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**The U.S. Navy and the 21st
Century:
Uncharted Waters?**

Course V Essay

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The U.S. Navy and the 21st Century: Uncharted Waters?

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"The U.S. Navy and the 21st Century: Uncharted Waters?"

INTRODUCTION

The U.S. Navy today is faced with the challenge of defining its role in American society. Its principal opponent, the Soviet Navy, now lies largely in port, rusting, inadequately manned, and served by no coherent doctrine. At the same time, the recent changes in U.S. defense organization wrought by the 1986 Goldwater-Nichols Act are placing new demands on the Navy to cooperate and operate with the other services. Long a go-it-alone service focusing on global naval warfare—on winning command of the sea—the Navy now faces a period where command of the sea is largely assumed. In the emerging regional context, the Navy must now focus its energies on operations within the littoral and on the projection of American national power across the surf line. This fundamental change is having profound impact on American naval strategy.

The purpose of this paper is to explore some of the strategic implications of the changes which are transforming our world. Much of the debate in the literature today is concerned with the operational level impacts of change, and very little attention is being paid to the long term strategic landscape. For those operational and force structure discussions to hold validity, an assessment of the strategic changes must be made. Therefore, this essay will delve only briefly into some operational issues, and then only to illustrate some of the implications of the changing environment for the Navy. To begin the journey, a brief look at a historical example will illuminate some of the challenges the U.S. Navy faces today.

THE ROYAL NAVY ANALOGY

"The Navy had, in effect, to show that it was useful in defense of trade and a promoter of prosperity, not in some hypothetical and improbable war, but in the actual circumstances of peace."¹

Analogies, as Ernest May argues, are dangerous if used too literally.² This is very true in the case of the Royal Navy from 1815 to 1853. Much has changed since that time, and more than an ocean separates the British way of war from the American. Nevertheless, certain insights can be garnered from the experience of British naval officers nearly two centuries ago; insights that might otherwise be missed. The parallels are simply

too striking to ignore, and may aid the U.S. Navy in looking to the uncertain future that lies ahead.

The above quote could easily have come from any number of cogent analyses of the situation facing today's U.S. Navy. It did not. The author is addressing the plight of the Royal Navy after the 1815 defeat of Napoleon. Faced with the absence of a serious naval opponent, the Royal Navy struggled for seventy years to identify its role in the national security affairs of the Empire. It was a time when the nation's security was seen to be better ensured by finance and trade than by military forces. Centralization of the military bureaucracy in the name of efficiency, without regard to fighting effectiveness, began as early as 1832. Waste, fraud and abuse became the legitimizers of naval cuts aimed in reality at unpopular governments. The large debt incurred by the government during the Napoleonic Wars was seen to be stifling economic growth, and the prime source of what we would now call discretionary income was to be found in the naval and military budgets. As a result, over the period between Waterloo and the Crimean War, the Navy atrophied, infrastructure crumbled, and, not surprisingly, demands and commitments increased.³ All of this is startlingly familiar ground to those involved in today's defense debates.

As the Royal Navy reeled under these changes, it was also faced with phenomenal technological change. Though Americans have come to call the period Pax Britannica, peaceful it was not. Many small conflicts were fought, what today we might call 'Operations Other Than War,' and many a Royal Navy sailor and Marine met his end.⁴ Given the pace of technological change and the demands placed on personnel, the Royal Navy never had the opportunity, even if it had the desire, to seriously study the implications of the new technology for naval warfare, and to develop new doctrine. Instead, faced with the demands of a new role of world policeman, consistently lower government spending, and the need to protect a burgeoning free trade system, the Royal Navy neglected its broader obligations, and focused on the operational requirements of the day.

Challenged by this combination of pressures, the Royal Navy changed dramatically during the 19th Century. Mirroring the society from which it derived its purpose, the Navy came to focus on science, seamanship, and smartness of appearance. Its ships were built specifically for the task of patrolling the distant reaches of Empire, seldom, if ever operating with another ship, totally unsuited for ship-versus-ship battles, and often never firing a shot throughout their entire commission lest the shock of discharge chip the ship's paint.⁵ Officers went for decades without promotion, and, lacking a retirement system, it was not uncommon by mid-century to find octogenarians in command of squadrons.⁶

All of these conditions were reflections of the needs of the Empire, and of the ability of naval forces to meet those needs. Where the Royal Navy foundered was in its near total neglect of the study of naval strategy and the maintenance of tactical expertise--obligations that only professional naval officers can meet. By the Crimean War in 1854, the Navy had so much lost its sense of how to act like a Navy that it was only just able to steam to the several theaters of action:

"When Napier took his fleet to the Baltic in 1854 he found that his captains, so far from being nostalgically wedded to the glories of sail, were terrified to use it except in the calmest of weather, were baffled by signals, and kept well clear of one another if possible."⁷

By 1854, the Royal Navy, which had so dominated the naval contests of the previous hundred years, was but a hollow shell of its former self. It had forgotten how to fight and sail, and had lost its sense of purpose in defending the Empire from naval threats. As Rodger writes, "...the Navy was employed in accordance with the spirit of the age."⁸ The struggle to climb back up to that lofty position of 1815, intellectually as well as materially, was long, expensive, and in terms of national security, risky.

THE U.S. NAVY FACES A NEW ERA

Like the Royal Navy of the early 19th Century, the U.S. Navy today is without equal or even serious challenger. The prospect of a global naval war is, for the moment, quite remote.⁹ This fact, coupled with recent changes in U.S. defense organization, is drawing the Navy toward the shore. The 1992 Navy white paper "...From the Sea"

expresses this sense. The new environment has led to a new strategy which "...represents a fundamental shift away from open-ocean warfighting *on* the sea toward joint operations conducted *from* the sea."¹⁰ Lacking a global naval threat, the Navy must redefine its role in American national security and society to remain relevant today. The old role of achieving command of the sea has now (though perhaps only for the moment) drifted into the background, while the role of power projection has assumed new importance. No longer must the Navy prepare alone for the climatic battle at sea between well balanced combat fleets. Instead, it must now operate close in to shore with the other services, particularly the Marine Corps. Jointness is a fact of life necessitated by the growing regional character of war, and littoral operations are, for the foreseeable future, the venue for naval action.¹¹

In 1911, Sir Julian Corbett wrote the following words:

"Since men live upon the land and not upon the sea, great issues between nations at war have always been decided—except in the rarest cases—either by what your army can do against your enemy's territory and national life, or else by *the fear of what the fleet makes it possible for your army to do.*"¹²

These words clearly articulate one of the enduring concepts of naval warfare—that it exists only to influence events ashore, whether through the introduction and sustainment of forces, the threat of doing so, or the defense of one's own coasts and resources. Navies have tended to forget this simple fact periodically as they focus on the idea of the decisive battle to the exclusion of other elements of naval warfare.¹³ The defeat of the Japanese fleet in World War II, and perhaps even the German High Seas Fleet in World War I can be attributed to a sort of strategic myopia that failed to recognize the broader role of navies regarding commerce and sustainment of war economies.¹⁴

Faced with an uncertain future, but one that is certainly different than what U.S. naval officers have grown up with, the Navy must take extraordinary precautions to continue to view the whole of the naval warfare spectrum. It must avoid both the lure of the "decisive battle" and the intellectual straight jacket that constrained the adaptability of the Royal Navy in the late 19th Century.

While the traditional foe has gone into history, new challenges to American security emerge daily. Like the Royal Navy in the early 19th Century, a combination of domestic, economic and technological pressures are pulling the U.S. Navy in different directions. As with the Royal Navy, demands for reduced military expenditures run directly counter to demands for increased commitments to global stability in the form of forward presence, peace support operations, and humanitarian assistance. Underlying this tension is the desire to stay in the lead technologically. The ability to maintain the technological edge is constrained by both the declining resources and the requirements of present and highly demanding operations. Again, like the British experience, the U.S. Navy is finding itself over committed, affording little time for deep thought on the future of naval warfare or of the absorption of new technology.

This combination of domestic, economic and technological forces will largely determine how the Navy is employed in the ensuing decades. If the Navy is to remain relevant to American security concerns--and to its society as a whole--it must adapt to the conditions of the present. If it is to continue to meet its obligation to that very society, however, it must also never forget the specter of global naval war which may once again come knocking at the door.

The U.S. Navy can expect over the coming years to be asked to disperse its energies, perhaps in a manner similar to the way the Royal Navy operated in the first half of the 19th Century. The accelerating growth of the oceanic legal framework suggests that the constabulatory role of the Navy will grow while also impinging upon the Navy's traditional freedom of navigation.¹⁵ Conflicts on land being extremely costly and painful, littoral nations may shift confrontations out to sea. The spread of naval technology, the large surplus of naval platforms, both from west and east, and the codification of 200 mile Exclusive Economic Zones all add incentives for conflict at sea.¹⁶ Moreover, with growing economic interdependence, the maintenance of free trade will likely assume a growing importance. Add to this the need to counter illegal operations such as drug smuggling,

piracy, and immigration, and there is ample pressure for the Navy to divert increasing energy into the constabulatory role.

Being drawn into the littoral by the absence of blue water naval threats and by the needs of regional conflicts, the Navy will find itself in a difficult environment. Unlike the Royal Navy in the 19th Century, ships are decidedly vulnerable to power projection *from* the shore in the form of air power, cruise missiles, diesel submarines, and fast patrol craft--all of which are to be found in increasing numbers throughout the world. While gunboat diplomacy may not be dead, it has become entirely more hazardous.¹⁷

The support of UN peace keeping and peace enforcing operations as well as unilateral U.S. actions will put the Navy in harms way, and will tend to prevent it from being dismembered as the Royal Navy was. Though there are pressures to deploy smaller and smaller groupings of ships for presence purposes, the speed of communications in the world today and the better organized governments compared to those Britain sought to influence in the 19th Century, combined with the threat posed to naval forces from the littoral, mean that maintaining a *credible* presence will require a much more robust force.

Beyond these fairly clear trends lies the great unknown of the future. One possibility sees a growing disorder in the world which threatens the security of every nation; a threat that thus far has gone unanswered effectively by the United Nations. Should the nations of the world perceive that collective security, such as practiced by the UN, is becoming impotent, then great pressures will be created for the acquisition of arms for self-defense. The siphoning of scarce funds into military procurement is in itself unsustainable in many of today's nations. What is worse, a movement toward the position of autarky in defense could begin to erode the economic interdependence that is so prominent in maintaining peace between great powers.

While such a scenario is not suggested as a high probability, it must be acknowledged as a possibility. The return of great power rivalries foreshadowed by the Russian involvement in Sarajevo in March, 1994, the difficulties being experienced in European integration, and the tensions between the United States and Japan over trade, all

suggest that trade wars and open conflict are not necessarily relics of history.¹⁸ The Navy must be prepared to conduct operations in all areas, *perhaps simultaneously*.¹⁹ The requirement for doctrinal, material and intellectual flexibility will be far greater than any the U.S. Navy has experienced to date in over 200 years of history.

IMPLICATIONS FOR THE U.S. NAVY

Perhaps the most dramatic implication for the U.S. Navy in the new environment is the fact that it must now operate with the other services. During the Cold War, naval forces, with the exception of amphibious groups, operated in the open ocean independent of any support from or coordination with other U.S. services. In the global threat environment of the period, the Navy could accomplish its mission—gaining and exploiting control of the sea—on its own. Furthermore, the best way the Navy could aid the ground campaign was to win sea control. This implied a global operation rather than theater or regional.

With the end of the Cold War, the Navy's role has shifted to supporting ground forces in smaller regional conflicts. In such a situation, the Navy's mission can no longer be accomplished by the Navy alone, because it is too closely linked with the missions of the Army, Air Force, and Marines. In the regional threat environment, naval forces must form part of the joint concept now maturing in the American military. This is a radical departure for the Navy, and is resulting in dramatic shifts in what is important and what is not.

In 1993, the Navy established the Navy Doctrine Command (NDC) in Norfolk, Virginia in an effort to codify a wide array of publications and to enhance cooperation with the other services.²⁰ The cornerstone document to be published by NDC will be *Naval Warfare, NDP-1*.²¹ It seeks to articulate an operational level doctrine for the Navy—the first such attempt in the Navy's history. Borrowing heavily from the Marine Corps' *Warfighting, FMFM-1* and the Army's *FM 100-5, NDP-1* lays out the fundamentals of how the United States conducts naval warfare.²² While it is only a first cut at what will hopefully become a centerpiece of U.S. naval culture, it represents the distance the Navy

has come in recognizing the changing security environment since its ardent opposition to the Goldwater-Nichols Act reforms in the early 1980s.

Changes in doctrine and culture reflect changes in the world and in the Navy's role in that world. Yet, the challenge confronting the Navy today is that it must now operate along a much wider spectrum of conflict more often than it did in the Cold War. As happened to the Royal Navy in the early 1800s, the U.S. Navy is facing sharply declining budgets with increasing commitments. There is, therefore, still a requirement to maintain a balanced fleet. As Eric Grove writes, "The United States, as a semi-island continent, must go to sea if she is to exert her military power against states beyond Canada and Mexico."²³ Projecting that power across oceans is largely taken for granted by many Americans, but it is an exceedingly complex and difficult task, even in peacetime.²⁴ What underpins America's ability to project power is the maintenance of a balanced fleet capable of sustained forward operations, on, over, under, and *from* the sea.

To reconcile in some way the growth of commitments, both in number and in dimension, with the decline in budgets, the Navy will have to make some hard choices in the near future. Faced with an uncertain environment, and aware of the long lead time and perishable industrial base, the Navy will fight hard to maintain its carrier capability. No other platform provides the built in flexibility to concentrate one moment on littoral operations, and the next on blue water combat. While Tomahawk missiles are useful for surgical strikes against key enemy command and control nodes or infrastructure, only aircraft launched from carriers can be relied upon to provide the sustained, high sortie support for troops on the ground, or battlespace surveillance, or anti-shipping action, or anti-submarine patrol and sea lines of communication (SLOC) protection. There is no better bargain for the American taxpayer in terms of flexibility in an uncertain world than the aircraft carrier.

Submarines will continue to be required at some level, both to oppose the growing fleet of diesel submarines in the world and to be available to protect shipping in the event

of future conflicts. Of course, ballistic missile submarines will continue their lonely vigil of strategic deterrence into the foreseeable future.

Surface ships will continue to be the workhorses of the fleet. Their declining number is cause for concern when historical examples are considered. Their roles are extremely varied, and expecting them to escort carriers, defend amphibious forces, launch Tomahawk missiles, protect shipping, and fulfill myriad diplomatic functions as well, will strain the small numbers currently planned.²⁵ Yet, again, the tendency to resort to smaller, cheaper, and less capable platforms must be resisted. Given the uncertainty inherent in today's world, and again the long lead time in construction, America's surface units must remain multi-mission capable and survivable in the high threat environment of the littoral. The U.S. Navy cannot afford to follow the path of the Royal Navy in specializing its cruiser and escort forces.²⁶

Where there is cause for concern lies beyond the above ship types, and gets at the core of the shift from blue water to littoral operations. The Navy is accelerating the decommissioning of its older amphibious ships in order to "re-capitalize" its amphibious force. Unfortunately that will take it below the capability of lifting 2.5 Marine Expeditionary Brigades (MEB) outlined in the Secretary of Defense's annual report.²⁷ The deficit will persist until the year 2006, and then only if the seventh ship of the LHD-1 class is built along with the twelve ships of the new LPD-17 class amphibious transports. These, rumor has it, are inching nearer the budget cutter's ax every day.²⁸

While it may not be critical to maintain a 2.5 MEB capability, this ignores the fact that it is one thing to conduct an amphibious *raid* of a temporary nature, and quite another to sustain a *presence* on a foreign and hostile shore.²⁹ If the Navy is to remain credible in an increasingly conflict-ridden world, it must retain the ability to land on an enemy coast, and then sustain itself there indefinitely.

Sustainment and strategic lift is another area of concern. Thorough analyses have been conducted to determine how much shipping is needed to move units to a theater of operation, and to sustain them once in the theater, and steps have been taken to build up to

the levels recommended in those analyses. Two factors, however, suggest that the plans as laid out contain flaws. First, there is no redundancy in shipping—what is planned for is what is needed. The loss or even mechanical breakdown of one large SL-7 transport can seriously upset equipment delivery timetables.³⁰ This is exacerbated by the large size of the ships intended for surge deployments and sustainment—though more efficient, their loss has greater impact. The second factor is that the Navy, in planning its escort force level, has discounted protection of shipping, assuming secure SLOCs.

The two factors impinging on sustainment plans combine to create a significant vulnerability in future conflicts. It seems rather rash for America to assume that the next opponent it faces will ignore the use of sabotage or mid-ocean interdiction of the SLOCs given the lessons of Desert Shield/Storm. The vulnerability is clear for all to see, and without protection, interdicting the routes from the United States is too easy. Moreover, should one of the ships bringing equipment to the theater be sunk or damaged due to enemy action, protection of the entire SLOC will then be demanded. The Navy would, in such a case, be very hard pressed to provide for the SLOC security. Such will be the legacy of maintaining sealift and escort forces on the margin.

MANAGING UNCERTAINTY

"...it is recognized that an effective national security strategy, in an era of constrained resources and set within a rapidly changing security environment, places a premium on forces that are flexible, versatile, and mobile."³¹

The world is changing rapidly, American's demand reduced budgets, and the pace of technological change steadily accelerates. Who, under such circumstances, can predict the future? Who can say *this* is the Navy America needs? No one. The answer is to focus the organization and equipment on flexibility and adaptation, "...on the management of uncertainty, rather than on the construction of new capabilities tailored to predictions of what future wars would look like."³²

The flexibility inherent in naval forces has already been addressed, as has the need for a balanced fleet to meet the full spectrum of warfare in the future. What has not yet

been touched upon is the importance of intellectual flexibility in the coming decades. It is proper to end this essay with a brief discussion of training and education as tools of managing uncertainty, because that is exactly what the Royal Navy failed to do in the 19th Century. Focused on technology, on steaming, and on appearance, British naval officers lost touch with the world around them, and with the role of naval power in that world. As N.A.M. Rodger cogently argues:

"If naval officers had been trained *not only to know, but to think*, they might have realized that the circumstances in which they had grown up, far from being inevitable and immutable, were the accidental consequences of circumstances which were, by the 1830s already passing away."³³

NDP-1 is a seminal document in that it stresses the theoretical principles of war as pertaining to naval warfare. This is the first truly explicit recognition of this fact in many decades. Currently, no real theoretical training or education is conducted in the Navy. Officers are introduced to naval history in their first year of college, and that is it. The next taste of military art and theory must wait for war college attendance at the commander/captain level. To the extent that *NDP-1* encourages consideration of military theory at lower levels, then the Navy will increasingly be able to avoid the rigid dogmatic view of naval warfare that characterized the Royal Navy in the last century. Without that theoretical foundation, it is that much harder to break with the accepted wisdom and innovate.

If *NDP-1* is to be faithfully integrated into the Navy's culture, and if the Navy is to truly become a player in the joint arena, then it will have to look more closely at exposing mid-grade officers to joint education along the lines of the Army's Command and Staff College.³⁴ Similar review of senior officer training is also needed. Currently, most senior naval officers attend only one warfare-oriented education course during their entire career.³⁵ The length of study is but nine months, during which time they are expected to digest the equivalent of a Masters Degree in National Security Affairs. While this is a significant improvement over previous decades, it is far too fast-paced and intense to allow reflective study.³⁶

If the Navy is to remain faithful to its obligation to American society over the coming decades, it must accept the costs of re-capitalizing, not just its fleet assets, but, more importantly, its people. This is the time to stress the importance of education, and of reasoned but thorough consideration of the future. In the 1880s, Admiral Stephen Luce and Captain A.T. Mahan established the Naval War College in a time of constrained budgets to promote the study of strategy and tactics. In the 1920s and 1930s, again in a time of constrained funding and no clear enemy, the Navy used its war college as a center for exploring the impact of new technologies—the aircraft carrier, at sea refueling, and amphibious operations—on naval warfare.

It is time now to do the same thing. Take officers out of the fleet for training and education. At the mid-grade or senior levels, teach them at a war college for a year, then pick some of the best and brightest to spend an extra year *working with each other* to push the bounds of naval warfare theory beyond what the Navy was left with in 1945.

Above all, educate the officer corps thoroughly in the concepts of naval warfare as handed down from Mahan and Corbett, and in the examples of the application of sea power over history. Make this a key ingredient in the ongoing education of officers so that they will be better able "...to seek innovations through new and varied application of conventional guidance that has been successful in the past, and *to recognize the cases when the paths taken in history no longer apply.*"³⁷

Rodger, in his review of the Royal Navy in the 19th Century, sounds the alarm of intellectual ossification. It is through the education of the officer corps that the Navy will avoid a repeat of the same mistake, and ensure that the Navy remains relevant, and fully capable of protecting the nation's security in the future. It is through this course that the Navy can avoid Rodger's opprobrium of the Royal Navy:

"As it was, they were knowledgeable and enthusiastic proponents of technical change and material development, who had lost sight of the objects for which the Navy existed; *highly trained, and wholly uneducated.*"³⁸

NOTES

- ¹N. A. M. Rodger, *British Naval Thought and Naval Policy, 1820-1890: Strategic Thought in an Era of Technological Change*, in Craig L. Symonds, ed., *New Aspects of Naval History*. Selected papers presented at the Fourth Naval History Symposium, U.S. Naval Academy, 25-26 October, 1979. (Annapolis: U.S. Naval Institute Press, 1981), p. 143.
- ²See Earnest R. May, *"Lessons" of the Past: The Use and Misuse of History in American Foreign Policy*. (London: Oxford University Press, 1973).
- ³Of particular merit, see C.J. Bartlett, *Great Britain and Sea Power, 1815-1853*. (Oxford: Clarendon Press, 1963), pp. 12-22. Paul Kennedy also addresses these issues. See *The Rise and Fall of British Naval Mastery*. (London: The Ashfield Press, 1976), pp. 163-171.
- ⁴The majority of deaths came from disease, but even so, the cost of maintaining its presence on the world's littoral was high, as these examples indicate: "In the Navy as a whole, however, annual deaths from all causes, even in the latter half of the century, were sometimes greater than [for the Royal Navy] during the First World War." "Of forty-four officers who sailed in 1824, only thirteen were alive in 1826." Rodger, *British Naval Thought*, p. 147.
- ⁵The sense of transition within the Royal Navy over this period is nicely captured in Rodger *British Naval Thought*, and in Bartlett, *Great Britain and Sea Power*, as noted above. See also Donald MacIntyre, Capt, RN, *The Pax Britannica*, in Lcdr Peter Kemp, RN, ed. *History of the Royal Navy*. (New York: G. P. Putnam's Sons, 1969), pp. 157-159, and Stephen W. Roskill, Capt, RN, *The Strategy of Seapower: Its Development and Application*. (London: Collins, 1962), pp. 89-90.
- ⁶"In 1854 Lord Dundonald was rejected for the Baltic Command at the age of seventy-nine on the grounds of youthful rashness." Rodger, *British Naval Thought*, p. 142. Emphasis added.
- ⁷Rodger, *British Naval Thought*, p. 142.
- ⁸Rodger, *British Naval Thought*, p. 143.
- ⁹The only possible contender at this point is the Russian navy which is in such a state of disrepair and demoralization that, when taken in the context of the Russian political and economic crisis, it poses only an unlikely threat to the United States, and then primarily in the form of its ballistic missile submarines. See George F. Kraus, Jr., Cdr., USN (Ret.), *Adrift in Heavy Seas*, *U.S. Naval Institute Proceedings*, Vol. 120, No. 4 (April, 1994), pp. 118-119.
- ¹⁰Secretary of the Navy, Chief of Naval Operations, Commandant of the Marine Corps, *"...From the Sea: Preparing the naval Service for the 21st Century*, " (Washington, D.C., September, 1992). p. 3. Emphasis added.
- ¹¹Joseph C. Strasser, RAdm., USN, *The Role of Naval Forces in Combat*, in Robert L. Pfaltzgraff, Jr., and Richard H. Shultz, Jr., ed., *Naval Forward Presence and The National Military Strategy*. (Annapolis: U.S. Naval Institute Press, 1993), p. 254.
- ¹²Julian s. Corbett, *Some Principles of Maritime Strategy*. (London: Longmans, Green & Co., 1911), p. 14. Emphasis added.
- ¹³Eric Grove, *The Future of Sea Power*. (Annapolis: U.S. Naval Institute Press, 1990), p. 24. See also Stephen Roskill, *Decisive Battle and the Royal Navy*, in Geoffrey Till, *Maritime Strategy and the Nuclear Age*, 2nd ed., (New York: St. Martin's Press, 1984), pp. 106-110.
- ¹⁴See H.P. Willmott, *The Great Crusade: A New Complete History of the Second World War*. (New York: The Free Press, 1989), pp. 178-182. See also D. Clayton James, *American and Japanese Strategies in the Pacific War*, in Peter Paret, ed., *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*.

(Princeton, N.J.: Princeton University Press, 1986), pp. 716-719. On the German strategy in World War I, see Theodore Ropp, "Continental Doctrines of Sea Power," in E. M. Earle, ed., Makers of Modern Strategy: Military Thought from Machiavelli to Hitler, (Princeton: Princeton University Press, 1943), pp. 450-452.

¹⁵This trend may also increasingly limit naval mobility: "...the long term future of naval mobility is under challenge." Kenneth Booth, cited in Grove, Future of Sea Power, p. 170.

¹⁶"...medium and small states will always have the motivation and means to defend or assert their national interests at sea either collectively or, more usually, nationally. This is especially so given the connected developments in both resource exploitation and the law of the sea that give all littoral states substantially increased off-shore areas of responsibility and control." Grove, Future of Sea Power, p. 167.

¹⁷Sir James Cable, "Gunboat Diplomacy's Future," U.S. Naval Institute Proceedings, Vol. 112, No. 8 (August, 1986), p. 39.

¹⁸Robert L. Pfaltzgraff, "Change and Continuity in the 1990s," in Robert L. Pfaltzgraff, Jr., and Richard H. Shultz, Jr., ed., Naval Forward Presence and The National Military Strategy, (Annapolis: U.S. Naval Institute Press, 1993), p. 17.

¹⁹As the Toffler's suggest, military forces in the future will have to fight across a whole new spectrum of war that includes three basic levels: the agrarian, the industrial, and the informational. Focus of effort against one level of war, or against one point in the spectrum of conflict will no longer be possible. Alvin and Heidi Toffler, War and Anti-War. Survival at the Dawn of the 21st Century, (Boston: Little, Brown & Co., 1993), pp. 81-84.

²⁰The fact that NDC was set up in Norfolk (rather than Washington, D.C.) is an indicator of the change. The location was chosen, not for parochial reasons, but to be close to the Air Force and Army doctrine centers. Its mandate essentially encompasses every element of naval strategy and doctrine, from considerations of national security strategy, to joint doctrine, to the detailed tactical publications needed to run day-to-day operations. Chief of Naval Operations and Commandant of the Marine Corps, "Charter of the Naval Doctrine Command," letter serial 00/3U500015, dated 29 Jan 93.

²¹Frank B. Kelso, II, Adm., USN, and C. E. Mundy, Jr., Gen., USMC, Naval Doctrine Publication 1: Naval Warfare, forthcoming.

²²A.M. Gray, Gen., USMC, Warfighting, FMFM-1, Department of the Navy, Headquarters, U.S. Marine Corps, March 1989. FM 100-5: Operations, Headquarters, Department of the Army, June, 1993.

²³Grove, Future of Sea Power, p. 47.

²⁴RAdm Strasser suggests the difficulties in moving forces overseas. See "The Role of Naval Forces in Combat," p. 255.

²⁵Les Aspin, Secretary of Defense, Annual Report to the President and the Congress, January, 1994, (Washington, D.C.: U.S. Government Printing Office, 1994), pp. 171-172.

²⁶See Grove, Future of Sea Power, pp. 24-25.

²⁷Aspin, Annual Report, p. 171.

²⁸"The real cost, in addition to the loss in actual deployed capability, probably will be measured in terms of some other amphibious ships—LHDs, L[PD]s—that we really need but will be unable to squeeze through the budget process because 'carriers can do that mission now.'" T.J. McKearney, Cdr., USN (Ret.), "The Gator Stumbles," U.S. Naval Institute Proceedings, Vol. 120, No. 1 (January, 1994), pp. 35-36. See also James B. Soper, Col., USMC (Ret.), "Amphibious Lift," Marine Corps Gazette, April, 1994, p. 14. Cdr Christopher Wade, USN writes "...unless the current trend in amphibious shipping is reversed, the U.S.

may lack sufficient numbers of amphibious ships to maintain a forward-presence strategy a decade from now." *The Forward Warriors: The United States Must Revitalize its Amphibious Fleet*, Armed Forces Journal International, March, 1994, p. 26.

²⁹McKearney argues that the Navy has drifted away from its expertise in sustained amphibious operations, and is now almost totally focused on amphibious raids: "...limited objectives, limited duration, limited support required." He maintains that the Navy is support and sustainment problems associated with long-term amphibious operations. *The Gator Stumbles*, "p. 37.

³⁰During Desert Shield, the breakdown of one ship carrying the bulk of the 24th Mechanized Infantry division's gear caused a substantial delay in its arrival in theater. Fortunately, Saddam was accommodating enough to allow the United States the time to overcome this event. Personal recollection.

³¹Pfaltzgraff, *Continuity and Change*, "p. 18.

³²Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military*, (Ithaca: Cornell University Press, 1991), p. 259.

³³Rodger, *British Naval Thought*, "pp. 148-149. Emphasis added.

³⁴The Navy has long resisted the two-tier professional training scheme emphasized in the Goldwater-Nichols Act, citing the need for naval officers to be in the fleet learning their trade. Yet, this shortcoming in officer education truncates the growth of the broadened perspective needed to adapt to change. Furthermore, it puts the Navy behind the pack in preparing for joint, and even service, staff assignments (which have traditionally looked down on in the Navy).

³⁵I distinguish here between *training* and *education*. The former provides the skills needed for tactics, the latter broadens the intellect and "...hones our thinking and ability to make decisions." Naval officers are well trained, but poorly educated. *NDP-1*, p. 50.

³⁶See Martin van Creveld, *The Training of Officers: From Military Professionalism to Irrelevance*, (New York: The Free Press, 1990), pp. 78-86.

³⁷*NDP-1*, p. 51. Emphasis added.

³⁸Rodger, *British Naval Thought*, "p. 149. Emphasis added.