and Soviet leader Joseph Stalin were reluctant to take overt action against South Korea until U.S. ground troops had been withdrawn. The withdrawal occurred in late 1949, and the invasion followed in June 1950. See William Stueck, *The Korean War: An International History*, Princeton: Princeton University Press, 1995, p. 31.

19. For instance, Military Support to Civil Authorities, Military Assistance for Civil Disturbances, Key Asset Protection Program, and the DoD Resources Data base.

20. The obvious case is where an opponent possesses air power capabilities. But even when an adversary has little or no air forces or power, friendly air power routinely makes critical contributions to the land battle: close air support, interdictions, and strategic attack.

21. As the reaction to U.S. deaths in Somalia in 1993 influenced commitment and employment of land power in Haiti and Bosnia. One should also recall the extensive debates over combat operations in the Gulf War. However, casualties may not be as significant a driver of policy as many presume. For a detailed historical discussion of this issue, see Eric V. Larson, *Casualties and Consensus: The Historical Role of Casualties in Domestic Support of U.S. Military Operations*, RAND: Santa Monica, CA, 1996, especially "Conclusions," pp. 99-103.

22. Interdependence, as a concept, goes beyond the current scope of joint operations, which essentially is close cooperation among the Services to achieve military and national objectives. Interdependence is also more than integration of the Services because integration infers separate parts that contribute to a greater whole. Interdependence in this author's concept exceeds integration. Services will depend upon each other for the performance of the majority of the roles, missions, and tasks that the Armed Forces of the United States will be called upon to perform. For a slightly different view of the interaction among the Services, see Colonel John Bonin, "Mutually Supporting Relationships," Exercise Joint Warrior, Discussion Issue 6, Interrelationships Land-Sea-Air Forces, April 1, 1998.

23. Where general air parity existed, e.g., throughout World War I, the ability of aircraft to observe offensive preparations allowed opponents to mass defensive forces, thereby contributing to the stalemate that marked most of the Western Front.

24. For instance, the PAC-3 version of the Multiple Launch Rocket System (MLRS) and the Army Tactical Missile System (ATACMS) equipped with Brilliant Antiarmor Submunitions (BAT) and Sense and Destroy Armor (SADARM) munitions.

25. The obvious examples are the Allied campaigns in North Africa, Italy, and Europe and the U.S. island-hopping campaigns in the Pacific during World War II. I am indebted to my colleagues, Colonel John Bonin and Colonel Leonard Fullenkamp for this and the next observations.

26. See, e.g., J. Michael Robertson, "Sea Control Remains Critical," *Proceedings*, April 1997, p. 80. There is a long history of such operations: from the Peloponnesian Wars to Alexander the Great versus the Persians to Napoleon denying Britain bases in the Mediterranean and Baltic Seas to Union forces capturing Confederate seaports in the U.S. Civil War to the land capture of German submarine pens in World War II. Once again, I thank Colonel John Bonin for bringing these citations to my attention.

27. These capabilities are not just quantitatively different from the past, where shore batteries could deny ships access to ports and a relatively narrow band of coastline. Today, land- or air-launched cruise missiles extend their reach hundreds (and soon, perhaps, thousands) of kilometers out to sea. This represents a significant qualitative change in the land-sea power equation.

28. Joint warfighting experiments, such as those recommended by the National Defense Panel and General Dennis Reimer, Chief of Staff, Army are one such example of how this question can be examined.

29. The most noted recent example, is Operation Desert Claw, the 1980 attempt to rescue U.S. hostages held in Iran.

30. This recommendation is in line with the long-standing principle of war: simplicity.

31. Once again, the joint warfighting experiments advocated by the NDP could be used to address these pressing issues.

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