

# **Towards a Balanced Fleet: Options for a 21<sup>st</sup> Century Navy**

**A Monograph  
by  
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## Abstract

*Towards a Balanced Fleet: Options for a 21<sup>st</sup> Century Navy* by Commander Michael E. Hutchens, USN, 47 pages.

This monograph studies the challenges facing the U.S. Navy in 2009. It is principally an historical study that attempts to draw a parallel between today's strategic environment and past environments. The historical analysis focuses on past maritime strategies produced by the U.S. Navy and an historical review of the Royal Navy of the late 19<sup>th</sup> Century. Through this analysis, broad strategic themes become apparent. Recognizing and understanding these strategic themes illuminates options available to the U.S. Navy.

The first historical analysis centers on the development of U.S. maritime strategy since 1970. After almost forty years of maritime history, its stability and coherence remain remarkable. U.S. Navy missions over the forty years focused on four mission areas: sea control, power projection, naval presence, and strategic deterrence. Despite dramatic changes in the strategic environment, what changed in the strategies was the priority placed on specific missions. The strategic concept of the Navy's most recent maritime strategy departs from past examples. *A Cooperative Strategy for 21<sup>st</sup> Century Seapower* adds two additional missions: maritime security and humanitarian assistance/disaster response. This is a dramatic change, but it is a change that fits the current environment.

The second historical analysis centers on the comparison of the Royal Navy of 1850-1900 with the U.S. Navy of 2009. The strategic environment the Royal Navy faced over fifty years at the end of the 19<sup>th</sup> Century mirrors that faced by today's U.S. Navy. The decisions made by the Royal Navy over a century ago provide options for today's maritime service. The Royal Navy example illuminates the importance of the following themes: policing the commons, remaining first in shipbuilding, and developing a balanced fleet.

Through these historical strategic themes, it is possible to identify potential courses of action. This paper recommends continued investment in perfecting theater ballistic missile defense for U.S. Navy ships. This capability remains vital to the relevance of the U.S. Navy against a growing area denial threat. The second recommendation is to reduce the number of aircraft carriers and redirect funds to increase the size of U.S. surface and submarine fleets. The current strategic environment demands smaller but more numerous forces to accomplish the six mission areas expressed in *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*. Finally, this monograph recommends further development of *A Cooperative Strategy for 21<sup>st</sup> Century Seapower* from a strategic concept into a full strategy. The U.S. Navy must assign resources to the strategic concept for it to become a full strategy.

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## Introduction

Article I, Section 8 of the U.S. Constitution distinguished between an Army and a Navy. The foundational document of the U.S. Government provided Congress the authority to raise and support an Army, while it granted Congress the power to provide and maintain a Navy.<sup>1</sup> The difference in language between the authorities for an Army and that of a Navy was telling. To provide and maintain a Navy, in context of the Constitutional time period, did not threaten individual liberty as did an Army. The authors writing the Constitution retained vivid memories of the British occupation of the colonies, and a standing army posed a threat to the young country. An army exerted a tremendous influence on the local populace and by extension, the government. However, a maritime service remained limited in its influence to the Eastern seaboard of the thirteen new states.

In addition to the perceived threat associated with an army, the very nature of a navy demanded a more continuous maintenance than an army. The timeline of designing, building, manning, and training a ship required years, rather than months needed to raise and to train an army. The best example of the difference between the army and navy was when the united Colonies mounted an effective revolution over eight years against the British army. The colonies, however, never succeeded in challenging the Royal Navy. For the duration of the Revolution, the colonies remained blockaded by the Royal Navy until the arrival of the established French Navy offered relief.

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<sup>1</sup> *U.S. Constitution*, Article I, Section 8.  
[http://www.archives.gov/exhibits/charters/constitution\\_transcript.html](http://www.archives.gov/exhibits/charters/constitution_transcript.html).

A recent *Defense News* article identified a tremendous credibility gap the U.S. Navy faces with Congress and senior governmental leaders. After numerous program failures, cost overruns, and poor communication regarding the service's strategic direction, many in Congress seem fed up with the U.S. Navy.<sup>2</sup> While this seems a damning commentary on the senior leadership of the maritime service, a closer examination of the issue demonstrates less a failure of leadership but instead, a difficult transition to a new direction the leadership must take to address a dramatically changing strategic environment.

The dramatic change in the strategic environment caused a re-evaluation of the missions and capabilities for which the U.S. Navy planned and trained. The arrival of the War on Terror pushed the U.S. Navy to a secondary role as the U.S. Army and Marine Corps took the front line in what remains, principally, a land campaign. The U.S. Navy struggles to this day to remain relevant in the fight against Islamic extremism, where the Navy cannot win the fight, but can instead hinder it. The majority of national resources and attention rightly remain fixed on the two services at the front lines, while the Navy answers the call to bear its burden in the War on Terror by filling the necessary, but unglamorous, secondary roles vacated by troops executing combat missions in Iraq and Afghanistan. Above and beyond this new war-fighting environment in which the Navy must function, numerous domestic issues continue to affect the Navy. Budgetary constraints in light of the War on Terror, national debt and deficits, and declining economy hit the service at the same moment that shipbuilding costs are on the rise. The

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<sup>2</sup> Christopher P. Cavas, "Why No One Believes the Navy," *Defense News*. <http://www.defensenews.com/story.php?I=3548246> (accessed February 5, 2009).

Navy leadership seems unable or unwilling to communicate an effective maritime strategy nested within a dramatically changed national strategy.<sup>3</sup>

This paper addresses the challenges, which the current strategic environment places before the U.S. Navy. In addition, it examines issues surrounding where and how the Navy must operate, which drives the fleet structure needed to serve the interests of the nation. More specifically, the strategic environment is driving the U.S. Navy away from a sea control mission dominated by the aircraft carrier as the capital ship and more toward a policing the commons mission characterized by a smaller displacement surface ship fleet structure. An historical study of past maritime strategies and mission roles filled by the Navy will identify the changing strategic environment over the previous decades and highlight the dramatic change the Navy faces today. An historical comparison of the U.S. Navy of 2009 with the Royal Navy of the late 19<sup>th</sup> century will highlight similarities in the challenges both navies faced, even though separated by 150 years. Lessons gleaned through a study of the Royal Navy can guide U.S. Navy efforts in addressing challenges to developing its future fleet structure. The study of the strategic environment and past U.S. maritime strategies used to meet them, coupled with the historical study of the Royal Navy will form the basis to propose a future fleet structure different than the one currently in place.

It is reasonable to ask why a discussion on the topic of maritime strategy is necessary in the midst of on-going U.S. conflicts in Iraq and Afghanistan, and it is the very fact that the U.S. remains actively engaged in two difficult land campaigns that a review of maritime strategy remains relevant. The U.S. is one of the few nations in the

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<sup>3</sup> Ibid., 4.

world with the capacity, interest, and ability to be both a maritime and continental power. The size, wealth, and geographic location of the United States afford it that potential. However, the reality since World War II is that the U.S. is not inclined to embroil itself in continental, or land, campaigns. The principal means by which the U.S. seeks to exert influence over other nations is through her maritime power. Specifically, the U.S. prefers to use an aircraft carrier as a foreign policy tool before the deployment of an Army division. This remains relatively constant throughout post-WWII history with the exception of Korea, Vietnam, and the current efforts in the Iraq and Afghanistan. Looking at Korea and Vietnam, the long duration and difficulty of these land campaigns forced difficult choices upon the United States regarding the allocation of resources. And, the requirements of the moment rightly made the Army and Marine Corps the main beneficiary of the nation's available resources. Limited resources forced difficult decisions on the U.S. Navy to support the current land war, while simultaneously planning and preparing for a notional strategic environment after the cessation of hostilities. This strategic puzzle remains just as valid today, with respect to Iraq and Afghanistan, as it did during the Korean and Vietnam Wars. This paper seeks to provide an answer to this difficult question.<sup>4</sup>

## **Post-World War II Maritime Strategy**

In October 2007, a new maritime strategy was released to the public. A *Cooperative Strategy for 21<sup>st</sup> Century Seapower* was a common statement of U.S. Navy, Marine Corps, and Coast Guard strategy concerning the direction of maritime forces of

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<sup>4</sup> For brevity, "U.S. Navy" will be used when referring to U.S. maritime forces. It is recognized that the U.S. Marine Corps and U.S. Coast Guard provide important aspects of U.S. Maritime Forces.

the United States.<sup>5</sup> Released with a good deal of fanfare, the publicity generated a degree of talk about it being the first maritime strategy since 2002's *Seapower 21* released by then Chief of Naval Operations (CNO) Admiral Vern Clark. Presented at the Naval War College, the new strategy was 16 pages long and represented a dramatic shift from maritime strategies of the previous decade.

The first and most obvious difference with the new strategy was the addition of two new missions for the country's maritime forces. The addition of Maritime Security and Humanitarian Assistance/Disaster Response (HA/DR) marks the first time these were broken out into separate missions. Although these missions warranted mention in more than one previous strategy, they remained short of a full mission. Rather, Maritime Security and HA/DR represented sub-aspects of sea control or naval presence. The second, and less obvious, aspect of the new strategy was the return to concentration on sea control as a Navy mission. Although one of the four traditional missions for the U.S. Navy, sea control had not been a high priority mission during the 1990's. Prior to October 2007, the U.S. Navy firmly held to the four traditional naval missions: power projection, sea control, deterrence, and naval presence.<sup>6</sup>

Although the publication of a new maritime strategy is something in which the U.S. Navy engages every couple of years, upon examination, this latest effort signifies a dramatic change in direction. The obvious question is, "Why?" The short answer is that the strategic environment changed, and the long answer requires a review of U.S.

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<sup>5</sup> U.S. Department of the Navy, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*, <http://www.navy.mil/maritime/MaritimeStrategy.pdf> (accessed February 5, 2009).

<sup>6</sup> David K. Richardson, Major Lane V. Packwood, and Daniel E. Aldana, "A Great White Fleet for the 21<sup>st</sup> Century," *U.S. Naval Proceedings*, January 2008, 26.

maritime strategy since 1970 to highlight when, where, and how that strategic environment changed.

Tables 1 and 2 highlight the numerous versions of maritime strategy published by or for the U.S. Navy since 1970. As can be seen, every three years or so, the Navy publishes an updated version (either internally or for public dissemination) of how the U.S. Navy sees its future role. From Figure 2, one can see the consistency of the Navy's missions over the course of nearly 40 years.

Throughout World War II, the maritime missions of the U.S. Navy included sea control, projection of power ashore by amphibious means, and naval presence.<sup>7</sup> One can make the case that these three had been the missions of navies for centuries, but in the aftermath of WWII, the U.S. Navy could not make the case for funding sea control as a mission because the dominance of the U.S. Navy was so great. Although beyond the scope of this paper, the budget battles of the late 1940's and early 1950's over the role and relevance of the U.S. Navy in the "new" nuclear environment had a tremendous effect on the Navy, and the maritime service worked hard to adjust to the demands of a

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<sup>7</sup> John B. Hattendorf, ed. *U.S. Naval Strategy in the 1970's* (Newport, RI: Naval War College Press, 2007), 35. Also known as Newport Paper 30.

Table 1- U.S. Maritime Strategies since 1970<sup>8</sup>

Author	Title	Year
ADM Zumwalt (CNO from 1970-1974)	<i>Project 60</i>	1970
VADM Turner ( <i>NWC Review</i> article of 1974)	<i>Missions of the U.S. Navy</i>	1974
ADM Holloway (CNO from 1974-1978)	<i>Strategic Concepts For the U.S. Navy</i>	1975
SECNAV W. Graham Claytor, Jr.	<i>SEA PLAN 2000</i>	1978
ADM Hayward (CNO from 1978-82)	<i>Future of U.S. Seapower</i>	1979
ADM Watkins (CNO from 1982-86)	<i>The Maritime Strategy</i>	1982-1986
ADM Trost (CNO from 1986-1990)	<i>The Maritime Strategy</i>	1989
ADM Kelso (CNO from 1990-1994) <sup>9</sup>	<i>The Way Ahead</i>	1991
ADM Kelso	<i>...From the Sea</i>	1992
ADM Boorda (CNO from 1994-1996)	<i>FORWARD...From the Sea</i>	1994
ADM Johnson (CNO from 1996-2000)	<i>Anytime, Anywhere</i>	1997
ADM Clark (CNO from 2000-2005)	<i>Seapower 21</i>	2002
ADM Mullen (CNO from 2005-2007)	<i>1,000 Ship Navy</i>	2005 <sup>10</sup>
ADM Roughead (CNO from 2007-present) <sup>11</sup>	<i>A Cooperative Strategy for 21<sup>st</sup> Century Seapower</i>	2007

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<sup>8</sup> Tables 1 and 2 are a compilation of information across three sources from the Naval War College. Three Newport Papers (No 27, 30, and 33) were used in identifying the strategies and the years issued. All three are noted in the body of the paper.

<sup>9</sup> Source for CNO tenure dates (up to ADM Kelso) is U.S. Navy website. <http://www.navy.mil/navydata/cno/cno-list.html> (accessed 12 March 2009).

<sup>10</sup> VADM John G. Morgan, USN and RADM Charles W. Martoglio, USN, "The 1,000 Ship Navy: Global Maritime Network," *U.S. Naval Institute Proceedings*, November 2005, [http://www.usni.org/magazines/proceedings/archive/story.asp?STORY\\_ID=247](http://www.usni.org/magazines/proceedings/archive/story.asp?STORY_ID=247).

<sup>11</sup> Source for CNO tenure dates (since ADM Kelso) is U.S. Navy website. <http://www.navy.mil/navydata/infoIndex.asp?id=C> (accessed 12 March 2009).

**Table 2- Mission Areas of Maritime Strategies since 1970**

CNO	Strategy	Missions
Zumwalt	<i>Project 60</i>	<ol style="list-style-type: none"> <li>1. Assured 2<sup>nd</sup> Strike</li> <li>2. Control of sea lines and areas</li> <li>3. Projection of power ashore</li> <li>4. Overseas presence in peacetime<sup>12</sup></li> </ol>
Turner	<i>Missions of the U.S. Navy</i>	<ol style="list-style-type: none"> <li>1. Strategic deterrence</li> <li>2. Sea control</li> <li>3. Projection of power ashore</li> <li>4. Naval presence<sup>13</sup></li> </ol>
Holloway	<i>Strategic Concepts for the U.S. Navy</i>	<ol style="list-style-type: none"> <li>1. Sea control</li> <li>2. Power projection (includes deterrence)<sup>14</sup></li> </ol>
Watkins	<i>Maritime Strategy</i>	<ol style="list-style-type: none"> <li>1. Deterrence</li> <li>2. Destroy enemy maritime forces {<i>sea control</i>}</li> <li>3. Protect sea lines {<i>naval presence</i>}</li> <li>4. Support land battles {<i>power projection</i>}<sup>15</sup></li> </ol>
Kelso	<i>From the Sea</i>	<ol style="list-style-type: none"> <li>1. Strategic Deterrence</li> <li>2. Presence</li> <li>3. Control of the Seas</li> <li>4. Project precise power from the seas</li> <li>5. Continuous on-scene crisis response</li> <li>6. Sealift<sup>16</sup></li> </ol>
Boorda	<i>FORWARD...From the Sea</i>	<ol style="list-style-type: none"> <li>1. Projection of power from sea to land</li> <li>2. Sea control and maritime supremacy</li> <li>3. Strategic deterrence</li> <li>4. Strategic sealift<sup>17</sup></li> <li>5. Forward naval presence</li> </ol>

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<sup>12</sup> Hattendorf, *U.S. Naval Strategy in the 1970's*, 4.

<sup>13</sup> *Ibid.*, 35.

<sup>14</sup> *Ibid.*, 54 and 66. ADM Holloway did not view sea control and power projection as missions; rather, he used the term “functions.” Sea control and power projection, properly executed, resulted in naval presence.

<sup>15</sup> John B. Hattendorf and Captain Peter M. Swartz, USN (ret), eds. *U.S. Naval Strategy in the 1980's* (Newport, RI: Naval War College Press, 2008), 157. Also known as Newport Paper 33. Equivalent missions in parenthesis are this author’s opinion.

<sup>16</sup> John B. Hattendorf, ed. *U.S. Naval Strategy in the 1990's* (Newport, RI: Naval War College Press, 2006), 89. Also known as Newport Paper 27.

<sup>17</sup> *Ibid.*, 158.

CNO	Strategy	Missions
Johnson	<i>Anytime, Anywhere</i>	<ol style="list-style-type: none"> <li>1. Sea Control</li> <li>2. Power projection</li> <li>3. Presence</li> <li>4. Deterrence<sup>18</sup></li> </ol>
Clark	<i>Seapower 21</i>	<ol style="list-style-type: none"> <li>1. Sea Strike {power projection}</li> <li>2. Sea Shield {strategic deterrence}</li> <li>3. Sea Basing {naval presence}<sup>19</sup></li> </ol>
Roughead	<i>A Cooperative Strategy For 21<sup>st</sup> Century Seapower</i>	<ol style="list-style-type: none"> <li>1. Forward presence</li> <li>2. Deterrence</li> <li>3. Sea control</li> <li>4. Power projection</li> <li>5. Maritime security</li> <li>6. Humanitarian assistance/Disaster response</li> </ol>

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changing strategic environment. The U.S. Navy added tactical air projection and strategic deterrence as maritime missions.<sup>20</sup> The new additions combined into the four enduring missions the U.S. Navy has had since the end of World War II: sea control, power projection (both amphibious and tactical air), naval presence, and strategic deterrence (through the capability of submarine launched ballistic missiles).

What changed, if the missions of the Navy did not, was the emphasis, or priority, placed on each because of the strategic environment. Thus sea control was de-emphasized during the 50's and 60's since there was not a navy that could challenge the U.S. Navy, while strategic deterrence remained a high priority as the Navy developed the submarine launched ballistic missile (SLBM). Rather than adding or removing missions, the Navy remained relevant to the requirements of the nation by prioritizing the mission

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<sup>18</sup> Ibid., 172.

<sup>19</sup> ADM Vern Clark, USN, "Sea Power 21: Projecting Decisive Joint Capabilities," *U.S. Naval Institute Proceedings*, October 2002, [http://www.usni.org/magazines/proceedings/archive/story.asp?STORY\\_ID=711](http://www.usni.org/magazines/proceedings/archive/story.asp?STORY_ID=711). Equivalent missions in parenthesis are the author's.

most relevant at the moment. In 1970, ADM Elmo Zumwalt became the 19<sup>th</sup> Chief of Naval Operations and immediately initiated a review of Navy strategy. He recognized the need to update the Navy's mission priorities, and the result of his efforts was *Project Sixty*.

ADM Zumwalt released his maritime strategy, *Project Sixty*, which was intended to be released within his first sixty days as CNO and express his vision of the Navy's future direction.<sup>21</sup> Although released just under a month past that goal, what did not go unnoticed was the recognition on the part of the new CNO of the requirement to adjust the priorities of the service in recognition of the growing threat from the Soviet Navy. There was a realistic concern that the U.S. Navy could not ensure sea control in the face of a Soviet naval challenge.<sup>22</sup> So, for the first time since the end of WWII, the U.S. Navy began to focus on sea control as its principle mission rather than strategic deterrence. This, therefore, became the principal mission of the Navy for the decade of the 70's.

The next shift in priorities took place in the 1980's. The foundation set during the decade of the 1970s enabled the U.S. Navy to take advantage of the rapid increase in military spending that began at the start of the new decade. The origin of the 600-ship navy that governed the direction of the Navy during the early to mid-1980s began with Secretary of the Navy Claytor and his *SEA PLAN 2000*.<sup>23</sup> This concept laid the foundation for the rapid expansion of the Navy as funding became available under the Reagan Administration budget increases. With the rapid expansion of the Navy during

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<sup>20</sup> Hattendorf, *U.S. Naval Strategy in the 1970's*, 35.

<sup>21</sup> *Ibid.*, 1.

<sup>22</sup> *Ibid.*, 5.

<sup>23</sup> *Ibid.*, 104.

execution of the 600-ship Navy, the U.S. Navy developed the capacity to challenge the Soviet naval threat recognized during the 1970's. And, the resources that became available to the Navy supported the belief that the U.S. Navy would win the struggle for sea control, thereby enabling it to move from a blue-water fight for sea control into the littoral environment to establish naval presence and project power ashore.

The shift in priority for the U.S. Navy of the 1980s moved the service from a one-dimensional effort to achieve sea control to a multi-dimensional effort to achieve “global forward deterrence.”<sup>24</sup> By achieving sea control through the defeat of the Soviet Navy, the U.S. Navy could assure naval presence. Naval presence consequently enabled power projection ashore through U.S. amphibious forces comprised of the Navy and U.S. Marine Corps. This multi-dimensional threat, therefore, turned the U.S. Navy into a conventional strategic deterrent. Suddenly, the Soviet Union needed to take into consideration the potential threat to its flanks should there be a land war in Europe. Unlike in the past where strategic deterrence depended on the threat of submarine launched ballistic missiles, the merging of the other three maritime missions into a viable strategy turned the Navy into a conventional threat that limited the Soviet's range of action.

The great success of the *Maritime Strategy* of the 1980s was not only the merging of multiple missions into a viable plan, but it was the manner in which the strategy became a single source document to express the goals and responsibilities of the U.S. Navy to the service, Congress, and the nation. It balanced ends, ways, and means and became the vehicle for communicating that balance to those within the U.S. and for those

around the world. It is this author's view that this was a singular achievement for the U.S. Navy, and one the Navy struggles to repeat to this day. It remains the closest the U.S. Navy has come to achieving a full and complete strategy as defined by Mahan in *The Influence of Sea Power Upon History, 1660-1783*.<sup>25</sup>

The hard work and effort invested into the *Maritime Strategy* during the 1980's remains to this day a high-water mark for the ability of naval strategy to effect overall military and national strategy. It is this author's opinion that the decade of the 80s remains comparable to that period at the turn of the 19<sup>th</sup> Century when Alfred Thayer Mahan's theories on maritime strategy changed the direction of U.S. domestic and foreign policy. The end of the marriage between the U.S. Navy and its well-developed strategy was the end of the Cold War and the dissolution of the Soviet Union. When the Soviet Navy executed its strategic retreat from the world's oceans, and the Soviet Union ceased to exist, the very strategy existentially linked to the Soviet threat was overtaken by events and was no longer relevant.

Upon initial review, the maritime strategies since the *Maritime Strategy* suffer from any number of faults that continue to be enumerated by a number of writers; however, the greatest fault with maritime strategy since the demise of the Soviet Union is not something for which the U.S. Navy should be faulted. The strategic environment, which any maritime strategy must address, continues to change at a pace that is difficult to translate into a viable strategy. The great success of the *Maritime Strategy* culminated

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<sup>24</sup> Hattendorf and Swartz, *U.S. Naval Strategy in the 1980's*, 44-45.

<sup>25</sup> Alfred Thayer Mahan, *The Influence of Sea Power Upon History, 1660-1783* (Dodo Press), 7. The Introduction of Mahan's work does not number pages. The footnote referenced is from the seventh page and is distinct from page seven of Chapter 1.

in 20 years of iterative progress on U.S. naval thinking. Each subsequent version of U.S. maritime strategy improved upon and built on the success of the previous version. The principle prerequisite for any success of this type was a stable strategic environment, which is exactly what the U.S. Navy had in the Soviet Navy and Soviet Union. The Cold War, itself, produced an environment making the *Maritime Strategy* possible, although not a certainty. The one constant since the end of the Cold War, however, has been the absence of a stable strategic environment.

The second change in the strategic environment that constrains efforts to produce a viable maritime strategy is the shift in the principle tool of U.S. foreign policy. From the end of the Vietnam War until September 11, 2001, the main arm of U.S. foreign diplomacy was the U.S. Navy. It should be noted that the major exception to this was the eight-month effort surrounding Desert Shield/Desert Storm in 1990-1991. Outside of the use of land power to affect a foreign policy result in Kuwait, the United States principally relied on the U.S. Navy to exert pressure outside the U.S. The “preeminence” of the U.S. Navy as a tool of foreign policy provided it a means of getting what the service needed in defense budget battles. Convincing Congress of the need for weapons systems or particular ship types could be reasonably expected, and since it could be expected, the strategy behind the budget request could be supported.

With the terrorist attacks against the U.S. homeland in 2001, the strategic environment changed, and the U.S. means of exerting pressure on foreign countries changed from the use of maritime forces to land forces. The strategic focus, therefore, shifted from the U.S. Navy to the U.S. Army and Marine Corps as the instruments of foreign policy. At that moment, which continues to this day and for the foreseeable

future, it became difficult for the U.S. Navy to get the national resources necessary to execute a maritime strategy. As a result, the ability to develop a strategy that balances ends, ways, and means in the manner of the *Maritime Strategy* became elusive.

In view of the two changes in the strategic environment, it is now possible to review U.S. maritime strategy since the end of the Cold War. This can be broken down into two periods, from 1991 to 2001 and post-9/11 until the present. And, as Tables 1 and 2 demonstrate, the U.S. Navy did not fail to recognize the changing strategic environment; few did, but since 1991, the Navy made multiple attempts to address the new strategic environment in a coherent fashion.

The first coherent effort to acknowledge the end of the Cold War and chart a course for the future Navy came from then CNO, ADM Frank Kelso. CNO from 1990-1994, ADM Kelso led the service during the tumultuous years that ended the Cold War. His first formal recognition of the changing strategic environment was the article, “The Way Ahead.” This article was published simultaneously in the *U.S. Naval Institute Proceedings* and *The Marine Corps Gazette*, and Secretary of the Navy, CNO, and Commandant of the Marine Corps authored it.<sup>26</sup> This visionary article accurately predicted many of the adjustments the Navy would make over the following decade. The major acknowledgement with respect to naval missions proved to be the recognition that the principal missions for the U.S. Navy would be power projection and naval presence.<sup>27</sup> For the first time since ADM Zumwalt’s *Project Sixty*, released in 1970, the mission focus of the U.S. Navy changed. It changed in recognition of the new strategic

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<sup>26</sup> Hattendorf, *U.S. Naval Strategy of the 1990’s*, 23.

<sup>27</sup> *Ibid.*, 27-28.

environment. Although implied in this article, it would not explicitly be stated until the 1992 strategy ...*From the Sea* that U.S. sea control would be assumed to exist as a result of the new strategic environment.<sup>28</sup> The new environment proved to be a major change in direction, and as such, the article “The Way Ahead” became an outline for the future direction of the Navy rather than an actual strategy. The enduring theme of the decade became the assumption that the U.S. maintained sea control. From ADM Kelso’s explicit acknowledgement of assumed sea control in ...*From the Sea* until ADM Johnson’s *Navy Strategic Planning Guidance with Long Range Planning Guidance* of 2000<sup>29</sup>, the U.S. Navy’s ability to maintain sea control and defeat any naval force in opposition remained an assumption.

With the subordination of sea control as a naval mission, power projection and naval presence became the priority. The need for the U.S. Navy to exert an influence ashore and remain a viable tool of foreign policy dramatically increased the meaning of power projection and presence.<sup>30</sup> During the Cold War, naval presence meant keeping open the sea lines of communication between the U.S. and its allies. Power projection, however, required the Navy to put Marines ashore in amphibious operations. In the post-Cold War environment, these terms included: nation-building, security assistance, peacekeeping, counter-narcotics, counter-terrorism, counter-insurgency, and crisis response.<sup>31</sup> These proved to be very different from the capabilities of anti-submarine, anti-air, and anti-surface warfare critical during a fight for sea control. At the very

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<sup>28</sup> Ibid., 89.

<sup>29</sup> Ibid., 209.

<sup>30</sup> Ibid., 24.

<sup>31</sup> Ibid., 12.

moment of great change in the strategic environment, decreasing budgets for the Navy as a result of the Peace Dividend, and the removal of the enduring threat that had been the *raison d'être* of the *Maritime Strategy*, the meaning of enduring naval missions changed. Old skills honed over decades to face the Soviet Navy gave way to new skill sets as the U.S. Navy adjusted to the new meaning associated with naval presence and power projection. It becomes apparent why strategy documents of the 1990s remained less successful than the *Maritime Strategy* in becoming a single source document balancing the ends, ways, and means of the U.S. Navy.

The great success of the 1990's with respect to maritime strategy proved to be the alignment between U.S. Navy and U.S. Marine Corps strategy and doctrine. *The Way Ahead, ...From the Sea*, and *Forward...From the Sea* better expressed the unique relationship between these two sister services. This is not surprising considering the emphasis the decade placed on power projection. Amphibious landings during the Cold War meant using the Navy and Marine Corps as a team. With the subordination of sea control as a naval mission, the Navy acquired the opportunity to improve and develop its relationship with the Marine Corps to execute the prime mission of power projection, and the expanded meaning of power projection and naval presence, to include capabilities not before seen, demanded investment into amphibious warfare. The most telling evidence of this closer relationship was all three leaders within the Navy, (Secretary of the Navy, CNO, and Commandant of the Marine Corps) signed the three strategy documents of the first half of the 1990s.

However, by the end of the decade, with the publication of ADM Johnson's *Anytime, Anywhere* strategy, this close relationship ended. It was signed by only the

CNO.<sup>32</sup> It is this author's opinion that what drove this adjustment in the Navy-Marine Corps relationship was the re-emergence of more traditional naval missions that more closely mirrored Cold War missions than those in the early days of the post-Cold War environment. ADM Johnson, in *Anytime, Anywhere*, acknowledges for the first time since the end of the Cold War the future threat of area denial by U.S. adversaries.<sup>33</sup> Although the ability of the U.S. to maintain sea control was assumed in the document, the recognition of a growing threat began to draw the Navy's attention away from the principal mission of the decade, which had been power projection.

Returning to the broader discussion of maritime strategy, the decade of the 1990s showed the short duration of the strategic environment that produced the flurry of maritime strategy documents from the beginning of the 1990s. While the maritime environment against the Soviet Union persisted from at least 1970 to 1989 and enabled the development of the relatively stable *Maritime Strategy*, the new environment lasted only about half as long but produced more efforts at a relevant strategy. Therefore, the maturity of the strategies was less. The strategies may have been long-sighted in their vision, but they showed less maturity than in the previous decade at balancing the ends, ways, and means of the U.S. Navy. Uncertainty surrounding unfamiliar capabilities demanded of the service, reduced resources as a result of smaller budgets, and the loss of a clear adversary led to a more vague statement on maritime strategy. All this took place while the Navy remained the principle means of insuring American foreign policy. What becomes apparent with the next dramatic change in the strategic environment is that the

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<sup>32</sup> Ibid., 22, 88, 150, 179.

<sup>33</sup> Ibid., 174.

farther away the U.S. Navy gets from the certainty surrounding *Maritime Strategy* and its strategic environment, the less successful the Navy becomes at producing an enduring maritime strategy. This is exacerbated by the reality, that since 9/11, the U.S. Navy is no longer the principle means of insuring U.S. foreign policy.

The next major maritime strategy of the U.S. Navy came with the publication of *Sea Power 21*, authored by ADM Vern Clark. Released just after the one-year anniversary of the 9/11 attacks, the strategy embraced the language of the time. The strategy reflected the drive in late 2002 to transform the military and military planning. New terms came to represent old missions. Deterrence became Sea Shield; power projection became Sea Strike. Technology became the vehicle to link dispersed forces into a more capable and focused navy despite a smaller fleet, which had been reduced to half its numbers since the end of the Cold War. The strategy represented a plan to transform the Navy, or in simpler terms, to get more with less. The central question guiding these transformation efforts was, for a fleet dramatically smaller in size, how does the service provide more maritime capability? What was missing from this strategy was any sense of the means necessary to execute it. Where the *Maritime Strategy* provided indication of the number and types of ships necessary to execute, *Sea Power 21* provided none of that detail. This is the first indication of the nation's shifting focus from the sea to land. Released in October 2002, the concepts behind *Sea Power 21* drove the direction the Navy wanted to go, but did not clearly identify how the Navy was to get there. With the U.S. involved in Afghanistan and planning underway to invade Iraq six months later, the ability of the Navy to identify the means by which it would achieve its strategic goal became more difficult.

The second victim became the Navy's alignment with the needs of the military at large and the nation as a whole. In late 2004 and early 2005, there came the realization within the U.S. government that Iraq would not be a quick in and out success. During that period, the U.S. military and the nation recognized the needs of the Army and Marine Corps as the national priority in order to ensure victory. For the first time since the end of the Vietnam War, the Navy found itself a secondary priority in relation to the land services. Unable to achieve budgetary clarity in the current strategic environment, *Sea Power 21* remained incomplete as a strategy. It never became the single source document indicative of a mature strategy. Once the money necessary to execute *Sea Power 21* was diverted to the Army and Marine Corps, the Navy's love affair with technology and doing more with less abruptly ended.

The short duration of the strategic environment in the 1990's coupled with the realignment of the U.S. Navy's role in the post-9/11 world demonstrates the dramatic difference between developing a strategy rather than a strategic concept. As discussed previously, *Maritime Strategy* most closely approached Mahan's definition of a strategy. Since the end of the Cold War, U.S. Navy documents on maritime strategy meet the requirements of a strategic concept. Described by Samuel Huntington, "The fundamental element of a military service is its purpose or role in implementing national policy. The statement of this role may be called the *strategic concept* of the service."<sup>34</sup> In simple terms, Mahan defined strategy as balancing ends, ways, and means, while Huntington defines strategic concept as the service's singular purpose or mission. Although related,

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<sup>34</sup> Samuel Huntington, "National Policy and the Transoceanic Navy," *U.S. Naval Institute Proceedings*, May 1954, 483.

these are two distinct terms. The debate over *A Cooperative Strategy for 21st Century Seapower* is over whether it is a strategy or a strategic concept.<sup>35</sup>

Since the end of the Cold War, the changing strategic environment and relative importance of the U.S. Navy in relation to the other services limited the Navy to developing strategic concepts that fell short of strategy. Each effort communicated the ends and ways of the service without assigning the means. In addition, the short duration of the strategic environments hindered the cumulative progress made in developing the means. Specifically, the efforts to develop a maritime strategy ten years ago do not necessarily support efforts to revise today's new strategy. This remained a distinct disadvantage from the efforts of the 1980's where the strategic environment supported progressive improvement over time.

The Navy's latest strategy document is a strategic concept and marks a clear change in direction from the past. The addition of Maritime Security and Humanitarian Assistance/Disaster Response to the four traditional missions of the U.S. Navy represents the recognition of a new strategic environment in which the U.S. Navy operates. *21<sup>st</sup> Century Seapower* is the Navy's effort to identify for the public, the government, and for itself the service's future direction. In short, the document identifies the ends and ways of the Navy. The remainder of this paper discusses the means by which the U.S. Navy executes her new strategic concept.

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<sup>35</sup> Robert O. Work and Jan van Tol, "A Cooperative Strategy for 21<sup>st</sup> Century Seapower: An Assessment," *Center for Strategic and Budgetary Assessments Backgrounder* (March 26, 2008): 6, [http://www.csbaonline.org/4publications/PubLibrary/B.20080326.A\\_Cooperative\\_Stra/B20080326.A\\_Cooperative\\_Stra.pdf](http://www.csbaonline.org/4publications/PubLibrary/B.20080326.A_Cooperative_Stra/B20080326.A_Cooperative_Stra.pdf). Although beyond the scope of this paper, both this document and Hattendorf's *U.S. Naval Strategy in the 1990's* page 2 provide excellent insight into the difference between a strategy and a strategic concept. Work and van Tol refer to the difference as that between strategy and a strategic concept, as does Huntington. Hattendorf describes the difference as that between strategy and doctrine.

## **An Historical Parallel**

Where does a navy fit into the priorities of a large and powerful country struggling under the weight of tremendous pressures? For a maritime service with a long and proud history, how should that service address pressures dramatically changing the very nation it serves? A new direction in domestic politics results in a dramatic change at the election polls. Changing international realities demand a reevaluation of the country's priorities and strategy. Domestic and international economic pressures demand hard decisions with consequences for the Navy's future fleet structure. Finally, the unstoppable advance of technology drives the cost of shipbuilding up at the same time that a battle rages over the correct design of future navy ships.

It is reasonable to recognize the above description as the current state of affairs for the U.S. Navy. Demands on the U.S. Navy remain varied and immense; however, the description is, instead, of England's Royal Navy, between 1850 and 1900. The principal maritime power for over one hundred years, England came face to face with a changing strategic environment in the second half of the nineteenth-century that drove difficult decisions regarding national priorities and the role of the Royal Navy (RN). Some of the pressures the RN faced can be linked to the unstoppable advance of technology, but many resulted from the rise of regional powers and the changing strategic environment.

It may seem far-fetched to use an historical example of a navy that defended a constitutional monarchy over a century in the past to illuminate an uncertain future for today's U.S. Navy; however, despite the obvious differences between the RN of 1850 and the U.S. Navy of 2009, the similarities between the strategic options available to the two services, remain strikingly similar. The purpose of the comparison is not to dwell on

similarities between the U.S and Great Britain. Rather, the comparison intends, through an analysis of history, to identify potential courses of action for the U.S. maritime service based on how the RN dealt with similar strategic questions a century ago. The comparison of the U.K. during the second half of the nineteenth century and the U.S. of 2009 focuses on four areas: shifting political conditions, advances in technology, the rising cost of shipbuilding, and the rise of regional powers. The comparison of these four areas supports the premise that the strategic environment of the two periods remains sufficiently similar that lessons may be drawn identifying strategic options for today's U.S. Navy. Highlighting strategic options for the U.S. Navy supports a dialogue on balancing ends, ways, and means into a viable strategy, as discussed in the previous chapter.

The second half of the 19<sup>th</sup> Century in Great Britain was a steady and continuous redefinition of the role of government. Driven by the electorate and dramatic industrialization of the country, Great Britain at 1900 was very different than the country of 1850. The largest indication of this change was the dramatic increase in the number of eligible voters constituting the electorate. In 1850, the electorate numbered approximately 650,000. By 1900, the number of franchised males grew to over six million.<sup>36</sup> This ten-fold increase in the electorate produced a dramatic change in priorities for the government. The beginnings of mass democracy pushed the British government to allocate more resources toward social and economic services.<sup>37</sup> For the

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<sup>36</sup> Glenn Everett, "The Reform Acts," *The Victorian Web*, <http://www.victorianweb.org/history/hist2.html>.

<sup>37</sup> Paul Kennedy, *The Rise and Fall of British Naval Mastery* (Amherst, New York: Humanity Books, 2006), 194.

government, the requirements of the Royal Navy required balance with the growing social spending requirements. For the Royal Navy and its advocates, service budget allocations required competition with increasing social spending programs demanded by a reform minded electorate. It required the RN to justify and communicate its role to not just the government but to the changing electorate.

Returning to 2009, the U.S. electorate demanded a dramatic change in direction for the country with the 2008 national election. The change in direction was not solely the election of a Democratic president, but it was the election of that president with a large margin of control for Democrats in both Houses of Congress. Since 1980, only two years (1993-1994) find Democrats in control of both Congress and the White House.<sup>38</sup> Similar to the ballot box reforms in Great Britain, the result of the November 2008 election drove the development of new priorities within the government.

This reprioritization is the link between Great Britain of the late 19<sup>th</sup> Century and the U.S. of 2009. As with the Royal Navy a century ago, the U.S. Navy must compete for budgetary resources from a government and electorate with developing social spending priorities. The best example of the growing social priorities comes from Secretary of Defense Robert Gates comments concerning new defense budget priorities. In his announcement of April 6, 2009 publicizing new budget priorities, Secretary Gates opened his speech by noting \$13 billion of increased spending on troop and family care services provided by the Department of Defense.<sup>39</sup> In a speech announcing cancellation

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<sup>38</sup> John L. Perry, "The Party That Controls Congress Controls," *Newsmax*, Newsmax.com, [http://www.newsmax.com/john\\_perry/congress\\_oval\\_office/2008/04/03/85144.html](http://www.newsmax.com/john_perry/congress_oval_office/2008/04/03/85144.html).

<sup>39</sup> U.S Department of Defense, Secretary Robert M. Gates, Budget press briefing given 06 April 2009, <http://www.defenselink.mil/speeches/speech.aspx?speechid=1341>.

of major weapons programs, the Secretary highlighted additional money for military social programs matching new administration priorities. There is a great need on the part of the U.S. Navy “to develop...necessary [public] support, and it can only do this if it possesses a strategic concept which clearly formulates its relationship to...national security.”<sup>40</sup> Again referring to Huntington’s strategic concept, the U.S. Navy must communicate its value and then link that value to the country’s need for continued investment in maintenance of the fleet. The Navy must win over a populace already frustrated by past communication and execution failures on the part of Navy leadership.<sup>41</sup>

The next area of comparison between the U.S Navy of 2009 and the RN of the late 19<sup>th</sup> Century was the confusion surrounding the rapid change in military technology. The types of ships and weapons used by navies in 1850 differed greatly from those operated in 1900. The transformation of the RN from a sail-driven and wooden-hulled navy to one that was screw-driven and steel-hulled marked a dramatic revolution in maritime technology. This technological revolution took fifty years to sort out and compares with today’s maritime environment.

The U.S. Navy of 2009 participates in a revolution of electronics, sensors, communication, and weapons that turn multiple ships and aircraft into a system of systems. Rather than individual ships operating and fighting as single entities, they now leverage technology into a system, which permits an aircraft to identify an enemy, one ship to target that same enemy, and a second ship (or more) to launch a weapon and destroy it from a distance. The dramatic change in today’s weapons and ships remains

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<sup>40</sup> Huntington, “National Policy and the Transoceanic Navy,” 483.

<sup>41</sup> This is a reference to the Cavas article in the introduction of this paper.

just as revolutionary in its effect on maritime warfare as the advances of the Industrial Age.

The principle example of the dramatic change in technology seen in 19<sup>th</sup> Century maritime warfare is best expressed through a study of the Royal Navy during her Baltic operations supporting the Crimean War. The 1854-1856 maritime operations and especially the Great Armament over the winter of 1855-56 vividly highlighted the changing nature of war at sea. For, at the beginning of the war, the RN viewed operations in the conventional sense that dominated maritime strategic thinking since the early 1800's. As with the Napoleonic Wars, the RN intended to deploy a fleet into the Baltic that would engage the Russian battle fleet in a manner similar to previous naval battles. The RN fleet that departed for the Baltic in March 1854 comprised a fleet expecting battle at sea. The fleet included four steam battleships, four blockships (cruisers), and six frigates.<sup>42</sup> The composition of the fleet was unremarkable until one looks at the composition of the proposed fleet two years later. Winter preparations for the summer 1856 Baltic offensive included:

**Table 3: 1856 Great Armament Fleet Composition**

Ship type	Number
Steam Battleships	18
Large screw frigates	4
Corvettes	12
Paddle steamers	20
Gunboats	100
Mortar vessels	46
Mortar frigates	3
Despach (sic) vessels	20
Floating batteries	2
Total warships	225 <sup>43</sup>

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<sup>42</sup> Andrew D. Lambert, *The Crimean War: British Grand Strategy, 1853-1856* (New York: Manchester University Press, 1990), 77.

<sup>43</sup> *Ibid.*, 304.

However, the Great Armament Fleet, as the 1856 fleet became known, never reached completion as the March 30, 1856 Paris Peace Treaty ended the war.<sup>44</sup> But, what remains remarkable was the dramatically different fleet composition two years of war wrought on the RN. The steam battleship remained in the order of battle, but it was at a much lower proportion to the remainder of the fleet than at the beginning of the war.

The reason for this dramatic change in fleet structure was the Russian Baltic naval strategy. The Russian Navy was forced on the defensive and avoided direct battle against the combined British and French Fleets.<sup>45</sup> The Russian Navy and leadership recognized the inferiority of the Russian Navy<sup>46</sup> and recognizing that inferiority, the Russian Baltic Fleet refused to engage in battle. Rather it retreated to the protection of Russia's coastline fortresses to bolster the defense of those forts and ensure its own survival. The Baltic Fleet was a "Fortress Fleet" instead of a "Fleet in Being."<sup>47</sup> The defensive nature of the Russian strategy marginalized the RN capital ships of the 1850's, while preserving what little strength the Russian Fleet possessed.<sup>48</sup>

This Russian maritime strategy accounted for the dramatic change in the composition of the British Fleet over the two years of war. In order for the RN to engage and defeat the Russian Fleet under the protection of fortress guns at Sweaborg and Kronstadt, the RN had to destroy the fortresses that housed those guns. The 1854 steam battleship, as then designed, could not survive a battle against one of these fortresses.

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<sup>44</sup> Ibid., 334.

<sup>45</sup> Ibid., xx.

<sup>46</sup> Basil Greenhill and Ann Giffard, *The British Assault on Finland 1854-1855: A Forgotten Naval War* (Annapolis, MD: Naval Institute Press, 1988), 52-53.

<sup>47</sup> Lambert, *The Crimean War*, 5.

The battleship's wooden hull and smoothbore guns could not compete against a stone fortress with rifled guns.<sup>49</sup> Hence, the development over two years of two separate fleets. The battlefleet comprised of steam battleships as the ships-of-the-line, and the flotilla fleet comprised of the gunboats, mortar barges, and floating batteries necessary for the reduction of the Russian fortresses.

The results of two years of war in the Baltic held two lessons. First, naval warfare changed at the tactical level over the fifty years since Trafalgar. The advent of steam propulsion, rifled guns, explosive shells, and iron-hulled ships marked the end of the tactics that governed maritime warfare during the centuries of sail. Second, these very same technological advances permitted a navy to deny battle, rather than engage in battle. The tactical advances that technology brought to the maritime domain enabled an inferior enemy to engage in a strategic battle above its weight. The Russian Navy forced the RN to consume large quantities of resources and effort far larger than the size, condition, and antiquated design of her fleet warranted. In order to win against a strategic opponent vice a tactical opponent, the RN required the Great Armament Fleet rather than the fleet measured only by the number of battleships.

The RN took to heart the tactical lessons of the Crimean War, but soon forgot the strategic lessons.<sup>50</sup> The tactical lessons concerning the advantages of steam propulsion, rifled guns, explosive shells, and iron, eventually steel, plating drove ship development throughout the remainder of the 19<sup>th</sup> Century. The RN began implementing the tactical

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<sup>48</sup> Ibid., 330.

<sup>49</sup> Greenhill and Giffard, *The British Assault on Finland*, 301.

<sup>50</sup> Lambert, *The Crimean War*, 336.

lessons with the construction of *HMS WARRIOR* in 1861. This new ship combined steam propulsion, iron armor, and rifled guns.<sup>51</sup> This tactical implementation continued with *HMS DEVASTATION* in 1871<sup>52</sup> and *HMS DREADNOUGHT* in 1906<sup>53</sup>. Supported by her immense industrial strength, the RN continued to have the technological advantage in shipbuilding up to the German challenge during the years leading up to World War I.<sup>54</sup>

The RN capital ship development over the 50 years following the Crimean War demonstrated the assimilation of tactical lessons learned during that war; however, the strategic lessons of dealing with a defensive enemy did not make an enduring impression. Soon after the peace treaty in Paris, naval strength returned to its pre-war measurement based on the number of battleships.<sup>55</sup> The balanced naval force developed in response to the Russian defensive strategy required experience to forge into an effective fighting force and provide a reasonable assurance of capturing Kronstadt. With the cessation of hostilities, efforts to maintain the capabilities of such a force ended. The difficult lessons the RN relearned at the beginning of WWI regarding submarines, mines, and the defensive stance of the German Navy demonstrated this lack of balance.<sup>56</sup>

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<sup>51</sup> Royal Navy, "HMS Warrior 1861," *Royal Navy Website*, <http://www.royalnavy.mod.uk/history/ships/hms-warrior-1861/>.

<sup>52</sup> "Pre-dreadnought," *Absolute Astronomy.com*, <http://www.absoluteastronomy.com/topics/Predreadnought>. Absolute Astronomy.com is a web based encyclopedia.

<sup>53</sup> Royal Navy, "HMS Dreadnought 1906," *Royal Navy Website*, <http://www.royalnavy.mod.uk/history/ships/hms-dreadnought-1906/>.

<sup>54</sup> Kennedy, *The Rise and Fall of British Naval Mastery*, 174.

<sup>55</sup> Lambert, *The Crimean War*, 336.

<sup>56</sup> World War I Naval Combat, "Major Warships Sunk in World War I," *World War I*, <http://www.worldwar1.co.uk/sunk.html>. Of the losses to major naval forces in WWI, more losses are attributed to mines and torpedoes (both surface and submarine launched) than were caused by gunfire. Mines: 82, Torpedoes (surf):15, Torpedoes (sub):51, Gunfire: 61.

Returning to the current strategic environment, the U.S. Navy finds itself in a similar position that the RN faced at 1850. Today, there is a tremendous convergence of technology dramatically changing the way maritime forces are built and used. While the convergence of steam propulsion, powerful guns, and thick armor overturned centuries old methods of fighting at sea, today's technology of missile systems, sensors, communication, and electronics produce similar adjustments at both the tactical and strategic levels.

Although possible to study any number of modern technological advances, this paper concentrates on two with tremendous consequences for the U.S. Navy. Anti-ship cruise missiles and conventional ballistic missiles pose the greatest challenge for the U.S. Navy since this technology provides the United States' most likely peer competitor, China, with an opportunity to repeat the Russian defensive strategy. However, unlike the Russians, fortress walls and large guns do not provide protection for an inferior navy, rather maneuver room and survival of the fleet comes from an umbrella of protection created through the merger of cruise missiles, ballistic missile technology, and shore based aviation.

Last year, *Defense News* published an article detailing a new Chinese ballistic missile threat to Navy surface ships. With little detail as to the capabilities of the new Chinese ballistic missile threat because of classification concerns, the article received confirmation of the threat. One unidentified admiral was quoted as saying he was ordered, "stay away [from the Chinese coast]. There are no options."<sup>57</sup> This new ballistic

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<sup>57</sup> Christopher Cavas, "Missile Threat Helped Drive DDG Cut," *Defense News*, August 4, 2008, <http://www.defensenews.com/story.php/I=3657972>.

missile threat combined with the recognized threat of anti-ship cruise missiles pose significant problems for the U.S. Navy. If flag officers received orders to remain away from the Chinese coast, it confirms past U.S. strategy documents' recognition of a growing area denial threat.<sup>58</sup>

Although the *Defense News* article confirms the existence of an area denial threat, it does not speculate how the Chinese intend to use this new weapon. For that, one must turn to Chinese sources for insight on potential consequences. Based on a Chinese military journal, an operational ballistic missile system, should it become operational, “provide[s] China with more maneuvering space for military and political strategic operations on its eastern, maritime flank.”<sup>59</sup> In addition to providing maneuver room, the article explicitly acknowledges the missile capability as a means to “remedy to some extent China’s qualitative inferiority in traditional naval platforms.”<sup>60</sup> This article confirms the relevance of comparing Russian maritime strategy of 1854-1856 with Chinese strategy in 2009. As the Russians did against the RN, the Chinese are developing a “Fortress Fleet” rather than a “Fleet in Being.” This defensive strategy acknowledges the qualitative inferiority of the Chinese Navy to the U.S. Navy, but also leverages modern technology to ensure strategic maneuver, while protecting the fleet from direct attack. As previously discussed, this is a threat recognized by the U.S. Navy.

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<sup>58</sup> This refers to ADM J. Johnson’s writing *Anytime, Anywhere* of 2000, where the U.S. Navy acknowledges for the first time, since the end of the Cold War, efforts to deny the U.S. Navy access to parts of the world’s oceans. Referenced in Chapter One of this monograph.

<sup>59</sup> Wang Wei, “The Effect of Tactical Ballistic Missiles on the Maritime Strategy System of China,” *Shipborne Weapons*, trans. OS3 Danling Cacioppo, U.S. Navy, August 2006, 12-15. Quote taken from a complete translation of article in *Naval War College Review* Summer 2008, 135.

<sup>60</sup> *Ibid.*, 140.

The first comparison between the RN of the 19<sup>th</sup> Century and the U.S. Navy of 2009 was the shifting domestic political environment. The second was a comparison of the effect of technology on maritime strategy and operations. Now, it is possible to discuss the third, which relates to the advance of technology. This is the rising cost of shipbuilding. The dramatic advances in technology seen at the end of the Age of Sail produced a profound effect on the cost of building a warship. The dramatically rising costs added to the pressure on the RN because of the increased demands of the electorate to invest in social spending and infrastructure. This was true of the RN of the 19<sup>th</sup> Century, and it is true of the U.S. Navy today.

The cost of a Victorian Era ship was 108,000 pounds and purchased a wooden hulled ship of 90 guns. When screw propulsion was added, the cost increased to 151,000 pounds.<sup>61</sup> In 1861, the cost of *HMS WARRIOR* was 357,291 pounds.<sup>62</sup> In a period of five years, the cost more than doubled for a ship survivable in the then current environment. Added to the difficulty of commissioning new ships, the speed of technological change made obsolete those ships constructed prior to the latest advance in shipbuilding. Thus, additional pressure to replace older ships added to the cost of new construction. The dramatic increase in new construction continued to rise, and in 1906, *HMS DREADNOUGHT* cost 1.79 million pounds.<sup>63</sup>

Over fifty years, the advance of technology drove up the cost of a ship of the line more than 16 times. For a navy with centuries of tradition producing evolutionary

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<sup>61</sup> Kennedy, *The Rise and Fall of British Naval Mastery*, 193.

<sup>62</sup> Kennedy Hickman, "First Ironclads: HMS Warrior," *About.com*, <http://militaryhistory.About.com/od/shipprofiles/p/hmswarrior.htm>.

<sup>63</sup> Kennedy, *The Rise and Fall of British Naval Mastery*, 193.

improvements to warships, construction costs remained predictable. Costs associated with 19<sup>th</sup> Century revolutionary technical developments became exponential. This inflationary pressure matches the pressure felt by the U.S. Navy in 2009. An example of the difficulty the U.S. Navy faces in dealing with the cost of shipbuilding comes from the Congressional Budget Office (CBO). The CBO estimate to execute the Navy's 30-year shipbuilding plan is \$25 billion dollars per annum, and compares to \$12.6 billion per annum spent since 2003.<sup>64</sup> Additionally, the average cost of building each class of ship continues to increase over time. The cost per thousand tons to build *USS SPRUANCE* in 1970 was \$270 million. For *USS TICONDEROGA*, just eight years later, it was \$410 million. Although different ship classes, (*USS SPRUANCE* was a destroyer while *USS TICONDEROGA* was a cruiser) the two ships had the same hull form. The difference in cost, however, did not come from a different hull design. Rather, the increase in cost resulted from the more advanced sensors, communication suite, weapons, and electronics.<sup>65</sup>

Again, one recognizes parallels between the RN in the late 19<sup>th</sup> Century and the U.S. Navy of 2009. First, a more socially minded electorate drove election results that increased spending on social programs. This required the RN to justify its spending in a more competitive fiscal environment. Second, advances in technology drove a tremendous change in the tactical and strategic method of applying maritime power.<sup>66</sup>

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<sup>64</sup> Congressional Budget Office, *CBO Testimony: Current and Projected Navy Shipbuilding Programs*, Statement of Eric Labs before the Subcommittee on Seapower and Expeditionary Forces, Committee on Armed Services, U.S. House of representatives, March 14, 2008, 1. Accessed through CBO website: [http://www.cbo.gov/ftpdocs/90xx/doc9045/Shipbuilding\\_Main\\_Text.1.1.shtml](http://www.cbo.gov/ftpdocs/90xx/doc9045/Shipbuilding_Main_Text.1.1.shtml).

<sup>65</sup> *Ibid.*, 13.

<sup>66</sup> Kennedy, *The Rise and Fall of British Naval Mastery*, 174.

Third, the same technological advances that changed the use of maritime power, also dramatically increased the cost of shipbuilding. Finally, the RN of the late 19<sup>th</sup> Century dealt with the growing influence of rising regional powers that became a challenge to British hegemony, both at sea and on land.

A growing challenge to British naval hegemony developed as the 19<sup>th</sup> Century came to a close. It was less a decline in RN capability than it was an increase in the strength of other nations around the world. The advantages of industrialization moved beyond Britain, enabling other countries to produce ships of similar technological advancement as the RN, even if fewer in number.<sup>67</sup> The following table illustrates this point:

**Table 4: Capital Ship Inventories by Country**

Country	Battleships	Battleships in
Britain	38	62
France	19	36
Germany	11	12
Russia	3	18
Italy	7	12
USA	0	11
Japan	0	7 <sup>68</sup>

As can be seen, RN strength measured by the number of battleships over a 14 year period increased by over 60%; however, her relative strength measured against other nations declined as countries around the world increased in strength at a faster rate than the RN. The numerical expression illustrates in concrete terms the tectonic shift in the strategic environment the RN faced at the opening of the 20<sup>th</sup> Century. Germany, the

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<sup>67</sup> Ibid., 195.

<sup>68</sup> Ibid., 209.

U.S., and Japan became maritime competitors of the RN. And, in the prioritization of these regional powers, the RN recognized Germany as the principal threat to British hegemony.

In recognition of the rising regional powers, Great Britain took action enabling the RN to concentrate on the regional power deemed the greatest threat to RN maritime dominance. The RN was forced to prioritize resources against one regional power rather than all due to social constraints on the RN budget. In acknowledgement of the new strategic environment, Great Britain concluded a maritime alliance with Japan and yielded gracefully to U.S. expansion in the Western Hemisphere. In 1902, the British entered into a naval alliance with Japan. The alliance permitted the RN to withdraw from Japanese and Chinese waters, concentrating her Eastern Fleet in Singapore. The overall effect ceded maritime dominance in the Far East to Japan, guaranteed Japanese and RN cooperation against Russia, and enabled the RN to bring battleships back to the Home and Mediterranean Fleets to counter French and German maritime construction.<sup>69</sup> In the Western Hemisphere, Great Britain as a nation and the RN as a service gracefully withdrew naval forces from the stage and ceded regional dominance to the United States.<sup>70</sup>

The rise of regional powers at the end of the 19<sup>th</sup> Century forced Great Britain and the RN to make difficult strategic decisions. In making those hard decisions, Great Britain prioritized national interests and took action to ensure those interests remained secure. Being geographically closer, the growth of German and French navalism became

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<sup>69</sup> Ibid., 213.

<sup>70</sup> Ibid., 214.

a larger threat in the eyes of Great Britain than U.S. and Japanese maritime ambition. Thus, an alliance was struck with Japan, and the RN withdrew from the Caribbean. This avoided unnecessary competition among secondary concerns and consolidated resources to remain dominant in the Home and Mediterranean waters.

The historical strategic environment facing the Royal Navy at 1900 parallels the one facing today's Navy. The overall strength of the U.S. Navy as measured by the number of ships and their capabilities remains greater today than at any time since the end of World War II. The challenge facing the Navy is her relative strength. Just as the RN of old faced the rise of Germany, Japan, the United States, and France, so too the U.S. Navy of today must recognize and come to terms with the rise of China, a resurgent Russia, and a developing India. In light of new domestic priorities, a confluence of new technology with implications for maritime operations, and the rising cost of that same technology in a financially constrained environment, the U.S. must clearly articulate its national interests and align the naval service in a manner that supports those national interests.

Chapter One of this monograph identified the various strategic documents of the U.S. Navy, concentrating on documents since 1970. It illustrated the relative stability of strategy up to the end of the Cold War and the rapidly changing strategic environment since 1989. With the changing strategic environment, the U.S. Navy struggled to produce a viable strategy to define and communicate its mission for the United States. Specifically, the U.S. Navy worked to develop a replacement to the *Maritime Strategy* released in the 1980's that balanced ends, ways, and means. *Maritime Strategy* became a single source document communicating the Navy's mission to the nation, government

and the maritime service. Since the end of the Cold War, the Navy succeeded in producing strategic concepts rather than strategies. These new documents clearly stated the Navy's mission and objectives, but fell short of becoming a comparable single source document like the one achieved in the 1980's because none of the documents effectively assigned resources to the articulated mission.

In Chapter Two, a parallel was drawn between the Royal Navy of the late 1800's and the U.S. Navy of 2009, in effect a comparison of the two strategic environments. The use of this comparison lays the foundation to identifying potential courses of action for today's U.S. Navy. By studying the strategic decisions of the RN in the face of similar challenges, strategic decisions the U.S. Navy must make in a similar situation become clearer.

## **The Course Ahead**

In the face of tremendous pressure, what should be the U.S. Navy's future direction? How should the service balance the new domestic priorities, foreign threats on the world's oceans, and the challenge of communicating that balance to the nation it serves? In the previous chapter, the historical parallel between the U.S. Navy and the Royal Navy of the second half of the 19<sup>th</sup> Century provides assistance in charting a coherent course for the coming years. Before continuing, it is important to make the point that the use of an historical example is not meant to imply the U.S. must make the exact same decisions made by the Royal Navy of the late 1800's. Nor is the intent to imply the U.S. is declining as a world power. The historical comparison illustrates broad themes that this paper translates into strategic options. Just because the Royal Navy or Great Britain took a particular action in 1861 does not mean the U.S. should take the

same action in 2009. The broad themes drawn from the historical comparison are three: policing the maritime commons, leadership in shipbuilding, and the importance of a balanced fleet structure.

Policing the commons describes a broad concept of maritime dominance that seeks to ensure the maritime commons remain open and available for all nations that desire to use it. In short, it is the concept that in exercising the privileges of maritime dominance, the principal maritime power of the age does so for the common good. Illustrated by the Royal Navy in the late 1800's, understanding this concept remains vital to the U.S. As Queen of the Sea, the Royal Navy performed its role in a manner that ensured the benefits of the world's oceans and its trade remained available to all nations. Royal Navy accomplishments remain too many to list in entirety, but a few examples illustrate the concept.<sup>71</sup>

The Royal Navy embarked on the task of charting the world's oceans and conducting surveys of harbors around the world. The information gathered supported the production of the most accurate and complete nautical charts seen up to that time. Sold to all at reasonable prices, it greatly facilitated safe navigation of the maritime commons.<sup>72</sup> The availability of nautical charts supported an open ocean that all nations might access. This free trade concept insured by the Royal Navy came closer to a reality because of the liberal release of information documented by that very same Navy.

Next, the Royal Navy embarked on the tremendously difficult task of eliminating the slave trade. The Royal Navy, from the outlawing of slavery in all British dominions

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<sup>71</sup> The concept of 'policing the commons' derived from Paul Kennedy, *The Rise and Fall of British Naval Mastery*, 163-175.

in 1833, used her maritime supremacy to suppress the slave trade. And in support of this, Great Britain even convinced U.S. President Lincoln in 1861 to permit U.S. flagged ships to be stopped and inspected by British warships.<sup>73</sup> This RN mission remains unheralded. In addition to the anti-slavery mission, the RN also engaged in anti-piracy efforts to further ensure free and open trade. By endorsing free trade, charting the world's oceans, suppressing the slave trade, and limiting the effectiveness of piracy, the RN policed the commons. The words of Sir Eyre Crowe, a British diplomat in 1907, best described the balance between maritime dominance and the common good:

It would, therefore, be but natural that the power of a State supreme at sea should inspire universal jealousy and fear, and be ever exposed to the danger of being overthrown by a general combination of the world. Against such a combination no single nation could in the long run stand, least of all a small island kingdom, not possessed of the military strength of a people trained to arms, and dependent for its food supply on overseas commerce. The danger can in practice only be averted--and history shows that it has been so averted--on condition that the national policy of the insular and naval State is so directed as to harmonize with the general desires and ideals common to all mankind, and more particularly that it is closely identified with the primary and vital interests of a majority, or as many as possible, of the other nations.<sup>74</sup>

The judicious use of maritime supremacy remained the goal of the Royal Navy throughout the late 1800's. In light of this benchmark, the latest strategic concept of the U.S. Navy endeavors to achieve a harmony between U.S. maritime dominance and the common good. It is counter-intuitive that at the very moment the U.S. Navy suffers from an unsupportive fiscal environment and rising challenges from regional powers the U.S.

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<sup>72</sup> Ibid., 164.

<sup>73</sup> Ibid., 165.

<sup>74</sup> Eyre Crowe, "Memorandum on the Present State of British Relations with France and Germany," in *British Documents on the Origins of the War* Vol. III, ed. G.P. Gooch and Harold Temperley (London: His Majesty's Stationary Office, 1928), Appendix A, 402-403.

Navy adds *two additional* missions to its strategic concept.<sup>75</sup> However, these new missions of Maritime Security and Humanitarian Assistance/Disaster Response are the very missions necessary, in today's strategic environment, applicable to "policing the commons." The ability of the U.S. Navy to execute these new missions comes into sharp focus after the Indonesian tsunami relief efforts of 2004/2005, the Pakistani earthquake relief efforts of 2005, and Hurricane Katrina response efforts of 2005. The U.S. Navy response to these three tragedies clearly illustrates operations in support of the common good.

The second theme of the historical comparison between the Royal Navy and the U.S. Navy is leadership in shipbuilding. With the one exception of the French success in building *LA GLORIE* one year before the completion of *HMS WARRIOR*, the Royal Navy led the way on experimental designs while making the most of new technology. The combination of British industrial capacity and a sheer will to maintain maritime dominance enabled the RN to lead all technological advances for the following 50 years.<sup>76</sup> The fact that *HMS DEVASTATION* and *HMS DREADNOUGHT* rendered obsolete all other warships from the moment of their commissioning illustrates the leadership of RN warship construction. It was no accident that both ships launched from British shipyards.

Navigating the confluence of new technology one time might produce a revolutionary ship design the rest of the world followed. What made the leadership of the

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<sup>75</sup> U.S Department of the Navy, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*, 10. <http://www.navy.mil/maritime/MaritimeStrategy.pdf> (accessed February 5, 2009). Two additional missions in the sense that maritime security and HA/DR are not one of the four historic maritime missions of strategic deterrence, power projection, sea control, or naval presence.

<sup>76</sup> Kennedy, *The Rise and Fall of British Naval Mastery*, 193.

RN impressive was the repetition of her leadership over five decades. The sheer pace of change often resulted in one-of-a-kind ships or two in a class, and design improvements made some warships irrelevant in less than a decade. The pressure to reduce new construction in the face of exponentially increasing costs had to be great. However, the RN persisted in her determination to experiment and led the way in modern shipbuilding.

The U.S. Navy, likewise, must remain the leader in warship design and construction. Not just in hull or ship type but in the weapons systems and sensors that fill the hull. As did the RN over a century ago, the U.S. Navy has a five-decade tradition of leading technological innovation. The U.S. Navy built the first submarine launched ballistic missile, the first nuclear powered submarine and surface ship. It was the first to build a super carrier, vertical launch system, and land attack cruise missile. Each of these technical developments produced the most capable navy in the world. The challenge the U.S. Navy faces today is maintaining its technical lead in the face of rising costs and new national priorities. Spending larger sums of money for smaller gains in technical performance produces tremendous pressure on the Navy to justify its expenditures. With new political priorities driving budgetary decisions, the need for the Navy to effectively and accurately communicate the reasons for investment in her fleet becomes more vital.

Nowhere is the need for continued technological investment more important than in theater ballistic missile defense capability. The United States continues to demonstrate a leadership in this advanced technology, but in light of Chinese development of tactical ballistic missiles, continued advances remain critical to ensuring the viability of U.S.

maritime forces.<sup>77</sup> Should U.S. efforts to develop ballistic missile defense fall behind development of tactical ballistic missiles, an expanding area of the world's oceans will be denied to the U.S. Navy.

The first strategic theme was policing the commons, and the second strategic theme was remaining first in ship construction. The third strategic theme in the comparison of the RN and the U.S. Navy was the need for a balanced fleet. As discussed, the RN fleet operating in the Baltic during the summer of 1854 proved very different than the fleet under construction for the planned summer offensive of 1856. The Great Armament Fleet comprised fewer capital ships but more small surface combatants and logistic ships. The unglamorous workhorse ships came to outnumber the battleships that prior to the war, and after, expressed maritime power. The historical example of the Crimean War parallels some of the lessons of a more recent maritime war. The Falklands Conflict of 1982 demonstrated many of the same principles between the RN and Argentina that must be addressed by the U.S. Navy.

Well-documented, the Falklands Conflict, itself, remains beyond the scope of this paper. However, the maritime fighting during this war is the most recent proving ground of the revolutionary technologies effecting modern naval warfare. As such, some of the conclusions drawn from the conflict remain applicable to this study. Key to the discussion of the conclusions is a study by Dr. Jacob Kipp of Soviet Navy analysis published post-conflict in Soviet naval journals. The key conclusion of the Soviet studies

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<sup>77</sup> Reference to the Wang Wei article "The Effect of Tactical Ballistic Missiles on the Maritime Strategy System of China."

was the recognition of the vital importance of achieving a balanced fleet.<sup>78</sup> Therefore, it becomes necessary to define a balanced fleet.

The balanced fleet concept describes a naval force containing capability in all areas of naval warfare. A balanced force contains aviation, surface, sub-surface, amphibious, and logistical capacity, and along with this multi-area capacity, there exists an integrated command and control over the force with the capability for simultaneous offensive and defensive operations. Soviet Admiral I.M. Kapitanets, then the Soviet Commander of the Baltic Fleet,<sup>79</sup> describes the central lesson of the Falklands conflict as “the necessity of the balanced development and use in close combined action of the major types of forces of navies--submarines, aviation, and surface ships.”<sup>80</sup>

The balanced fleet lesson of the Falklands Conflict matches the historical parallel previously used in this paper. A wartime fleet such as The Great Armament Fleet of 1856 or the fleet mobilized to recapture the Falklands in 1982 balanced the need for capital ships with other requirements of naval warfare. In 1856, balance meant 18 battleships out of a total force of 225.<sup>81</sup> Capital ships composed eight percent of the total battlefleet. In 1982, two of the 98 ships of the RN battlefleet were aircraft carriers or a

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<sup>78</sup> Jacob W. Kipp, *Naval Art and the Prism of Contemporaneity: Soviet Naval Officers and the Lessons of the Falklands Conflict*, Texas A&M Stratech Studies (College Station, Texas: Center for Strategic Technology, The Texas Engineering Experiment Station of the Texas A&M University System, 1983), 12.

<sup>79</sup> *Ibid.*, 8.

<sup>80</sup> E. Ratkin, “Stavkana vnezapnost,” *Morskoi Sbornik*, No. 3 (March 1983), 81-82, quoted in Jacob W. Kipp, *Naval Art and the Prism of Contemporaneity: Soviet Naval Officers and the Lessons of the Falklands Conflict*, Texas A&M Stratech Studies (College Station, Texas: Center for Strategic Technology, The Texas Engineering Experiment Station of the Texas A&M University System, 1983), 27.

<sup>81</sup> Lambert, *The Crimean War*, 304.

mere two percent of the fleet.<sup>82</sup> An additional illustration of a balanced fleet was the ratio of auxiliary ships in the RN battlefleet of the Falklands campaign. Of the 98 ships total, 42 were auxiliary ships.<sup>83</sup> At 43 percent, this near one to one ratio between combatants and auxiliaries proved critical in sustaining the Falklands campaign. It must be stressed that using percentages to illustrate a balanced fleet is not an endorsement of a mathematical approach to fleet structure. Rather, it quantifies, in concrete terms, a balanced fleet.

Having defined a balanced fleet, it is possible to turn the discussion to why a balanced fleet remains vital to the U.S. Navy. A balanced fleet provides the flexibility and resilience necessary for a global maritime force to operate on the high seas or in the littoral. Or to use the description of Soviet Admiral Kapitanets, “success... in ‘fleet versus fleet’ or ‘fleet versus shore’ missions depends... upon the close combined action of all branches of naval forces.”<sup>84</sup> As the sole global maritime power of the current strategic environment, the U.S. Navy must achieve success regardless of whether the maritime fight is a fleet on fleet engagement or fleet on shore. To compare the current strategic environment with that faced by the RN of the Crimean War, the U.S. Navy must achieve success regardless of whether it faces a “fleet in being” or a “fortress fleet.” The other navies of the world remain small theater or regional navies able to tailor force structure to the specific requirements of the appropriate geographic region.

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<sup>82</sup> Kipp, *Naval Art and the Prism of Contemporaneity*, 12.

<sup>83</sup> *Ibid.*, 12.

<sup>84</sup> Admiral I. Kapitanets, “Rol’ flota v anglo-argentinskome konflikte,” *Morskoi sbornik*, No. 2 (February 1983), 20, quoted in Jacob W. Kipp, *Naval Art and the Prism of Contemporaneity: Soviet Naval Officers and the Lessons of the Falklands Conflict*, Texas A&M Stratech Studies (College Station, Texas:

However, the U.S. Navy does not have the luxury of operating in one environment, as a regional navy. Nor does it have the ability to dramatically shift its force structure in a couple of years as the RN did during the Crimean War. The lead-time for U.S. Navy new construction remains measured in a dozen years rather than two. Therefore, the U.S. Navy must develop a fleet offering the greatest flexibility in dealing with maritime threats, and a balanced fleet affords the required flexibility.

## **Recommendations and Conclusions**

The purpose of this academic study is to provide strategic options for the U.S. Navy in recognizing and addressing the current strategic environment. The current environment finds the U.S. Navy in an enviable position as the strongest and most capable Navy in the world. As far as size and experience, no other maritime force comes close. The challenge for the U.S. Navy is to remain as strong as ever despite the external and internal challenges facing the service. U.S. Navy efforts to remain relevant must concentrate on three tasks: perfecting theater ballistic missile defense, achieving a balanced fleet structure, and moving the Navy from a strategic concept to a strategy.

The capital ship of today is the aircraft carrier, and the method of employment remains the carrier strike group. Any weapon system that lasts 80 years as the measure of maritime power must be capable and flexible. Yet, in today's environment, the aircraft carrier remains vulnerable. If open source documents are accurate, and it is the assumption of this paper that they are, then Chinese development of tactical ballistic missiles poses a new and unique threat to U.S. aircraft carriers. Without a viable defense

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Center for Strategic Technology, The Texas Engineering Experiment Station of the Texas A&M University System, 1983), 16.

against this new technology, the defense in depth concept of the carrier strike group leaves an opening through which the Chinese military may deliver its ballistic missiles. The Chinese maritime strategy making use of tactical ballistic missiles remains defensive in nature in an attempt to marginalize the efficacy of U.S. carriers. This strategic environment requires the U.S. Navy to continue its technological leadership through the continued development of theater ballistic missile defense.

The second task or line of effort for the U.S. Navy needs to be further development of a balanced fleet. It should be clarified that the current Navy fleet structure contains tremendous capability over a wide range of mission areas. Achieving a balanced fleet is in light of the strategic environment studied in this paper. Because of the Chinese defensive strategy and ballistic missile threat, the U.S. Navy fleet structure needs to reduce the number of aircraft carriers and increase the number of surface ships and submarines. It is recommended that the carrier fleet be reduced to nine with a corresponding reduction of the number of air wings. With older carriers placed in strategic reserve, funds can be redirected to additional construction of surface ships and submarines. These platforms provide more utility in the current environment explored in this paper.

Efforts in surface ship construction must focus on adding capacity to the six mission areas defined in *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*. More DDG's with a ballistic missile defense capability supports the need for continued defense against a growing sea denial threat, while continued construction of the littoral combat ship (LCS) provides capacity in naval presence and maritime security mission areas.

Two controversial recommendations regarding surface ship construction are to increase the emphasis on amphibious ships and reintegrate logistic ships into the regular fleet. Amphibious ships remain the backbone of U.S. ability to project power ashore. The unique relationship between the Navy and Marine Corps requires greater emphasis in today's strategic environment. Additionally, the lessons of the Falkland's Conflict and the threat to logistic ships in a war zone support re-integrating surface ships into the regular Navy. Re-integration supports re-arming the ships with a self-defense capability making them less susceptible to the current threat environment.

The final recommendation regarding surface ship construction is to conduct a service life extension on the small inventory of mine counter-measure ships. As discussed previously, area denial remains a vital part of Chinese maritime strategy, especially in the waters surrounding Taiwan. Any area denial effort includes the use of mines. The RN lessons in WW I demonstrate the effectiveness of mines, and no mine warfare effort would be complete without a mine sweeping capability.

The overall take-away from these recommendations regarding force structure change is smaller is better. Amphibious, logistic, LCS, and mine warfare ships do not capture the imagination. They are not the awe-inspiring behemoths that are the aircraft carriers, but what they lack in size and flash, they more than make up for in capability and capacity. The current strategic environment demands capability and capacity to counter-balance the current threat

The third effort of the U.S. Navy is to develop the 2007 strategic concept into a viable strategy. This strategy must identify how the U.S. Navy achieves larger national objectives, and it must identify the resources necessary to accomplish the tasks assigned.

In fact, the strategy drives the fleet structure, and defining a coherent strategy is probably the hardest of the three recommendations. Developing a viable strategy is a balancing act taking into account the threat, national priorities, political considerations, and service culture. It is never easy, and it is all the more difficult in light of the on-going operations in Iraq and Afghanistan. However, the U.S. Navy did it in the past, and if the strategic environment remains relatively stable, the U.S. Navy can do it again.

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