MAKING PROGRAM/BUDGET DECISIONS ABOUT THE FUTURE OF THE NAVY: HOW SENIOR FLAG OFFICERS WORK WITH POLITICAL APPOINTEES AND CAREER CIVILIAN EXECUTIVES INSIDE THE NAVY HEADQUARTERS

by

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George Mason University
Fairfax, VA
Making Program/Budget Decisions about the Future of the Navy: How Senior Flag Officers Work with Political Appointees and Career Civilian Executives inside the Navy Headquarters

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DEDICATION

This work is dedicated to my wife Karyn Barlow, and our two wonderful children Emma Grace Farley and William Robert Barlow Farley who all endured countless hours outside the house, or quiet inside, while “dad’s doing his dissertation.”
ACKNOWLEDGEMENTS

This project would never have been completed were it not for the support and encouragement of my wife, my family and friends and my co-workers. I would especially like to recognize the anonymous contribution of the dedicated public servants who agreed to participate in this study and by sharing their experiences of working together making decisions about the future Navy, helped contribute to a more thorough understanding about how the Department of the Navy headquarters actually works. I would like to acknowledge the support of my supervisor and co-workers at CNIC. They kept the proverbial trains running while I took time off to finish this project. Finally, I would like to thank the members of my Committee and Professor Baker, my Committee Chair for her endless patience, understanding and faith that gave me confidence when I was at the point of giving up and whose gentle but firm guidance was instrumental in bringing this project to completion.
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<tr>
<td>BAM</td>
<td>Baseline Assessment Memorandum</td>
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<td>BA</td>
<td>Budget Authority</td>
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<td>BGM</td>
<td>Budget Guidance Manual</td>
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<td>BSO</td>
<td>Budget Submitting Offices</td>
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<td>CSG</td>
<td>Carrier Strike Group</td>
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<tr>
<td>CMO</td>
<td>Chief Management Officer</td>
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<td>CNO</td>
<td>Chief of Naval Operations</td>
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<td>CNIC</td>
<td>Commander, Navy Installations Command</td>
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<td>C^4ISR</td>
<td>Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance</td>
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<tr>
<td>CFMS</td>
<td>Command Financial Management System</td>
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<td>CBO</td>
<td>Congressional Budget Office</td>
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<td>CAPE</td>
<td>Cost Assessment and Program Evaluation</td>
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<td>DAWG</td>
<td>Deputies’ Advisory Working Group</td>
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<td>N8</td>
<td>Deputy Chief of Naval Operations, Integration of Capabilities and Resources</td>
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<td>DSB</td>
<td>Operations for Defense Science Board</td>
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<td>DoD</td>
<td>Department of Defense</td>
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<td>DON</td>
<td>Department of the Navy</td>
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<td>DCNO</td>
<td>Deputy Chief of Naval Operations</td>
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<td>FY</td>
<td>Fiscal Year</td>
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<td>FYDP</td>
<td>Future Years Defense Program</td>
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<td>HADR</td>
<td>Humanitarian Assistance and Disaster Relief</td>
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<td>IBR</td>
<td>Investment Balance Review</td>
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<td>ICBM</td>
<td>Inter-Continental Ballistic Missile</td>
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<td>Term</td>
<td>Abbreviation</td>
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<tr>
<td>Military Departments</td>
<td>MILDEPS</td>
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<td>Office of Management and Budget</td>
<td>OMB</td>
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<td>Office of the Chief of Naval Operations</td>
<td>OPNAV</td>
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<td>Office of the Secretary of Defense</td>
<td>OSD</td>
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<tr>
<td>Operation &amp; Maintenance</td>
<td>O&amp;M</td>
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<tr>
<td>Planning, Programming, Budgeting and Execution System</td>
<td>PPBES</td>
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<tr>
<td>Program Analysis and Evaluation</td>
<td>PA&amp;E</td>
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<td>Program Budget Information System</td>
<td>PBIS</td>
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<td>Program Objectives Memorandum</td>
<td>POM</td>
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<td>Senior Executive Service</td>
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<td>Senior Level Review Group</td>
<td>SLRG</td>
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<td>Sponsor Program Proposal</td>
<td>SPP</td>
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<tr>
<td>Submarine Launched Ballistic Missile</td>
<td>SLBM</td>
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<tr>
<td>Nuclear-powered Strategic Missile Submarine</td>
<td>SSBN</td>
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<tr>
<td>Nuclear Powered Attack Submarine</td>
<td>SSN</td>
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<tr>
<td>Total Obligational Authority</td>
<td>TOA</td>
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<tr>
<td>Type Commander</td>
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<tr>
<td>Vice Admiral</td>
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<td>Vice Chief of Naval Operations</td>
<td>VCNO</td>
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MAKING PROGRAM/BUDGET DECISIONS ABOUT THE FUTURE OF THE NAVY: HOW SENIOR FLAG OFFICERS WORK WITH POLITICAL APPOINTEES AND CAREER CIVILIAN EXECUTIVES INSIDE THE NAVY HEADQUARTERS

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George Mason University, 2014

Dissertation Director: Dr. Ann Baker

Today’s Navy is the product of the myriad decisions made over the last fifty years by leaders inside the Navy headquarters, the Pentagon, White House and the Congress. Over the last quarter of a century the number of combatant ships in the US Navy has declined and the cost of buying and operating them has nearly doubled in inflation adjusted dollars. This result has occurred even though no Navy official has ever expressed a desire for this particular outcome. The purpose of this study was to learn whether this outcome could be explained by understanding the ways that the senior leaders in the Navy headquarters interact and participate in the Programming, Planning, Budgeting and Execution System (PPBES).

To conduct this qualitative research project I collected data directly from key participants in the PPBES through twenty-five semi-structured interviews where I posed a series of
open-ended questions to Navy and Department of Defense officials who worked in the
Pentagon at some point during the last quarter century. I also collected data from a panel
discussion with fourteen senior defense experts (four of whom I also interviewed later)
and through a review of Congressional testimony by senior Department of the Navy
(DON) officials presented between 1989 and 2013. In addition to qualitative data I
compiled a comprehensive database of program/budget information for the twenty-five
year period between FY 1989 and FY 2014 that captured the total costs of the Navy, the
size of the combatant fleet and all of the issues raised by analysts inside the Navy
headquarters and adjudicated during the annual DON and DoD PPBES processes. This
research adds to the base of knowledge by collecting unique insights into how flag
officers, political appointees and members of the Senior Executive Service (SES) interact
behind the scenes to make program and budget decisions about the future of the Navy.
CHAPTER 1: INTRODUCTION, PROBLEM STATEMENT AND RESEARCH QUESTIONS

Introduction and Research Questions

Over the last quarter of a century the number of combatant ships in the US Navy has declined and the total cost of operating the Navy has grown (Figure 1 and Figure 2). Combatant ships are the Navy’s principal offensive platforms. Combatant ships include Aircraft Carriers, Strategic and Attack Submarines, Cruisers, Destroyers, Frigates, Littoral Combat Ships, and Amphibious Assault Ships. During this same period there is no public record of any of the Navy’s leaders, either the political appointees in the Secretariat or Flag Officers in the Office of the Chief of Naval Operations (OPNAV) expressing a desire or preference for this outcome.

Today’s Navy is the product of the myriad decisions made over the last fifty years by leaders inside the Navy headquarters. The purpose of this study is to understand to what degree this outcome is the result of the ways that officials in the Navy headquarters interact and participate in the Programming, Planning, Budgeting and Execution System (PPBES). This qualitative research project collected data directly from key participants in the PPBES through semi-structured interviews. Data was also collected during a panel discussion with senior defense experts and through a review of congressional testimony.
by senior Department of the Navy (DON) officials since 1989. This data was designed to learn what are the factors that have led Navy leaders to have consistently made choices which have produced a smaller and more expensive Navy?

**Figure 1. US Navy Combatant Ships FY 1984 - FY 2015**

The interviews with Navy leaders sought answers to two key research questions.

- First, is the outcome of choices made over the last twenty-five years – a smaller more expensive Navy – attributable in any measurable way to how the officials in the Navy
headquarters engage in the decision making processes and how their formal roles constrain or enable their participation in making decisions about the future Navy?

- Second, do the analytical processes that support the Planning, Programming, Budgeting, and Execution System (PPBES) deliver the necessary information for Navy officials to make optimal resource allocation choices?

![Navy Budget Authority FY 1984 - FY 2013](image)

Source: U.S. Office of Management and Budget

Figure 2. US Navy Budget Authority FY 1984 – FY 2013

Understanding how officials inside the Navy headquarters make decisions is important for several reasons. First, over the last seven decades the Department of the Navy budget (which includes the Navy and Marine Corps) has averaged more than $147 billion a year (adjusted for inflation). The Department of the Navy (DON) consumes about 30 percent
of the annual defense budget. In recent budget negotiations, the White House and Congress have agreed that budget decisions to reduce Federal spending will include fair share cuts between defense spending (excluding the incremental costs of wars), and discretionary domestic spending (Khimm 2012). That means that the defense establishment (including the Navy) is in effect competing for budget authority on an equal footing with domestic programs. In this environment what are perceived as poor budget choices by Navy officials may pose increasing risks to the Navy if its priorities do not compete well with other alternate uses of finite resources.

Second, since the nation’s founding the Navy has been an important component of America’s military power. As far back as the Barbary Wars of the early 19th Century America has relied on its Navy as a guarantor of access to the sea-based lines of communication and commerce. As a continental nation straddling both the Atlantic and Pacific Oceans, for more than a century America has conceptualized itself as a maritime power. While the need for a Navy was once subject to intense debate in America’s history (Symonds 1980), ever since President Theodore Roosevelt dispatched the “Great White Fleet” of 14 battleships on a circumnavigation in 1907-8 (Morris 2001, 494–503), the Navy has been a large and prominent element of America’s national power. In many respects one of the crucial jobs of senior Navy officials is making the case that the Navy is worth the continued investment. For that reason understanding how they conceptualize their collective vision of the future Navy is important.
Finally, all of the decisions that Navy officials make result in the shape and size of the future Navy. After the Second World War the US fleet slowly declined in size reaching 479 ships (including auxiliaries and service craft) in 1979 (Lehman 2001, 117). President Reagan and his Navy Secretary John Lehman set on a course to build a larger fleet capable of fighting the Soviet Union and executing a Maritime Strategy aimed at the Soviet fleet of nuclear-powered attack submarines and ballistic missile-carrying strategic submarines (Lehman 2001, 123–126). The number of combatant ships in the “600-ship” Navy peaked at 414 in FY 1987 and has declined to a planned size of 205 at the end of FY 2015. The current situation where the number of combatant ships in the fleet is smaller than it has ever been since the beginning of the Second World War, coupled with increasing competition for shares of the Federal Budget make it very important to understand how the officials in the headquarters make decisions about the future Navy.

**The US Navy**

Within America’s military establishment the Navy has always faced a unique challenge as warships have been the most expensive and capital intensive pieces of equipment in the nation’s arsenal. Traditionally referred to as “Capital Ships,” this term refers to both their cost and military value. What the Navy considers its most important warships has changed over time. Before and during World War I and through the interwar period battleships were the most important ships in the fleet. Immediately following Pearl Harbor, aircraft carriers emerged as the most strategically significant platforms. Since World War II, America’s nuclear-powered aircraft carriers and strategic submarines
SSBNs) carrying Submarine Launched Ballistic Missiles (SLBMs) have been the core around which the rest of the fleet is built. Today’s capital ships represent significant investments reaching many billions of dollars each. Because of their size, cost and relative scarcity (the US currently operates 14 SSBNs and 10 nuclear-powered aircraft carriers with one under construction), warships are national assets.

This investment has long been considered worthwhile because of the Navy’s unique ability to operate globally without the need for bases in proximity to military targets. Throughout the Cold War era the immediate response to almost any international crisis threatening US interests was to send an aircraft carrier and a number of supporting ships to the region as a show of force. A Carrier Strike Group (CSG)\(^1\) brings to bear a potent offensive force which since the 1980s has also included a large number of highly accurate cruise missiles that can be launched from the strike group’s destroyers, cruisers, and attack submarines. For decades naval forces have also been used to deliver humanitarian assistance and disaster relief (HADR) to victims of natural disasters around the globe. A recent media campaign highlights this aspect of the Navy’s mission with the tagline “America’s Navy, a Global Force for Good.”

The Navy’s capacity to “show the flag” when US interests are threatened, rapidly generate and deliver military strikes, or provide humanitarian relief is to a great degree

\(^{1}\) A Carrier Strike Group consists of a carrier and between three and seven escort and support vessels.
dependent on operating a minimum number of deployed or rapidly deployable assets.

While getting to where they are needed is possible on short notice, transiting 7,000 miles over an ocean still takes two weeks or more, so the Navy continuously forward deploys ships and strike groups in the Western Pacific, Mediterranean, and near the Persian Gulf.

The Navy Deployment Cycle

One of the biggest challenges for Navy force planners and decision makers is the fact that the number of ships that are deployable at any moment is limited by the need to continuously repair and upgrade the fleet. Wear and tear on a ship during deployment takes a heavy toll. After operating at a high state of readiness for as long as a year, ships return to their homeport where they undergo extensive repairs. During these sometimes extended repair periods the ship is unavailable for operational assignment.

Immediately following repairs and overhauls, ships undergo a work-up period where the crew (which typically includes a large number of new members) comes on board and is trained to operate the ship and its weapon systems. Work-ups can take as long as six-months during which the ship is not ready to be forward deployed for military or humanitarian operations. Only when the ship and its crew are fully ready for operations can it transit to its forward deployed location to relieve other ships on station, which in turn begin their own repair and work-up cycle. The effect of the deployment cycle is that only about one in three Navy combatant ships can be forward deployed at any time. This means that with 10 aircraft carriers in the inventory the Navy can generate three Carrier
Strike Groups at any one time (assuming that one carrier, usually the oldest, is held in reserve to support pilot training). This calculus, with the additional factor of the extraordinary costs of buying and operating each warship, has always been the central dilemma for planners as they formulate alternatives and recommend decisions about the shape of the current and future Navy.

**The Navy’s Problem Today**

During the last seven decades the Defense budget has increased and decreased coincident with the four major wars the United States has fought (Figure 3). Today, as more than a decade of wars in Southwest Asia is winding down, the defense budget is again falling. Navy Budget Authority peaked in FY 2010 and has declined every year since. The recent sequestration agreement temporarily reduced defense spending by about $50 billion in FY 2013. The Bipartisan Budget Act of 2013 (P.L. 117-67) temporarily suspended sequestration in FY 2014 and FY 2015, though DoD is bracing itself for the possibility of further cuts after FY 2015.
Despite the fact that in real terms, as a portion of the U.S. economy, current defense spending constitutes a small percentage of gross domestic product (Jones, Candreva, and DeVore 2011, 219; Walker 2013), it does constitute the largest discretionary portion of the Federal budget. By the mid-1980s, the widely perceived connection between defense spending and the then growing budget deficits appears to have exerted downward pressure on the defense budget. In real terms, defense spending began decreasing in inflation adjusted terms in FY 1986, several years before the notional end of the Cold War in 1991.
Whether it is due to changing facts on the ground in Southwest Asia or to a generally worsening fiscal environment, dealing with shrinking budgets has now become a preoccupation within DoD. For decades (Isaacson 1983; F. C. Spinney 2002), analysts have worried that the increasing cost of weapon systems would produce a situation where investment (procurement plus research and development) would squeeze out sustainment (manpower plus operation and maintenance) funding. Figure 4 portrays the relative

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2 Throughout this report Navy Budget Authority refers to twenty-two Navy appropriations. This analysis excludes the exclusively Marine Corps appropriations and working capital and trust funds.
budget shares of Navy spending by these categories. The Department responded to this situation in a variety of ways. The Reagan administration began by adding money to recapitalize the armed services by buying large numbers of next generation weapon systems in the early 1980s, and ended by stretching out procurements: buying fewer units per year for more years than originally planned. The end of the Cold War produced large reductions in force structure, which were used in equal measure to reduce overall spending and support the procurement of even more expensive systems.

Since FY 1999 rapid increases in the cost of military personnel, operations & maintenance (O&M), and investment, have occurred simultaneously, and may therefore be especially difficult for the Department to handle using prevailing decision making tools. Attempting to solve the current budget problems by cutting a little money from many programs to avoid painful decisions could over time erode the Navy’s ability to deliver capabilities that counter foreseeable threats and deal effectively with strategic surprises. The magnitude of current fiscal crisis in DoD, occurring as it is during a wider national conversation about the national debt and deficits may require a new approach; one that looks at problems through new lenses, poses new questions, and thoroughly and fairly considers imaginative solutions to increasingly intractable problems. In this environment, how will Navy leaders manage? Is there a method that they can use to make better decisions that optimize resources allocation across the service? At this point, the defense spending downturn which started in FY 2010 is only four years old. Is there
anything that can be done at the beginning of what could be a long downturn that would enable more rational decisions?

This Study
A less than optimal allocation of resources poses bigger risks now when budgets are falling. Navy decision makers facing this dilemma need to imagine new ways to make decisions that ensure the continued viability of the Navy. The unusual characteristics of the current crisis make this research timely and important. The basic premise of this research project was that the only way to really understand how decisions are made inside the Navy headquarters was to examine the relationships between and among the three tribes who participate: political appointees, flag officers, and career civilians who are members of the Senior Executive Service (SES).

There are several things that make this environment interesting from a public policy perspective. The first is that having three tribes at the head of the organization distinguishes the Navy (and other Military Departments) from most Federal entities which are led by two tribes; political appointees and senior executives. Of potentially greater interest is that this structure might affect the relative influence of one tribe over another when making decisions about how to spend money.

Method
The purpose of this grounded theory study was to understand the particular role that senior flag officers play in spending decisions (primarily budgeting, but also enterprise-
level management issues such as auditability) within the Department of the Navy (DON). The investigation focused on flag officers (more commonly referred to as admirals) because their role in and effect on enterprise-level business processes inside the Navy is not well understood. In most Federal agencies political appointees are the most influential actors. In DoD however, senior flag and general officers appear to possess authority that eclipses every other actor except perhaps the Secretary of Defense.

In the first phase of this grounded theory investigation, I conducted twenty-seven interviews of twenty-five officials who participated in the decision making processes in the Pentagon to collect information about how they interacted with other participants in making program/budget decisions. The biographies of prominent Navy officials tend to focus on the various strategic crises the protagonist faced in his or her career rather than on the details of how they operated within the bureaucracy (see Zumwalt 1976; Crowe and Chanoff 1993; Lehman 2001). As a result there is virtually no literature that describes the behind the scenes processes of making program/budget decisions inside the Navy headquarters. I wanted to produce useful data about how these processes worked that might explain whether there were qualities about the participants’ backgrounds and formal and informal roles that could help explain how decisions about the future Navy are made.
The Actors

As mentioned above, among the three tribes who work together inside the Navy headquarters to make decisions about spending money to shape the future of the Navy are Flag Officers, political appointees, and senior civilians who are members of the Senior Executive Service (SES). Flag officers seem to be the most prominent actors. There are two things to keep in mind when thinking about the role of flag officers as decision makers in the Navy. The first is that because of their deep connection to the institution and their specialized training and experiences as military professionals, senior flag officers are accorded tremendous influence in the various decision-making processes used in DoD. Secondly, once they pin on their third or fourth star, flag officers have a short window of opportunity to make enduring enterprise changes.

Flag officers signify their rank by the number of stars on their uniform collar or shoulder boards. During peacetime since the Second World War, four-star admirals are the highest ranking officers in the Navy. The most senior flag officers – i.e. three-star Vice Admirals and four-star Admirals – are nominated by the President to serve in specific billets and are confirmed by the Senate in a manner that is almost identical to the one for civilian political appointees, though usually a less rancorous one. In the Military Departments (MILDEPS), which are each components of the Department of Defense (DoD), the only actors with greater official authority are the political appointees who serve as Secretary, Under Secretary, and one of several Assistant Secretaries. While political appointees play an important role in the management of the Military Departments, commanding the
military to execute operations is the exclusive responsibility of the uniformed service members, led by their senior leaders – generals in the Army, Air Force and Marine Corps and flag officers in the Navy.

It takes an average of 25 years for a Naval Officer to rise to flag-rank, longer if the member started as an enlisted Sailor. Three- and four-star Admirals usually achieve that rank after between 30 and 35 years in the service. Once an officer receives his or her fourth star, s/he usually has only a few years remaining in their career. There are very few institutions where once you reach your position of greatest experience, authority, and responsibility you have only three to five years left before you have to leave. CEOs, College Presidents, and elected officials (with the exception of the term-limited positions like President) can serve for many years, accumulating influence, experience, and authority. By contrast the average Admiral retires at age 60, a point in their lives when they can expect to (and often do) launch a second career.

Three- and four-star admirals are involved in most major decisions about how the Navy operates. A casual observer might assume that this means Admirals focus on operational issues pertaining to how to deploy and use naval forces. This aspect of running the Navy is unquestionably important, especially during wartime. Nevertheless, the senior flag officers in the Department of the Navy headquarters spend most of their time working on

\[3\] On 1 July 2014 ADM Michelle J. Howard was the first female ever promoted to four-star rank in the Navy’s history (Lamothe 2014).
program and budget decisions and in efforts to make the case that the Navy continues to be a key element in America’s national military strategy that justifies the significant annual investment.

In his autobiography, Admiral William Crowe Jr., the Chairman of the Joint Chiefs of Staff (CJCS) between 1985 and 1989, explained how important these bureaucratic processes were to the Navy:

... the biggest things that happen in the Navy are winning battles in the [Joint Chiefs of Staff], the Secretary of Defense’s office, the White House, and Congress. We have to convince all these people otherwise we lose. He [the Chief of Naval Operations] doesn’t have to know a lot about the Navy, he has to know how to win arguments. (Crowe and Chanoff 1993, 44)

Admiral Crowe added that since the 1960s, with the introduction of strategic decision making processes run out of the Office of the Secretary of Defense (OSD), to protect the Navy’s interests its highest ranking leaders needed to possess skills more like lawyers than Sailors.

Unlike most institutions in American society, there is only one way into the highest reaches of the Navy. While a CEO can come from another company, a University President can come from outside academia entirely, and a Roman Catholic Bishop may have decided to enter the ministry in their late twenties or early thirties, a four-star admiral joined the Navy when s/he was around eighteen years old, and has spent every day of his/her professional life since then inside the institution.
Many observers assume the Admirals must be the most influential actors in running the Navy. The fact is that the highest ranking officers in the Navy receive delegated authority from the Secretary of the Navy (SECNAV) who possesses the ultimate statutory authority in the Institution. In practice flag officers share power with the Secretary and the other civilian political appointees selected by the President. Though flag officers are an important class of actors in DoD there has been almost no research into (1) what influences their preferences; (2) whether they use their position in the bureaucratic decision making processes in characteristic or predictable ways; and (3) how they interact with the other decision makers inside the Department of the Navy. This research is designed to help understand these questions.
CHAPTER 2: BACKGROUND: THE DOD DECISION MAKING

ENVIRONMENT

Since its inception in 1947, effectively orchestrating the differences among the four uniformed services and the three Military Departments under which they fall has always been one of the principal challenges of managing the Department of Defense (DoD). John Kennedy’s Secretary of Defense Robert McNamara introduced PPBS in 1961 to enable the rational prioritization of resources across the Department. The first important product of the PPBS process was a December 1962 decision to significantly restructure the nuclear-based strategic retaliatory force. This decision, like others in the early years of PPBS, was based on a careful analysis of evidence that focused on the central question of “how much is enough?” Through the use of a rigorous analytical method, the PPBS helped decision makers make choices that reallocated resources across the services. To answer the challenge posed by this new approach, the services rapidly became more skilled at the computer-assisted systems analysis and operations research tools used by McNamara and his so-called “whiz kids.”
Between 1984 and 2013 the DoD PPBES\(^4\) process was governed by DoD Directive 7045.15 signed on 22 May 1984 by William Taft IV, the Deputy Secretary of Defense. The 1984 instruction described the PPBS as a “cyclic process containing three distinct but interrelated phases: planning, programming, and budgeting (1984, 1).” A new version of this instruction was issued on 25 January 2013. The most significant change in the current instruction is that it does not emphasize the notion of “distinct but interrelated” phases (2013). In practice, since 2003 the program and budget processes have been increasingly merged so that they in effect occur simultaneously. In Chapter 5 this change to the process is raised by many interview participants as having had a significant effect on the way program/budget decisions are made inside the Navy.

The DON Budget Guidance Manual (BGM) provides amplifying guidance to Navy Budget Submitting Offices (BSOs) about how PPBES operates inside the Navy and Marine Corps headquarters. The BGM is maintained and updated annually by the Program/Budget Coordination Division (FMB3), an office within the Assistant Secretary of the Navy (Financial Management & Comptroller). The BGM describes the Navy PPBES processes which still employ three distinct phases, though the each phase has been compressed and there is now some overlap between phases which did not occur in the past (2013, 12 – 16). The remainder of this chapter presents a more detailed

\(^4\) The E for execution was added in 2003 (Jones, Candreva, and DeVore 2011, 106)
description of how the phases of the PPBES process actually occur inside the Navy headquarters. The narrative is in large part derived from the reflections of participants that I interviewed during this research project. Their observations also form the basis for the findings in Chapter 5.

**Background: How much is enough?**

*You cannot make decisions simply by asking yourself whether something might be nice to have; you have to make a judgment on how much is enough?* Robert S. McNamara April 20, 1963 (Enthoven and Smith 2005, 197)

The analytical processes the Navy uses today to support decision making are directly descended from the processes which were introduced to DoD over fifty years ago by Secretary of Defense McNamara. According to several of the participants in this study the Navy, arguably more than the Army or Air Force, embedded the operations research techniques that were foundational to PPBES into its own decision making processes. Because there are so many powerful constituencies inside the Navy headquarters representing the three main warfare communities (surface, undersea and air) the Navy has always required a framework for making decisions which the stakeholders accepted even when they might disagree with the outcomes.

**Unrestrained Requirements: Navy Planning**

The planning phase is where long range objectives are considered to generate an idea of what kind of Navy will be needed to counter and prevail against reasonably expected future threats. For instance during the Cold War between the America and its NATO
Allies against the Soviet Union and its allies, who we would likely fight in a future war was obvious. But even while planners were designing a force to counter the Soviet-led Warsaw Pact, the precise scale and capability of the future threat was uncertain. The future capability of the Soviet military was the subject of intense debate that produced a very wide array of possibilities.

Planning for future military capabilities is often very reactive to the worst worst-case scenarios that planners on the opposing sides could conceive. During the Cold War, besides aircraft carriers, the most important ships in the US Navy were the large nuclear-powered strategic submarines (SSBNs) that carried Submarine-Launched Ballistic Missiles (SLBMs). SLBMs constitute the sea-based leg of America’s nuclear Triad. By the mid-eighties the strategic threat of highly accurate American SLBMs fueled intense efforts by the Soviet Union to develop nuclear-powered attack submarines that could hunt and destroy American SSBNs. The constant ratcheting up of threats and the accompanying tendency to assume that our adversary’s efforts would achieve or exceed their objectives fuels the generation of increasingly costly requirements.

Planning is also an activity with very long-range time horizon that stretches out twenty or more years into the future. Forecasts of the distant future will inevitably produce a wide band of uncertainty where alternate futures can vary greatly. A circa 1988 projection of the next twenty years would have predicted that Soviet submarines would be incredibly stealthy, and armed with increasingly effective weapons possessing a high probability of
disabling or destroying the entire American SSBN fleet. To compete with the Soviets in a hypothetical world where they possessed this kind of naval capability it would naturally be imperative to build and operate a force with even greater stealth and more effective weapons and counter-measures. This is why the planning process can generate requirements for military capabilities which are increasingly expensive to attain and sustain. Because the planning process is generally more abstract and focused on future threats that don’t exist yet it is not fiscally constrained. As a result planners can come up with capabilities which are so expensive that nobody reasonably expects that they will ever materialize. According to Political Appointee A this feature was consciously embedded in the process as it was feared that a fiscal constraint “would drive out all the new ideas.”

Occasionally the very nature of the strategic threat environment changes suddenly and dramatically. This happened in the early 1990s with the fall of the Soviet Union and collapse of the Warsaw Pact. The terrorism campaign against Western interests that began in the late 1990s and culminated in the 9/11 attacks in America and the suicide bombings in London and Spain ushered in another era. The strategic shifts that flow from events like these can have a huge effect on planning. In the early 1990s when the Soviet Union collapsed the future threat that Navy planners had been aiming to defeat suddenly evaporated with no comparable threat to replace it. The data shows that in this period planning was increasingly constrained by intensifying pressures to reduce defense
spending overall as the American public and Congress sought to reap the fiscal benefits of the changed strategic environment.

**The Honest Broker: Building the Program Objectives Memorandum (POM)**

The next phase of the PPBES process is programming. As noted above the product of the planning phase is not fiscally constrained (Jones, Candreva, and DeVore 2011, 119) meaning that it is a “purer” expression of the forces required to conduct the Navy portion of the National Military Strategy if “money were no object.” The programming phase of PPBES is where fiscal constraints are introduced and choices are made to fit as much capability into the Navy “topline.” Programming is contentious because it is a zero-sum process. Choices made to add money to produce and sustain a particular capability need to be offset with choices to take away money required to produce and sustain other capabilities. For example a military target can be destroyed by dropping a bomb on it or firing a cruise missile. While there is a need for redundant capabilities, in some cases the decision becomes a choice between air warfare versus surface warfare, with one community winning at the expense of the other.

In the Navy there are distinct interest groups who have a stake in which capabilities win and lose in the programming processes. In fact how these constituencies are managed determines how the decision making process works. In the late 1980s the programming process was run by the platform “Barons” – three-star admirals who were resource sponsors for each of the major warfare dimensions; surface, undersea and air. The Barons
controlled the budgets associated with all aspects of their principal platform type. In the early 1990s that meant that for example OP-05 (Deputy CNO for Air Warfare) had control over the dollars, manpower and other resources needed to buy, operate, and sustain Naval Aviation.

For many of the participants in this study the Baron Era represented a period where the decision making process seemed to work especially well. The principal quality of this period which makes it distinct from later periods is the dynamic of the three-star ‘Barons’ fighting over the finite pool of resources that made up the Navy’s budget. A decision making process with three very senior key players, each possessing relatively equal strength in deliberations is unlike anything that has held ever since.

Throughout the last twenty-five years, decision making on the Navy Program Objectives Memorandum (POM) centered on the two-star admiral who serves as the Director for Programs (N80). The POM process began with the Baseline Assessment Memorandum (BAM) which represented an initial review of the whole program where issues of balance between programs and feasibility/affordability were first raised. The BAM sought to assess the gap between the fiscally unconstrained planning guidance and the current position of the POM, which at this point in time was the out-year extension of the President’s Budget Submission adjusted for inflation. At this early stage a very large difference between the estimated cost of the program in the BAM and the budget starting
point indicated how hard it was going to be to balance the program and deliver the program objectives with the available budget.

Following the BAM the resource sponsors submitted the Sponsor Program Proposals (SPPs) where they made changes that addressed the issues raised in the BAM. At this point resource sponsors would propose initiatives to generate savings in one or more programs to offset shortfalls in their highest priority programs.

Once the changes to the resource sponsor programs were approved they were locked in the programming database and published for formal review and appeals for reconsideration. During this stage of the process resource sponsors argued against proposed changes that they opposed. Once a proposed change has been published it can only be reversed by formal decision. To get a decision reversed at this stage requires involvement by higher levels in the Navy headquarters. Depending on the importance of the program and/or the intensity of the disagreement, issues can go all the way to the CNO and Secretary of the Navy. The majority of issues are adjudicated before reaching the three-star level.

The most contentious issues which in the Navy tend to revolve around changes to the proposed plans to buy ships and aircraft are frequently the ones that end up being elevated to the CNO and the Secretary. Often, after all the contentious issues are resolved, the Navy program is too expensive to fit within the fiscal guidance. Because of the way the programming process works, this happens close to when the POM is due to
OSD. OSD is not the only customer of the POM. Inside the Navy headquarters the budget process starts when the POM process ends.

Because a POM has to come in within fiscal controls the last step in the programming process is to make final decisions that fit within budget controls. The final balancing is the most contentious part of the process and the least transparent. Often during the final stage of the programming process issues that fell out earlier often are resurrected as they turn into bill payers to provide resources to balance the program. At this stage the earlier arguments against a specific recommendation carry less weight as there is an urgent need to find money to close gaps and finance higher priority programs.

Throughout the programming phase N80 and his staff serve as the “honest broker” between the various stakeholders. Labeling themselves in this way has always been a very conscious effort to announce that their role was not to serve any specific constituency (i.e. platform or warfare specialty) but instead to bring to bear unbiased analysis of facts and data. Serving as the honest broker between competing stakeholders and participating in the final balancing process where important decisions happen in a very short amount of time puts N80 analysts right in the middle of the decision making process inside the Navy headquarters.

**Pricing the POM and Balancing the Books: The Navy Budget Review Process**

The budget phase of the process traditionally began with the transmission of the POM database to the Comptroller organization. Once the POM submission is complete, the
program/budget data is passed to the budget office where it is “translated” into budget controls passed down to every Budget Submitting Office (BSO). During this review which occurs during the summer, analysts in the budget office (NAVCOMPT) examine the budget materials submitted by the BSOs and recommend adjustments to ensure that the budget is executable.

A budget includes information about who will produce and deliver supplies and materials, when they will be delivered and at what cost. Analysts read the budget submission materials and kick off the review by asking questions about whether the performers (vendors or other government entities) can deliver on time for the amount specified. If the review raises questions about whether the funding is sufficient to achieve the planned objective there are three potential courses of action for the budget analysts; (1) change the scope of the effort, (2) remove the funding and use it for another effort, or (3) add funding to make the program more likely to succeed.

There are a lot of reasons why a program is not properly funded. Sometimes a program is short funded because the OPNAV resource sponsor has tried to spread its budget further by systematically underfunding some or all of its programs. Frequently the resource sponsor systematically reduces funding for lower priority programs to ensure that it’s most important program is fully funded. Another problem budget analysts frequently encounter is when the resource sponsor proposes a savings initiative which further scrutiny reveals is not likely to deliver the necessary savings. As these savings are in turn
necessary sources of funds to finance other programs, if they are not realized then the entire program might be unaffordable.

Approved changes to the budget are published so that the BSOs and any other interested parties can weigh in with “reclamas” which are appeals to overturn the recommendation and restore the funding to the proposed levels. The reclama process is in essence another series of reviews by increasingly higher level authorities. If the interested parties cannot come to some sort of agreement at a lower level of review the mark is elevated to successively higher levels. A very small number of issues, usually the most contentious ones cannot be resolved and wind their way up both chains of command through OPNAV to the CNO and to SECNAV through the ASN.

Issues entered at the end of the budget review cycle are typically the ones with the biggest impact largely because it is only at the end of the review cycle after all the other decisions are made that the leadership knows whether the Department’s budget is above or below fiscal guidance. While the overall program moves around a lot at the end of the process the fact remains that in terms of the total budget the last minute changes, as well as most of the more routine changes earlier in the review represent a small proportion of the whole budget. In fact over the last twenty-five years the net inflation adjusted changes to the program constitute no more than 3.7 percent per year in inflation adjusted terms.
Final Decisions: The OSD/OMB Program and Budget Review

After all of the internal decision making activities inside the Navy headquarters the POM and budget materials are delivered to the Office of the Secretary of Defense (OSD) for the next level of review. The Cost Assessment and Program Evaluation (CAPE) office (formerly the Office of Program Analysis and Evaluation) inside OSD, reviews the POM to assess whether it satisfies the Secretary’s Defense Planning Guidance. CAPE focuses on two complementary aspects of the POM, whether it delivers on the Program Objectives it says it is supporting, and whether the costs attributed to delivering those capabilities are realistic. CAPE tends to weigh in more heavily on acquisition issues, specifically the procurement of major weapon systems. In looking at the next class of nuclear-powered attack submarine or tactical fighter plane, CAPE analysts can both assess the sufficiency of funding estimates and whether the capabilities that the weapon system delivers are congruent with fulfilling the national military strategy.

Program decisions from CAPE are sometimes quite extensive and introduce a fairly complicated effort by CAPE and the staff within the OSD Comptroller to reconcile the POM and the budget. As in the Navy headquarters, the changes made by the programmers take precedence forcing the budget analysts to scramble to make changes that ensure that the approved program objectives are satisfied and priced properly.

When the budget is submitted to the office of the Under Secretary of Defense (Comptroller), budget examiners from the Office of Management and Budget also
conduct their own budget review of the same materials. OMB plays an important role in
the final stages of the OSD Program/Budget review process. Usually late in the fall,
OMB delivers the “Passback” to the Department of Defense. Passback is how the
President, through OMB, makes changes to Agency budgets. The OMB budget
adjustments emphasize the strategic direction that the President wants to express in his
budget submission to Congress. DoD, as the Federal Agency with the largest
discretionary budget, often bears the largest changes in OMB Passback.

The OSD/OMB Program/Budget Review occurs in the fall and finishes in late December
or early January. The budget must be finished by then so that the budget database can be
locked and OMB can produce the Federal Budget materials which are submitted to
congress every year shortly after the State of the Union Address. By the time the
Department of Defense submits its annual budget to Congress the next PPBES cycle is
already underway.

Between February and September the Congress makes changes to the President’s Budget
through the Authorization and Appropriation processes. Navy leaders engage in the
Congressional budget process through testimony and hearings. Sometimes Congress will
make significant changes to the Navy budgets which are enacted into law. Depending on
the general fiscal and strategic environment Congressional adjustments to add money to
specific favored programs or initiatives are passed with offsetting undistributed
reductions. Sometime, additional funding is added without offsets.


**Spending Money: The Execution Process**

Execution for a specific fiscal year begins once the Appropriation Act is signed by the President and enacted into law. Appropriations are apportioned by OMB through the US Treasury to each Federal agency. In the DoD, appropriations are received by OSD and allocated to the Military Departments through their budget offices. The Navy Budget Office in turn sub-allocates funding to the Budget Submitting Offices for execution.

From the moment that the appropriation is signed into law the focus of the institution turns to tracking performance of the budget in terms of how much has been obligated by specific points in the fiscal year. Everyone across the enterprise is aware that the analysts in the Navy budget office as well as their counterparts in OSD and OMB are carefully tracking obligations to make sure that program managers are executing on a pace that will allow them to obligate all their funds by the time they expire.

If at the middle of the year a program is under-executing, higher authorities in the BSO, the Navy headquarters or OSD may take some of their money away to provide to other programs that are over-executing, or to finance new initiatives. It turns out that the urgent need to obligate funds before they expire introduces a set of pervasive behaviors which affect everything the government does.

**Conclusion**

How the Navy makes decisions about the program and budget and the actual act of spending money consumes an incredible amount of time and energy inside the Navy
headquarters, and throughout the rest of the enterprise. In effect, decisions about spending represent the collective effort of thousands of people all attempting to optimally use the large, though finite amount of money the Navy receives every year from the Congress. The decision making processes are incredibly complicated as they involve multiple, distinct but complementary processes going on simultaneously.

Not just complicated, the decision making system is complex because the participants (people and organizations) interact with each other in ways that are not entirely predictable. Participants who struggle with bringing the process under control so that it consistently produces desirable outcomes rarely have the tools to really understand what is happening. Deeper understanding requires “double-loop learning” which gets beyond the formal rules which govern the way things work in an organization. Just as it is important to understand the underlying rules that govern behavior in Complex Adaptive Systems, getting to the root of a problem requires uncovering the complex evolving dynamics that animate the behavior of the people in an organization and the overall organization itself.
CHAPTER 3: LITERATURE

Introduction

This investigation has been strongly influenced by the insights offered in two complementary fields, complexity theory and organizational analysis. Having spent my professional career as a civilian budget analyst in DoD, when I started to study complexity theory I immediately recognized that many of the concepts from that field could help explain how the department and its component organizations worked. I was particularly struck by the idea of “open” versus “closed” systems which in turn prompted me to consider flag officers in a different light. The flag officer community is an unusually closed one and that feature may affect how Admirals behave inside the Pentagon.

Complexity Theory

The United States Navy is an incredibly complex entity made up of a vast number of participants including service members, civilian employees and private citizens who work in firms that support the Navy by building systems or providing other services. The Navy’s mission, to be able to apply military force anywhere in the world in support of America’s national military strategy is unique, and incredibly challenging. Like any complex entity the Navy is constantly adapting and evolving capabilities. In the physical
world complex systems exhibit distinctive qualities, responding to their environment in characteristic though rarely entirely predictable ways.

Though complexity theory is rooted in the physical sciences of chemistry, physics, biology, and multi-disciplinary fields like computer science and engineering, increasingly it is being applied to social sciences, management, and economics (Miller and Page 2009; Strogatz 2004; Page 2009). Complexity theory is a response to reductionist analyses which have sought to focus more narrowly on physical phenomena to understand “how things work.” As Steven Strogatz puts it “after centuries of studying nature by teasing it into smaller and smaller pieces, we’re starting to ask how to put the pieces back together again (2004, 284).” The idea here is that things work by interacting with other things and that while the reductionist approach helps us understand individual root “behaviors” it does not do so well at explaining how actors work together in systems, organisms, or organizations.

Scientists today understand that the models they use to simulate and explain the physical world are incomplete. Through constant investigations they are able to add details to their models so that they explain more and make more reliable predictions. In the last century the steady accumulation of knowledge about how the universe works has been breathtaking. Conventional wisdom suggests that what we have learned about our complex, interconnected world in the last decade has yielded more insights than the previous 100 years (Barabasi 2003, 64). Accompanying this explosion of knowledge has
been a steady, and lately phenomenal, increase in the ability to manage and manipulate vast quantities of data. By using powerful computers to design models and simulations of the physical world, scientists can run experiments to test whether their theories enhance our understanding of how things work.

Before computers made such sophisticated modeling possible, the unavoidable fact that the universe was vastly more complicated than the models suggested simply had to be ignored. This was because beyond a certain relatively small number of variables it is impossible to do the math for a complex model by hand, which is what most scientists had to do up until the 1960s (Holland 1999, chap. 6). With the advent of automated calculating machines during and immediately after the Second World War, scientists like John Von Neumann and Alan Turing began pushing the outer boundaries of what would turn into advanced computing and complexity theory (Johnson 2001; Waldrop 1992). By the 1960s as interactive computing arrived on government labs and college campuses, scientists began to write models with larger numbers of variables that were able to illustrate how complex systems operated with greater fidelity. Now these simulations can be designed and run on affordable home computers.

**Self-Organization**

One of the key insights in complexity theory has to do with the concept of self-organization and emergence. Self-organization explains why complex entities composed of actors which may or may not be self-aware are able to exhibit collective (emergent)
behaviors which make the whole entity seem conscious or purposive. Kaufmann explains self-organization “as matter’s incessant attempts to organize itself into ever more complex structures, even in the face of the incessant forces of dissolution described by the second law of thermodynamics (Waldrop 1992, 102).” This phenomenon explains, for example, how insect colonies are able to accomplish things such as feeding, reproducing, and building and maintaining huge nests. Casual observers tend to anthropomorphize insect colonies ascribing to them qualities like discipline, diligence, and industriousness. Because the focal point of the colony is a “queen,” people frequently assume she has a leadership role that just does not exist. In fact the colony has no leader, instead all the insects respond to their environment and chemical signals according to a set of simple rules (Johnson 2001, 31). A computer simulation designed to model termite behavior illustrates how this works. In this simulated world there are termites and woodchips (MIT 1999). Termites behave according to three simple rules. They 1) walk around randomly, 2) when they bump into a woodchip they pick it up, and 3) if they are carrying a woodchip and bump into another chip, they drop their chip and continue walking around randomly again.

Whenever this simulation is run an interesting thing happens, the termites end up building a big pile of woodchips. The “termites” will build a pile in a different location every time but they will always build one and in so doing demonstrate self-organization and emergent behavior. There was no rule directing the “colony” to build a big pile of wood chips. Instead the individual termites acting in accordance with the three simple rules
displayed an emergent behavior to finish a “job.” The simple environment and rules constitute a framework within which actors without anyone or anything telling them exactly what to do, accomplish complicated tasks. This example of apparent self-organization is emergent and applies to many other group behaviors. Similar computer simulations show how birds flock and why traffic jams occur in particular spots on the road even when there has not been an accident (Strogatz 2004, 263).

To those trained in physics self-organization seems to run contrary to the second law of thermodynamics which describes entropy, the fact that over time systems get more disordered rather than more organized. Entropy, which is why things fall apart, occurs in a closed system which doesn’t receive new agents or inflows of energy (Mitchell 2011, 43). In the end a closed system reaches a point of perfect equilibrium which in living systems is death. The phenomenon of self-organization is possible when an entity operates within an open system which stays dynamic.

Ilya Prigogine a Nobel Laureate for Chemistry produced key insights into what he called “dissipative systems” which persistently expend matter and energy to maintain their structures (Kauffman 1995, 53). Steven Johnson explains that when entropy is overcome, even temporarily “higher-level order may spontaneously emerge out of the underlying chaos” (2001, 52). Kiel elaborates by explaining that dissipative systems “consist of a variety of subsystems that interact in a nonlinear fashion”(Kiel 1989, 545). By interacting nonlinearly, agents within dissipative structures are exposed to a wider range of possible
interactions which consequently increase the opportunities for novel behaviors and innovations to deal with challenges.

For a dissipative ecology to display self-organization, it must receive energy from outside the system. Anderson (1999, 222) makes an interesting connection here by explaining that organizations (enterprises, groups, and government agencies) are open “dissipative” systems along the lines defined by Prigogine. Looked at this way we see that organizations receive the equivalent of energy from new participants: “those with influence and/or authority turn the heat up or down on an organization by recruiting new sources of energy (e.g., members, suppliers, partners, and customers), by motivating stakeholders, by shaking up the organization, and by providing new sets of challenges that cannot be mastered by hewing to existing procedures.” Kiel suggests that in public administration the introduction of financial resources constitutes another source of energy that fuels a dissipative system (1993, 547).

**Evolution and Improvement**

As noted earlier complexity theory is especially prominent in the fields of biology, genetics, and evolution. This is partly due to the extraordinary complexity of the genetic code itself and the statistical/probabilistic nature of the results of sexual reproduction (Judson 1996; Kauffman 1995; Waldrop 1992). How the two parent chromosomes will combine is not entirely predictable due to things such as recessive genes and mutations. Evolution occurs because sexual reproduction enables the continuous improvement of a
species. This happens when the genes of the parents are combined so that the child possesses inherently stronger characteristics. Say two parents possess average eyesight but the combination of their two genes produces a child with superior eyesight. This new trait might offer the offspring a significant advantage in noticing predators from a long distance which may in turn enhance its chances of survival and by extension the likelihood of passing its improved genes to future generations. This outcome is not determined by the combination of the two gene sets, but the probability of the result is statistically predictable. Complexity theory helps explain how natural selection or what might be better understood as genetic “problem solving” actually occurs in nature. One of the potential pitfalls of sexual reproduction is that for every beneficial gene that is passed on another less than desirable gene may slip through too. As a result over successive generations the ideal chromosomes for surviving a particular environment may never emerge.

It helps to think of all the possible chromosomes as on a landscape with the “best” ones located on the top of the highest mountain and the “worst” one being at the bottom of the deepest valley (Kauffman 1995, 248). Natural selection suggests that evolution is the process of “climbing” from a poor genetic inheritance to a progressively better one. This search for these fitness peaks is problematic however because the journey tends to be one way. As a result if the journey “peaks” at the top of a lower mountain (a “good enough” solution), there is no incentive to move down the mountain and begin climbing another mountain yielding improved fitness. In any form of decision-making a similar
phenomenon exists because actors usually do not seek out the optimal solution to a problem as much as a satisfactory one (Mouzelis 1967, 125; Simon 2000, 118).

Steven Johnson (2001, 170–174) describes this phenomenon by highlighting an experiment to “breed” a computer program that produces an algorithm to sort 100 random numbers in the fewest steps possible. Computer scientist Danny Hillis created a simulator that through trial and error and a technique similar to sexual reproduction created successive generations of the algorithm that got progressively better at solving the problem. Through countless iterations of the program, it produced a 75-step solution, much better than chance but not exceptional. The explanation for settling on a lower fitness peak turned out to be the fact that in the many trials there was no incentive to move back down a peak once it arrived at the top. Hillis solved this problem ingeniously by introducing predators that in effect killed or chased down sub-optimal solutions forcing them to start climbing a “neighboring” peak. By this method Hillis’ simulation created a 62-step solution to the sorting problem, close to the best that can be accomplished.

While climbing the fitness peak is an attractive metaphor to describe the process by which entities improvise and adapt to a changing environment, it must be recognized that the calculation of “fitness” occurs along many dimensions and it is therefore impossible to create a single measure of success for an entity’s evolution (Anderson 1999, 225). Genetic algorithms like Hillis’ model can help demonstrate how complex organizations
evolve but their utility in explaining real world problems may be limited. These models help us understand fundamental phenomena but not specific situations.

**Complex Adaptive Systems**

One of the challenges of applying complexity theory to public policy issues is the gap between complexity as a phenomenon and complex systems as something we encounter every day. Even casual observers intuitively understand that any moderately large organization; a business, a school, or a government agency is extremely complex. Those who observe complex organizations from within are often so caught up in the day-to-day challenge of getting their job done that when they do take a moment to try to understand why initiatives fail to produce desired outcomes, they invariably fall back on the simple bromides like, “this organization is dysfunctional.” Neumann explains that the bureaucratic behavior which is often seen as a symptom of an organization’s dysfunction is itself a method to impose order and fend off chaos (1997, 89). In the face of this challenge, complexity theory offers a framework that legitimizes and encourages the daunting task of looking at the whole organization instead of pieces when trying to design enterprise-level solutions. A 1991 study for the International Institute of Applied Systems concluded that when dealing with complex systems, solving problems requires searching for “nonobvious linkages” which only reveal themselves when the whole (or a very large part of the) system is included in the investigation (Neumann 1997, 91–92). Thus, the more traditional reductionist approach to analysis fails because “interconnections and
feedback loops preclude holding some subsystem constant in order to study others in isolation” (Anderson 1999, 217). According to Brown and Duguid “complex knowledge emerges not from work simplification [bureaucratization] but from the social interactions of individuals within and across organizations (Brown & Duguid, 2002 cited in Kilduff & Tsai, 2003, p. 63).”

Anderson presents a conceptual framework to help understand complex systems as opposed to complexity itself as a phenomenon (Anderson 1999, 225). Organizations which fit the definition of being Complex Adaptive Systems are able to create emergent outcomes. According to Anderson’s model Complex Adaptive Systems (CAS) have the following four characteristics:

1. *Agents with Schemata*. Like the termites in the earlier example, agents in an environment act according to a set of rules (i.e. their understanding of how the world works and their role in it) which circumscribe their behavior.

2. *Self-Organizing Networks sustained by Importing Energy*. Agents in the system are connected so that their behaviors are interrelated and responsive to feedback. As required by Prigogine’s definition of a dissipative system, the environment in which the agents act cannot be closed or else it would devolve into a state of less rather than more organization.

3. *Coevolution to the edge of chaos*. Agents coevolve with one other and thus their movement on the fitness slope effects the environment, thereby introducing further dynamism into the system. By coevolving, and in effect changing the entire environment by themselves changing, the collective actions of agents cause the entire system to move to the edge of chaos, and in so doing introduces opportunities for greater change (Waldrop 1992, 292–294).
4. *Recombination and System Evolution.* The open system permits the introduction of new agents and new technologies which in combination can produce new innovations which allow the entities (agents, groups, and organizations) to move up the fitness slope.

The edge of chaos turns out to be a very interesting place which offers exactly the right environment for sustained and dramatic change and innovation. Christopher Langston, one of the investigators highlighted by Waldrop in his history of the Santa Fe Institute argues that the boundary between chaos and order is where the mysterious “something” that makes life possible exists (Waldrop 1992, 293). This suggests that getting an organization to the edge of chaos might be a prescription for fostering the kinds of important changes that make government more effective. Kiel expands on this notion and explains that in the public administration domain “that intrusions of politics on administration may serve to enhance instability and thereby increase the possibility for symmetry-breaking behavior” (Kiel 1989, 547) by which he means moving an organization towards instability forces it to experiment and adapt in imaginative ways.

In understanding organizations the more important issue is the degree of energy that comes into the system. When we describe an organization as “tired” or “unimaginative,” we are often suggesting that it is not open to change and perhaps demonstrates unusual difficulty adapting to new ways of doing business. On the other extreme sometimes an organization is characterized as being “chaotic” or in a constant state of flux. An organization like this may be subject to a lot of internal energy some of which is self-
induced and some of which is the characteristic response to external events.

Organizations which are too sensitive (and ultra-responsive) to external stimuli may find it difficult to self-organize and find an equilibrium which allows it to function effectively.

Public managers, organizational theorists, and public policy researchers are forever trying to develop new ways to foster and implement enduring change. One of the valuable insights of CAS is that organizations themselves may be able to self-organize and deliver that change. The challenge here is that the kind of enduring change that is sought may only emerge at a “breakpoint” where extreme stimulus is met with highly imaginative and inventive behavior by actors within the organization. Theorists like Nonaka (1994, 28), Kiel (1989, 545), Kaufman (1995, 257–264), and Anderson (1999, 223–225) explain that the break that occurs when the organization is most energetic is likely to produce “novelty” which yields another state of self-organized order. In the case of organizations this level of stable order is one where new and desired capabilities are possible. Finding this point where chaos becomes self-organized order is the balancing act which organizational theorists are interested in better understanding.

The organizations in the US Department of Defense (DoD) which are continuously adapting to the external environment and internal business needs fit Anderson’s definition of Complex Adaptive Systems. In the operating forces, the military members who operate in the field are very familiar with and embrace the notion of creating novel and surprising solutions to tactical problems. In contrast the large bureaucratic
organizations which train and equip service members are less responsive to stimuli and difficult to change. One of the biggest challenges in applying the insights offered by the CAS theorists is the natural resistance of the bureaucracies that run the military departments (MILDEPS) to embrace the idea that pushing an organization to the edge of chaos is the most likely way to produce desired changes in the way it operates.

Managers can foster the kind of changes that complex adaptive systems can generate by continuously “turning up the temperature” in the organizations they control by placing increasing demands to do more (or better) work with the same or fewer resources. In the past the Navy has sought to do this through enterprise-wide initiatives like Total Quality Management (TQM) and Lean Six Sigma (LSS). The danger with these techniques is that they can be overused or misused. TQM was in vogue in the Navy in the late 1980s and early 1990s. It was pervasive throughout the enterprise and advocates for it made sweeping claims of the improvements it could deliver which in practice were unfulfilled. Lean Six Sigma (which has its roots in the Japanese auto industry) appeared in the Navy around 2001, and its advocates made claims similar to earlier TQM proponents. The danger is that repeated episodes of enterprise-level change mandated from above, none of which fully produce desired improvements, fuel skepticism and cynical responses by workers who peremptorily dismiss any new initiative as “just the latest fad” which will eventually fade. A somewhat related problem with continuously applying energy into an organization through “change initiatives” is the danger that the people inside will burn out. Operating at the edge of chaos where the greatest change can occur is tiring and
generally unsettling to people in the organization. To be able to sustain the effort necessary to produce novelty, organizational managers need to also offer opportunities for workers to reflect, recharge and recover (Baker 2009, 41).

A good example is the inability of traditional economic models to predict economic bubbles. Bubbles reflect the limited rationality of large collections of economic actors. Since the classical economic models assume perfect information and the ability of economic actors to make rational decisions, they do not do so well during an episode where prices rise unexpectedly and far beyond the underlying value of particular goods. Brian Arthur, an economist featured by Waldrop (1992, 328), felt that like the termites in the example above, the stock market would be better explained through a simulation that captured the emergent behavior of buyers and sellers governed by simple rules than by the top down neoclassical models. When first introduced to the emergent/self-organization simulations, economists like Arthur are invariably struck by the similarity to Adam Smith’s Eighteenth Century notion of the “invisible hand,” the principal that collectively all the buyers and sellers in a market would reach price/demand equilibrium (Smith 2003, xii). To some the invisible hand is suggestive of the same sort of self-organization exhibited by termites and ants.

When applied to designing and implementing change in government programs, complexity theory offers valuable insights. Of perhaps greatest value is the recognition that large complex organizations will not be changed by fiat from above, particularly
when the directed change does not take into consideration, or seek to modify, the simple behaviors that operate at the root of the organization which fuel apparent self-organization (remember the termite example above). While self-organization can occur with unconscious actors, it also occurs with self-aware actors who remain unaware of or uninterested in how their activities contribute to emergent behaviors (success or failures) of the organization they work in.

Recognizing this, it may be possible to develop changes that resonate with actors and get them to behave in more desirable ways. Alternatively, it might be possible to design techniques which effectively communicate with these organizationally remote, or otherwise hard to reach, actors in ways that convince them to really change. This approach may cultivate emergent behavior throughout the organization which makes desirable change more likely and perhaps more enduring (Baker 2009, 49). Analysis which does not take into account the complex nature of government organizations will fail to produce recommendations which will actually work in the targeted environment.

We will see next, that when combined with organizational learning, these two fields really help explain why organizational change so often fails in large bureaucracies.

**Organizational Learning**

Single loop learning concerns itself with reacting to errors or problems and solving them as expeditiously as possible. Double-loop learning also seeks to solve problems but does so by looking more deeply at the root causes of the situations which might have caused
the defect or error to occur. In double loop learning an investigator will pose more provocative questions. Instead of asking why a defect was produced in a routine process, an investigator might wonder why the process where the error occurred was even being used, or applied in a specific way. Argyris (1994, 79) describes how a CEO discovered that every innovation in his company was subjected to more than 275 checks and approvals. He created a task force to address this problem and it eliminated 200 approval points, streamlining the innovation process dramatically. While this is clearly an improvement, Argyris explains that it is an example of single-loop learning. In this case, double-loop learning would have led the CEO to ask some penetrating questions of his subordinates. The CEO should have asked that if they all realized that seeking 275 approvals for each innovation was stifling new ideas why didn’t anyone do anything about it or raise it to his attention?

Double-loop learning forces an investigator to get beyond the theories-in-use which govern the way things work in an organization. Argyris’ and Schön’s idea of the theories-in-use is similar to Schein’s concept of underlying values (Schein 2004) which are frequently different from (and sometime incongruent with) the espoused values that the organization claims are its governing principals (Argyris and Schön 1995). Just as it is important to understand the agents’ schemas that are present in Complex Adaptive Systems, getting to the root of a problem requires knowing what really animates the behavior of the people in an organization and the overall organization itself.
Double-loop learning is valuable because it gets to the more fundamental rules and procedures that constrain and enable how actors behave in an organization. In reality the basic values or “schemata” that bound the behavior of actors in a system are much more influential than the espoused values or official rules published in the organization’s manual or vision statement. Because getting to the root issues through double-loop learning frequently reveals the difference between espoused values and the theories-in-use it can be embarrassing to the people who were responsible for designing the official policies and procedures or those charged with enforcing them. Any time an actor can be embarrassed by revealing the difference between what is supposed to happen and what is actually happening there is a potential for unpleasant consequences. To protect themselves from unpleasant consequences actors erect defensive mechanisms and behaviors.

Asking hard questions inevitably puts someone on the spot and as Argyris and Schön explain, over time people in organizations become very skilled at techniques that help them avoid blame and minimize conflict, even when these behaviors make the organization less capable. Argyris (1999, 100) characterizes this phenomenon as “skilled incompetence” and demonstrates that deeply ingrained defensive routines keep an organization from addressing fundamental problems and inhibit change. In a Complex Adaptive System, skilled incompetence is the equivalent of attempting to close the system off from new sources of energy.
Rational Choice

In theory the formal program and budget decision making processes inside the Navy headquarters offer leaders the opportunity to pick the best option among a set of feasible alternatives i.e. the Rational Choice Model. The Navy as well as the rest of the Department of Defense is particularly familiar with the rational choice model as it is what animates the formal decision making processes introduced to DoD more than 50 years ago by Secretary of Defense McNamara. The Programming, Planning and Budgeting System (PPBS) was consciously designed to present decision makers with feasible, alternative ways of spending money to produce military capability. So rational choice is an important paradigm that for many observers makes it possible to understand how an immense organization like DoD operates. PPBS was intentionally designed by McNamara and his cadre of young systems analysis practitioners to answer an admittedly complicated question “How Much is Enough?” Using data that is reviewed and screened by a series of layers inside the headquarters the Navy’s program/budget process allows decision makers to assess the alternatives and make choices about what things to buy and what things not to buy.

To understand whether the interlinked PPBES processes are rational (or whether they produce rational outcomes) it is necessary to briefly describe the rational model of public policy making. The rational model is exemplified by what Schneider and Ingram define as the Policy Sciences (Schneider and Ingram 1997, 36–38). According to Schneider and
Ingram the method used to examine any issue should at a minimum include each of the following steps;

- Determine goals and objective,
- Create or identify policy alternatives,
- Assess the probable effects of each alternative on each goal,
- Adopt the most efficient or effective policy, and
- Implement the policy and evaluate the results.

The Policy Sciences are the prevailing method in the academic discipline of public policy. The curricula of most of the large public policy graduate programs include a significant series of core courses that emphasize quantitative analyses including statistics, micro-economics, econometrics and decision theory. Clemons and McBeth (2000, 46) show anecdotally how most advertised positions at public policy schools seek candidates possessing strong credentials in these hard disciplines of policy sciences.

Frequently the policy sciences are criticized for being coldly impersonal and disconnected from the realities of public policy making in the real world. Clemons’ and McBeth’s suspicion of this approach is evident as they derisively characterize analysts “operating with stony neutrality, robot-like efficiency” careful not to let “politics” taint the recommendations that inevitably follow from their calculations (2000, 48). By labeling their approach to decision making a science, proponents of the rational model imbue their work with an aura of objectivity and professionalism. The model’s central tenet is that there is a correct or optimal solution to any public policy question. To the policy science practitioner, objective truth is discernible and quantifiable so that every
policy problem can be rigorously analyzed. When done right, such analysis will accurately assign the full costs and benefits of alternative solutions so that the method that produces the greatest good will always be selected – that is, as long as politics does not interfere.

If the rational choice model worked as expected, then on average decision makers would reliably chose the alternative which produces the most desired outcome. If the processes under scrutiny consistently do not produce an outcome that conforms to the rational model it is at that point appropriate to develop a different model as an explanatory frame. The rational model does not explain why Navy leaders have for more than a generation made a series of choices which have produced a smaller and more expensive Navy, an outcome that no one really likes.

**Essence of Decision**

A literature search to see if this dilemma had been faced before led me to reexamine Graham Allison’s seminal study of the Kennedy Administration’s behavior during the 1962 Cuban Missile Crisis (1971). Allison’s work showed that when the prevailing interpretive lens fails to adequately explain a phenomenon it is necessary to look at the subject from a different paradigm. In *Essence of Decision* Allison first looks at the events leading up to and during the Cuban Missile Crisis from the perspective of the Rational Actor Model, his Model I. Allison’s rational actor is an informed decision maker who when offered a set of alternatives will reliably choose the one that “maximizes output for
a given input or minimize inputs for a given output.” In the case of the Cuban Missile
Crisis the rational actor is President Kennedy, or the “Kennedy” administration or even
the United States who instead of assessing abstract inputs and outputs is assessing risks
and benefits offered in alternate courses of action. In this analysis the decision by the
Soviet Union to deploy nuclear-armed Intermediate Range Ballistic Missiles (IRBMs) in
Cuba, 90 miles from America, failed to make sense from a purely rational actor
perspective. The risks were too high to justify the possible rewards. Accordingly “many
of the aspects of the Soviet deployment to Cuba could not be explained by Model I (and
were therefore puzzling to the Washington officials applying such an implicit model to
soviet actions).” (Allison and Zelikow 1999, p. 380)

The fact that the rational actor model did not provide a compelling explanation for why
the Soviet leadership made the choices they did meant that another perspective was
necessary to understand and explain their actions. In the next two sections Allison
reexamines the facts presented in section one and adds other elements to explain the
events from the perspective of bureaucratic/organizational behavior theory. Under this
model, placing IRBMs in Cuba made sense as a decision driven by the Generals that ran
the Soviet Missile Forces to offset a tactical disadvantage in their ability to credibly
threaten a pre-emptive strike on America’s land-based nuclear missile force. Allison
finished by looking at the events from the perspective of political behavior and shows
that the decisions by Khrushchev and Kennedy throughout the event were largely shaped
by and made sense because of the organizational and interpersonal politics that animated
the advisors and principal subordinates in their respective military, intelligence and diplomatic corps.

In his conclusion Allison poses the hypothetical question to those who wish to understand and improve how the government works: “what do you do when your interpretive lens only explains half of the story?” Too often when the prevailing paradigm for understanding is nearly universally accepted as the best way to describe “how the world works” the answer is to focus instead on the 50 percent that is explained. Allison paves the way for a better approach to this conundrum; use a new lens that helps explain more of what he characterizes as the “explanatory gap” or “missing chapter.” (Allison 1971, p. 267)

Allison published Essence of Decision in 1971, just nine years after the events chronicled in the study. In 1999, Allison and his colleague Philip Zelikow jointly published a second edition which was enriched by having access to declassified information from the US side and vastly more information from the Soviet side of the story available due to the collapse of the USSR in 1991. Since 1999 Complexity Theory has emerged as a new analytical frame which adds to and enhances Professors Allison and Zelikow explanatory framework.

**Social Networks and Complexity**

Successfully implementing changes in the way the Department of the Navy makes decisions would benefit from analyses that recognize and incorporate insights from
complexity theory and social networks. Neumann explains that “the organizational structures that humans have devised through history are the results of the often unconscious attempts to meet the demands of the increasingly complex external environments within which they found themselves” (1997, 87). He goes on to explain that handling the massive growth in information is just the latest new quality of complexity in the public sphere. Self-organization and emergence offer a new way to help understand how individuals respond to their environment and specific stimuli.

Pushing the Navy to the “edge of chaos” might be a conscious act by an Admiral seeking to create the environment necessary to foster changes. Kiel (1993) cites an investigation by Nonaka where Japanese businessmen intentionally fostered an atmosphere of constant crisis to “ensure adequate instability for organizational renewal” (Nonaka, 1994, p. 28 cited in Kiel, 1989). Among other things, this study seeks to understand whether senior flag officers can contemplate using their position to instigate or sustain this kind of enterprise-level change, if they perceive that their best avenue for making lasting change is to sponsor the procurement of important weapon systems, or some other characteristic choice.

**Capability versus Cost**

For decades there has been an intense debate within the defense establishment generally and the Navy in particular about whether new, high technology weapon systems are sufficient “force multipliers” to justify their increasing cost (Fallows 1982; Kotz 1988; Markusen and Yudken 1992; F. Spinney 1985). In the early 1970s the Navy was facing a
significant budget decrease as the Vietnam War was winding down. The total number of ships in the fleet declined from 932 ships in FY 1968 to a postwar low (at that point) of 521 in FY 1981. According to Admiral Elmo Zumwalt the Navy’s biggest challenge then was:

“supplementing the high-performance ships it was building in small numbers, because they were so expensive that small numbers were all it could afford, with new types of ships that had adequate capability for many missions and at the same time were inexpensive enough to build in the larger numbers that were required for an American naval presence in many parts of the oceans.” (Zumwalt 1976, 60)

The solution then was the “High-Low” mix. A fleet consisting of smaller numbers of expensive, highly capable ships balanced with a relatively high number of low-end ships like frigates and patrol craft.

The challenge then as now is assessing the tradeoff between buying ships in sufficient numbers when each ship cost much more than the ones that are being replaced. This turns into a perfect candidate for Secretary McNamara’s question of “How much is enough?” The argument for decades has been that the qualities that new technologies bring to bear – i.e. greater lethality and survivability – make it possible for a smaller fleet to be as capable or possibly more capable than today’s fleet (Leopold 1978; Lehman 2001).

The Congressional Budget Office produces an annual assessment of the Navy’s shipbuilding plan. The CBO report projects the thirty-year cost of the Navy’s ship inventory goals (i.e. fleet size) using the CBO’s own costing methods. The most recent report concludes that to attain the planned fleet objectives the Navy annual shipbuilding
budget would need to average $19.3 billion for the next thirty years, a number that is 38 percent above the historical average shipbuilding budget (adjusted for inflation) for the past thirty years (CBO 2013, 3). The CBO method does not consider the full life cycle cost of the planned fleet either as it focuses exclusively on projected procurement plans. Additionally, the CBO report is careful not to qualitatively assess the Navy’s shipbuilding plan. There is no measurement of capabilities for a fleet of the size that the Navy is planning to attain. The CBO report highlights that there is no universally accepted method of comparing cost, capability, and the number of ships that offers decision makers an apples-to-apples comparison of alternative future fleets.

**Summary**

In total, the literature that grounds this investigation substantiates the legitimacy of examining the unexpected outcomes of the Navy’s program and budget decision making processes through the lens of social science-based complexity theory. Complexity theory, organizational analysis and organizational learning combine to offer a framework for understanding how the many actors and stakeholders interact in unexpected ways to make decisions about the future of the Navy. Any analysis that tried to reduce the decision making processes to just what happened in the headquarters or ignored how the work of tens of thousands of managers all across the Navy yield emergent outcomes could not deliver a meaningful or actionable depiction of how the future of the Navy comes to be.
CHAPTER 4: METHOD AND RESEARCH QUESTION

Today’s Navy is a result of the myriad decisions made over the last fifty years by leaders inside the Navy headquarters, the Office of the Secretary of Defense, the White House and Congress. This research project is designed to understand, in a thoroughly documented and rigorous fashion, how officials inside the upper echelons of the Navy headquarters work together to make these decisions. The purpose of this study is to interviews key participants who during the last twenty-five years have made decisions about the future Navy to learn through their perceptions how program/budget decisions are made. My research is designed to gain insight into why despite their expressed intention Navy leaders have consistently made choices that have over time produced a smaller and more expensive Navy.

Designed as a grounded theory investigation, the focus was to understand the particular role that senior flag officers played in business decisions (primarily budgeting, but also enterprise-level management issues) within the Department of the Navy (DON) headquarters. As would be expected in a grounded theory study, the interview data pointed in a new and interesting direction that caused me to wonder whether the nature of the institutional decision making environment inside the Navy can be better understood.
using insights from the field of social science-based complexity theory; specifically through the interpretive lens of Complex Adaptive Systems.

The twenty-five year period between 1988 and 2013 provides an interesting window for looking at the program/budget processes inside the Navy. The first half of the period began as the prolonged competition between the Soviet Union and the United States came to an unexpectedly abrupt end. With the fall of the Berlin Wall in 1989 and the rapid disintegration of the Soviet Union and its client regimes in Eastern Europe and continuing through 2001, the US defense budget was under constant downward pressure until the last two years of the Clinton Administration. In the second half of the period immediately following the September 11th attacks through FY 2010, the defense budget increased rapidly and was sustained at historically high levels. The growth in DON spending plateaued in 2010 and has been declining in real terms since.

The interviews with Navy leaders were designed to answer two key research questions:

- Is the outcome of choices made over the last twenty-five years – a smaller more expensive Navy – attributable in any measurable way to how the officials in the Navy headquarters engage in the decision making processes and how their formal roles constrain or enable their participation in making decisions about the future Navy?
• Do the analytical processes that support the Planning, Programming, Budgeting, and Execution System (PPBES) deliver the necessary information for Navy Decision makers to make optimal resource allocation choices?

**Phase I: Grounded Theory Interviews**

The way that the research questions have emerged from the meaning making process illustrates one of the key characteristics of the grounded theory method. Grounded theory uses the deep analysis of participant interviews to understand how individuals experience the people, processes and technologies they encounter in the conduct of their daily business. In this case, the study was designed to understand how the most senior actors interact with each other while deliberating inside the Navy headquarters to make decisions about the program and budget. As a qualitative research method Grounded Theory provides a framework for identifying the participants in the study. Instead of randomly selecting a statistically significant sample of the population of participants, Grounded Theory practitioners apply what is termed as a “theoretical sampling” technique where the investigator:

> collects, codes and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges (Glaser and Strauss 1999, 45).

According to most participants and the researcher’s observations from more than twenty-five years of experience working in and for the Department of Defense as a financial management expert, the community of practice inside the Pentagon and Navy headquarters who make program/budget decisions or provide advice to senior decision
makers is compact. At any one moment the core group who make program/budget
decisions and their key subordinates consists of between fifteen and twenty individuals.
Decision making meetings can include as few as two or three people. While ostensibly
held to make decisions, larger meetings with ten or more participants are more often
convened as a forum to discuss issues and collect information from subject matter experts
and leaders representing important institutional constituencies. According to many of the
participants small group meetings of between three and five people are where most of the
action happens. The main actors in the Navy program/budget decision-making process
are the Political Appointees in the Secretariat, the flag officers in Office of the Chief of
Naval Operations (OPNAV), and their respective Senior Executive Service deputies.

The interview data collection for this research was approved by the GMU Human
Subjects Review Board (HSRB) who reviewed the interview protocol, contact letter and
informed consent form that each of the participants received (see Appendix: Human
Subjects Research Board Materials). During the renewal phase of the study the HSRB
suspended the requirement that participants sign a consent form as the target population
for this investigation, consisting of senior leaders inside the Navy and DoD headquarters
is not a protected class.

To conduct this investigation I contacted forty-two individuals who are (or were)
participants in the resource management decision making processes inside the Navy or
DoD headquarters. Most of the participants were either flag officers, political appointees,
and members of the Senior Executive Service (SES) who during the past twenty-five years occupied one of the fifteen or twenty key resource management decision making positions inside the Department of the Navy headquarters in the office of Secretary of the Navy (Secretariat) or the Office of the Chief of Naval Operations (OPNAV). Of the three classes of actors that I contacted, the Political Appointees were the least inclined to participate, with eight of seventeen choosing not to participate.

Table 1. Study Participants

<table>
<thead>
<tr>
<th></th>
<th>Flag Officers</th>
<th>Political Appointees*</th>
<th>Senior Executives*</th>
<th>Total</th>
</tr>
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<td>8</td>
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<td>Executive Forum</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>14</td>
</tr>
</tbody>
</table>

* Three participants that were members of the Senior Executive Service before they were political appointees are listed here as political appointees.

Twenty-five individuals sat for interviews or provided data that addressed the research questions. Three of the interview participants held positions outside the Navy headquarters but were knowledgeable about Navy processes or the comparable processes in other Military Departments. Two of the fourteen participants in a panel discussion were from outside the DoD entirely, but did possess deep knowledge of Pentagon decision making processes and outcomes. Twenty-three of the twenty-five individuals interviewed occupied more than one key resource management position during their career. As a result the accumulated insights include the complementary perspectives from
their many roles which all helped to develop a more complete picture of what happens inside the Navy’s decision environment.

When I scheduled an appointment with an individual I provided them with a description of the research project that included a copy of the interview protocol (see appendix). The participants were also asked to review a consent form which stated that “every effort will be taken to eliminate personally identifiable information from the data used in the final study report.” While I have systematically anonymized the participant data in my reporting, a close observer of the Navy headquarters over the last twenty-five years could probably identify some of the participants from their observations and the incidents they describe.

All of the participants were asked if they would be willing to have their interview recorded and all but two agreed. The interviews were conducted in a variety of locations and most lasted about an hour. In conducting the interviews I was guided by the techniques of qualitative interviewing presented by Herbert and Irene Rubin who explained that interviews are “structured conversations combining main questions, follow-up questions and probes. (2004, 129)”

I conducted interviews between February 2011 and March 2014. In addition to the interviews, I also collected data during a not for attribution panel discussion sponsored by the Logistics Management Institute (LMI) in 2006. The executive forum was a half-day conference with 14 senior public officials (four of which I subsequently interviewed) to
discuss how the Department of Defense might handle the next budget downturn when the wars in Iraq and Afghanistan ended. Observations from this meeting were previously published by the researcher in the Spring 2007 edition of *The Public Manager* (Farley 2007).

The sample population was stratified by the participants’ formal status in making program/budget decisions inside the Pentagon. At the head of a population of thousands of people inside the Pentagon who support the program/budget decision making processes there are three distinct groups who are instrumental; 1) Navy Flag Officers, 2) Political Appointees, or 3) members of the Senior Executive Service (SES). During their careers three of the officials I interviewed served as both senior executives and later as political appointees.

In practice I found it impossible to get any of the participants, many of whom were very high ranking officials, to answer the interview protocol questions serially. The protocol instead served as a foundation for an open-ended interview about the participant’s experiences around the program/budget process. The purpose of the interviews was to learn from the participants how these deliberations worked during their time in the Pentagon.

During the interviews participants frequently mentioned other individuals who I also interviewed (either previously or subsequently). The data is filled with cross references where participants detailed their shared interactions within the decision making
processes. This confirmed my expectation through years of close observation that the core group of resource management decision makers inside the Navy headquarters is small and tightly interconnected. The most influential resource management decision makers are the principals within the Secretariat (the Secretary and Under Secretary and the four Assistant Secretaries) and OPNAV (the CNO, Vice CNO, N8 and his three two-star subordinates), supported by their civilian SES deputies. Other key participants are the resource sponsors who at the beginning of the time-period under review were three-star admirals serving as Deputy Chief of Naval Operations (DCNO). In 1992 the three-star resource sponsors were demoted to two-stars and placed under the DCNO, Integration of Capabilities and Resources (OPNAV N8).

According to the participants, the important decision meetings involve as few as three people and usually no more than half a dozen. Near the end of the first round of interviews I noted that a number of interview participants were referencing the same incidents and other participants who I had also interviewed (or planned to interview). At this point I was satisfied that my theoretical sampling technique, which is a key element of grounded theory development (Corbin and Strauss 2007; Charmaz 2006; Clarke 2005), had produced data that in Grounded Theory terms “saturated” the research site and thoroughly captured how people worked together inside the decision making environment. At this point as each interview was not really producing new conceptual insights but was instead adding color to the descriptive account (Breckenridge and Jones
I concluded that it was not necessary to solicit additional interview participants.

As is not unusual with semi-structured interviews, the participants wanted to discuss experiences and make observations on incidents and issues that were not the central focus of the interview protocol. Much of these detailed description of how the PPBES process actually works inside the Navy headquarters served as the material for Chapter two of this work. In all cases the participants had a good understanding of the interview objectives and went to great lengths to tell me what they thought was significant about their experiences in the decision making process. As a result the interviews produced valuable insights into how decisions are made and who participates in the process and in what ways. Throughout the interview process I was intent on allowing the informant to expand on the stories they thought were important, a technique designed to get the participant to open up about what they thought was important in their experiences (Rubin, Herbert 2004, 175).

Following the interviews I contacted the participants to thank them formally for agreeing to discuss their experiences and informed them that I might wish to talk with them again. I conducted second follow-up interviews with two participants, one after he had moved into another position inside the Navy headquarters. For those interviews which I recorded I transcribed the interviews verbatim producing over 430 pages in total. In the cases
where I did not have a recording (one due to a technical problem) I wrote up the interview from notes and memory.

Once the data was transcribed and loaded into nVivo software I examined it to identify overarching themes. Applying the techniques of grounded theory I read and iteratively open-coded 625 passages in the transcripts into more than 100 themes. Using nVivo, I conducted a series of word-frequency queries of the coded data nodes into two main categories; “Who Makes Decisions” and “Information for Decisions.” Passages from these nodes were used to substantiate the two main findings and twelve associated observations. While coding the data I wrote a series of field notes and memos which explored the concepts and served to frame my thinking on what the interview data was saying about how the participants experienced the Navy’s decision making environment. I searched the data carefully to determine if there was anything about the interpersonal interactions inside the Navy headquarters that was unique from an organizational behavior perspective.

A final set of data was composed of the annual testimony before the Congress presented by the Secretary of the Navy and the CNO between 1989 and 2013. Congressional reports publish this testimony from the annual hearings before the House and Senate Armed Services Committee. These reports were downloaded from the ProQuest Congressional database, and the testimony transcript was extracted and loaded into nVivo software. Using this software I designed and executed a series of word-frequency queries
to see if at any point in the last twenty-five years any of these senior leaders had expressed a desire for a future Navy that was both smaller and more expensive on a unit cost basis. I also reviewed the testimony and the questions and answers to see if there was any mention by these officials of any expressed intent that the number of combatant ships would decrease while the costs to buy, operate and maintain them would increase.

In developing the proposal for this research I expected that the fact that senior flag officers were nearing the end of their long careers would cause them to behave in particular ways which might explain why the decision making produced specific outcomes. In discussing this issue with both the flag officers themselves and the many people who interacted with them inside the Navy headquarters, it became apparent that this quality was (1) either not deterministic in the way I had hypothesized, or (2) participants are extremely cautious about revealing how this quality may or may not affect behavior. None of the interview participants considered this an important factor that explained how decision making occurred in the Navy headquarters.

**Phase II: Analyzing Outcome-based Data**

After assessing the data against the initial research question about the effect of nearing the end of one’s career as a naval officer, I realized that it did not seem that this transition caused them to behave in ways that significantly affected how they made decisions or operated within the decision making processes. At this point I reexamined the data I had collected seeking other new insights. At this juncture I realized that if I was to answer
questions about how participants collectively made decisions, I needed to add data that could help assess the quality of these decisions. Was there anything about the choices that the people made inside the decision-making meetings that could be measured against the key research question focusing on the outcome of a future Navy that was smaller and more expensive?

Every year through the program and budget building processes Navy leaders make decisions about what things to buy that will constitute the future Navy. Decisions about the types and numbers of ships, aircraft, weapon systems and Sailors are program decisions which are translated into budget alternatives which all have in effect, a price tag attached. When all of the decisions are made and the budget is accumulated, the resulting dollar figure is the amount of Total Obligational Authority (TOA) that the Navy is requesting Congress to appropriate as Budget Authority (BA) to buy and operate ships and aircraft – the offensive force of the Navy.

To connect the insights from the grounded theory interviews and other qualitative data with historical data on the program and budget, I collected as much quantitative information as was available. I compiled twenty-five years’ worth of program/budget data and accumulated it into a single database. The Navy’s Program Budget Information System (PBIS) is a database which supports and documents changes made during a budget cycle.
The annual budget review cycle begins with the end of the last review which occurs when the President’s Budget is locked and submitted to the Congress and continues until the next President’s Budget submission. During the review changes to the Program/Budget database are made to account for (1) actual execution in the “prior year,” (2) adjustments made by the Congress in the “current year” and (3) changes made inside the Pentagon to the “budget year” and beyond in the Future Years Defense Program (FYDP). When the program/budget review cycle ends and the President’s Budget Submission is delivered to the Congress all of the issues from that review are rolled up into a new baseline issue that serves as the starting point for the next review. The rolling up process suppresses all of the transactional details from the just completed review (and by extension all previous reviews).

The database I constructed is an enhancement to the Navy’s official collection of cycle-specific databases because it enables comparisons of all the issues between cycles and fiscal years. In addition to reporting the accumulated budget submission and execution data, the database I constructed for this analysis made it possible to look at the conduct of program/budget reviews inside the Navy headquarters.

**Decisions about the future Navy**

The budget is explicitly designed to fund the current Navy and to buy and sustain the future Navy. Looking at the data artifacts from these decision making processes it is possible to assess both the size and cost to operate the future fleet. It is further possible to
compare the cost and size of the future Navy to comparable current and historic measures and assess if the future force that flowed from the antecedent decisions turned out better.

Using the aggregated program/budget data, it is possible to focus on how the deliberations that the participants described in the interviews yielded decisions that affected both the size and cost of the future Navy. The value of this approach is that both qualities about the future Navy are objectively measurable. It is possible to compare the size of the fleet in terms of the number of combatant ships and average cost of the Navy at time $T_0$, when decisions were being made about the Navy at future time $T_n$ with the actual size and average cost of the Navy at future time $T_n$. For example if the future Navy at $T_n$ is smaller and more expensive, then the decisions Navy leaders made might not have been as good then if the future Navy was larger and less expensive. This analysis does not consider the quality of the fleet in terms of the increased lethality of new systems or the effectiveness of weapons system in protecting the ships of the fleet from enemy attack.
Table 2. Cost of the Fleet vs. Size of the Fleet

As noted above, there is a third dimension of analysis that is important when assessing the Navy; capability. A smaller Navy that costs more per ship is not necessarily a poor outcome if the capability of the smaller fleet fully satisfies the Navy’s role in the National Military Strategy. While measuring the cost and size of the fleet may be an incomplete measure, the Navy routinely expresses its capability in these terms when for example it headlines in its budget rollout the number of Aircraft Carriers it sustains in the inventory; 15 during much of the Cold War, 10 today.

In official documents and unofficial channels such as the Proceedings of the Naval Institute, a monthly professional journal, officials characterize the future Navy in terms of the number of combatant ships in the force. Through the early 1980s Secretary of the Navy John Lehman used the “600 Ship Navy” to characterize his plan to build and sustain a larger fleet which could execute the Maritime Strategy to counter the Soviets in
any future conflict. Similarly the Army routinely expresses itself in terms of Active Duty Divisions and the Air Force in terms of Air Wings. While imperfect, the number of combatant ships in the fleet is an acceptable and widely understood measure of military capability that describes the Navy.

Having a way to measure the quality and outcome of the decisions turned out to be very important to contextualize the individual recollections about how the decision making process worked. When participants were asked to consider the trends in terms of the size and cost of combatant ships and other weapon system, no one acknowledged the actual outcome as desired or planned. Given that this trend is consistent over more than twenty-five years, though much more pronounced since 1996, it is not an anomaly of either the immediate post-Cold War era or the post-9/11 era that followed it. In fact it is possibly an undiagnosed feature about the way that the Navy headquarters works, and as such needs to be carefully examined.

The Investigator as the Instrument
An important element in conducting a grounded theory investigation is that the primary data collection instrument is the researcher. Through much of my career I have been a participant and interested observer usually just outside the offices where final decisions are made. From one perspective my personal history has equipped me better than just about anyone else to understand the issues I am investigating and aids in my interpretation of the data I generated in this study. At the same time my twenty-five year career inside the DoD has undoubtedly affected my perspectives and views about how the
institution works and more importantly, how it might work better. Anyone with so much training and experience in a particular set of tools and ways of thinking is likely to assign greater weight to them than to other important complementary tools.

To answer potential critics of my interpretations I would offer that my career experiences inside the Department of Defense have been unique in that on four separate occasions constituting more than half of my career I was assigned as a special assistant responsible for leading enterprise-level efforts to re-engineer financial management processes. By temperament and now though more than a decade of rigorous academic training, I have learned how to analyze organizational environments inside the DoD and have used that skill to develop practical solutions to problems as diverse as audit readiness, implementing an Enterprise Resource Planning (ERP) system, and re-engineering the PPBES processes as a member of the Secretary of Defense Special Study Team on Joint Defense Capabilities. While I acknowledge that as a participant/observer I possess preferences that may color the way I have interpreted the data, I have sought to ensure that my understanding of the findings was more influenced by a commitment to generally accepted methods of social scientific research and by an appreciation for and openness to the larger concepts that emerged during the investigation.

The risk that the participant researcher introduces his or her own biases to the study can be mitigated through adherence to generally accepted data collection and analytical methods. In conventional ethnographic research, application of what Agar calls “detached
involvement” (Agar 1996, 100) produces the best of both worlds, insiders trained and equipped to collect data, code it and interpret it to diagnose organizational behavior to produce insights the institution can use to operate better. Herr and Anderson describe what they characterize as “participatory research” as a method that permits methodologically trained and equipped insiders to collaborate with other participants to produce research findings “that are immediately applied to a concrete situation.” (Herr and Anderson 2005, 16).

If accepted without question, the criticism that a participant researcher cannot help but introduce a crippling bias risks leaving the important work of generating knowledge and valuable insights as the exclusive domain of specially trained outsiders. Recognizing that becoming knowledgeable enough about how things actually work inside an institution can take time and, dependent on the obstacles, might never produce deep and meaningful insights that are accessible by and credible to sponsors and stakeholders in the organization. Given the need to understand how organizations operate and the inherent difficulties of this type of analysis it seems that encouraging insiders to equip themselves appropriately so that they can do this work is potentially beneficial to all parties.
CHAPTER 5: FINDINGS

The data collected during this study were designed to answer two important questions:

- First, is the outcome of choices made over the last twenty-five years – a smaller more expensive Navy – attributable in any measurable way to how the officials in the Navy headquarters engage in the decision making processes and by how their formal roles constrain or enable their participation in making decisions about the future Navy?

- Second, do the analytical processes that support the Planning, Programming, Budgeting, and Execution System (PPBES) deliver the necessary information for Navy Decision makers to make optimal resource allocation choices?

Findings

The remainder of this chapter presents the findings generated from the data collected in the participant interviews and Executive Forum panel discussion. There are two basic findings which align with each of the research questions.
1. *Who makes decisions does not appear to have much effect on the long-term trajectory of the future Navy* – The who and how of decision making over the past twenty-five years has not had an appreciable effect on the twin trajectory of a smaller, more expensive Navy.

1.1. *The Chief of Naval Operations is the most influential actor* – The CNO has the power and authority to reorganize OPNAV in ways that he believes will produce decisions congruent with his vision of the future Navy.

1.2. *No one can easily oppose the Chief* – There are no actors within the Service headquarters who can openly oppose the Chief’s pursuit of his vision for the future of the Service.

1.3. *Deputies are institutionally handicapped* – Several members of the Senior Executive Service (SES) serve as Deputies to political appointees and flag officers in the Navy headquarters. Despite their deep institutional knowledge and years of experience, as deputies they influence but don’t make decisions.

1.4. *The system handles most decisions* – The large staffs in the Navy headquarters deal with most program/budget issues at the working level rather than elevate them to senior leaders for adjudication.

1.5. *Getting leadership’s attention is difficult* – the first and necessary step to implement a change to the way the decision making process works is to convince senior leadership that a problem exists and that a solution is possible. Getting executive attention and buy-in for such bottom-up initiative is very difficult.

1.6. *The institution can successfully resist most changes* – The institutional Navy has a long tradition of independence and delegation of authority which sometimes is manifested in the practice “slow rolling” or selectively implementing, or not implementing directed changes.
2. *The decision making process does not produce optimal choices* – The complicated Planning, Programming, Budgeting and Execution System (PPBES) does not deliver information to senior leaders that allows them to make the best resource allocation decisions.

2.1. *The focus is on the near term* – As the budget is the principal deliverable to the Congress, the focus of the PPBES process tends to be the single budget year for which the Administration is requesting appropriation and authorization.

2.2. *Analytical processes are invented to handle specific problems* – Due to perceived or genuine weaknesses in the PPBES processes the institution frequently resorts to ad hoc methods to deal with significant program and budget issues.

2.3. *Increasingly, the process interferes with quality analysis* – Recent changes to the PPBES processes have reduced the time available for budget analysts in the Navy headquarters to conduct detailed scrubs of programs for pricing and other executability issues.

2.4. *Difficult decisions are never made early* – Because of the fear that making a decision early will limit future options or cause others in OSD or the Congress to take money, decisions are delayed until the last possible moment.

2.5. *Analysts resort to “Salami Slicing”* – Analysts in the Navy headquarters create thousands of program/budget issues every year. In total, these changes have only a small effect on the overall program.

2.6. *The fiscal and strategic environment shapes the boundaries of the choices* – More than anything else, the character of the program/budget review is influenced by whether the Navy expects more money in the coming year, or less.
Following each finding are associated observations which substantiate the principal finding.

**1. Who makes decisions does not appear to have much effect on the long-term trajectory of future Navy**

How individuals participate in the Navy’s decision making process is a function of many factors including their formal role or status inside the headquarters, the specific knowledge, skills and abilities they bring to the table and how they interact with other participants. Despite the frequent reports of the sometime outsized influence of specific personalities and the institutional power of selected participants, the data provides evidence that the actors in the process are less important than the process itself and the institutional framework in which decisions are made. Over the last twenty-five years the impact of any individual has been short-lived and despite their efforts, enduring qualities of the institution as a complex adaptive system are more determinative of outcomes than the people involved. We start by examining the most powerful actor, the Chief of Naval Operations.

**1.1 The Chief of Naval Operations is the most influential actor**

The CNO is the most influential actor in the Navy headquarters when it comes to Planning, Programming, Budgeting and Execution System (PPBES) decisions. Between 1988 and 2013 there have been eight CNOs. Four of them; Kelso, Clark, Mullen and Greenert initiated far reaching changes to the decision-making environment designed to make it produce alternatives congruent with their individual vision and agendas. More
than half of the interviewees observed that the CNO specifically, and Service Chiefs (the military heads of each Service) in general have tremendous power to make significant organizational changes to the headquarters staff who run the analytical processes which support decision making. Inside the Navy four of the last eight CNOs have used this authority to reorganize OPNAV to give more power to selected key subordinates in the headquarters who in turn shape the alternatives that the system generates.

To most observers the CNO’s authority emanates from the Title 10 authority to “act as the agent of the Secretary in carrying [approved plans and recommendations] into effect.” (10 U.S. Code § 5033 (d)(3)). Several of the participant interviews took place while the current CNO was executing yet another reorganization of OPNAV to change the way that resources were controlled and decisions were made. I asked one participant whether the CNO sought approval from the Secretary before implementing this latest reorganization.

There certainly has not been anything between the Secretariat and OPNAV on this, this has been a total “inside the tent” if you wear a uniform, that’s it, that’s what’s going on. The Secretary has been watching what has been going on and has been plugged in periodically mostly for situational awareness as far as I know. (Senior Executive B)

According to 10 U.S. Code § 5013 the Secretary of the Navy is the ultimate authority inside the Department. Any authority to run the Department including that held by the CNO is delegated by the sitting Secretary. In this case Senior Executive B’s observation that “the Secretariat was respecting Title 10 authorities on that one” reveals a common but mistaken notion that the CNO’s delegated authority in effect grants him unilateral and
permanent power to organize the Navy staff. Political Appointee D confirmed that what the CNO or the Commandant does to their respective services is not of much concern to the Secretary;

...the Secretariat does not get involved with reorganizations on the OPNAV Staff or Marine Corps Staff. When Admiral Clark came in he had a specific thing, you know Admiral Roughead wanted to have N2/N6; that’s his call, that’s not an issue.
(Political Appointee D)

Another participant, Political Appointee B noted that in the Army headquarters the generals sometimes would use Title 10 to justify making decisions without coordinating them through the Secretariat. His reading of Title 10, confirmed that the Assistant Secretary for Financial Management and Comptroller was statutorily responsible for developing and submitting the program and budget “so this idea that responsibility for the program lies with the [Army] Vice [Chief of Staff] or the Chief [of Staff] has no basis in law.”

Senior Executive D acknowledged that the Secretariat possesses the authority and power to make changes. At the time that I interviewed Senior Executive D, the Under Secretary of the Navy was attempting to implement a new organizational construct around his role as the Department’s Chief Management Officer (CMO) which had just been established as part of the FY 2009 National Defense Authorization Act. The Under Secretary envisioned a much more instrumental role for himself and the other Assistant Secretaries in making program and budget decisions, a role clearly delineated in the relevant statutes. While Senior Executive D conceded that the Under Secretary did have the power to make
significant changes to the processes, he noted that the military would most likely respond with their own reorganizations.

If you do that the CNO and the Commandant will simply invent their own process because they need to have a process to determine what they think is most important. ...civilians [political appointees] come and go; at least the CNO is there for four years. (Senior Executive D)

An important source of his institutional power is the CNO’s ability to selectively promote trusted allies into key subordinate positions in OPNAV during his four-year term. While 10 U.S. Code § 5013(g)(1) grants the Secretary of the Navy the authority to “assign, detail, and prescribe the duties of members of the Navy and Marine Corps,” civilian appointees routinely defer to the military in appointments at the two-star level and below, and many of the three- and four-star assignments. According to Senior Executive F, the political leadership can and does weigh in on some flag selections as the billeting process for three- and four-star admirals is highly politicized and run through the White House as these assignments require Senate confirmation.5

His demonstrated power to influence who gets promoted into key positions ensures that high ranking admirals and senior naval officers who hope to achieve flag rank themselves someday pay close attention to what is important to the CNO. Political Appointee H, who

5 Flag Officer E described how the Secretary of Defense personally blocked his nomination to another billet because the Secretary considered him indispensable in his then current assignment.
also served as a Senior Executive in OPNAV earlier in his career, observed this phenomenon at close hand.

*An interesting thing about that crowd is how well connected they were to the CNO. He was clearly the sponsor or the boss that they were responding to ... the decision maker was the CNO.* (Political Appointee H)

Political Appointee A, a key participant in the Office of the Secretary of Defense (OSD) for twenty years observed that the Service Chiefs all come into office with a significant independent agenda “to put their stamp on the Service … and they are helped by having a typically significant transition team.” After he is confirmed by the Senate and before he is sworn in, the incoming CNO has a roughly six-week transition period where he is unassigned; meaning that he is momentarily not occupying any billet. During this period the ascendant CNO has an opportunity to think about what he wants to do once he takes charge. Several participants cited this transition period as a way for the new CNO to create his agenda.

*Vern Clark became CNO; he knows that he’s got five years and so he developed a five-year plan and he focused on a different issue every year. It was very conscious, planned out thing. [Mike] Mullen [the next CNO] had the same plan; he did it a little differently than the way Vern did it; he sort of simultaneously did it, but Clark, you know, sat us down and said ‘here are my five things and year one I’m going to do this. Year two, I’m going to do this, year three I’m going to do this.’* (Flag Officer B)

CNO Vern Clark came into office with an explicit agenda to change the way that program/budget decisions were made to reduce the authority of the financial managers in OPNAV, and grant more authority instead to the operating commanders in the fleets.
colorful language Senior Executive F describes the atmosphere when Admiral Clark took over.

_So Vern Clark comes to town in 2000 and he says “the fleet is getting screwed, we’re not addressing all their requirements.” N8 is the “Dark Side” – Darth Vader. [Flag Officer I, then the VCNO] was persona non grata in Vern’s eyes as was Senior Executive D by inference and me a little bit. (Senior Executive F)_

This passage illustrates one of the new CNO’s main challenges; when he takes over, the leaders inside OPNAV are artifacts of the previous CNO.

_And the problem when you first get there is that none of the guys are your guys. But you have a fairly good opportunity to influence [that]. (Flag Officer B)_

During his four-year term the CNO will make a mark on the Navy by expressing his agenda and preferences. He will also shape his vision of the Navy by making what he considers are necessary changes to the analytical and decision making processes inside the Navy headquarters. Finally, during his term he will influence if not outright direct a large number of personnel assignments so that by the midpoint of his four-year term key positions in OPNAV and the fleets will be filled by his people whom he can expect will, at least during the rest of his term, support and advance his priorities.

In the last twenty-five years four of the eight CNOs have implemented significant changes to OPNAV (Swartz and Markowitz 2009). Under Admiral Trost, the Resource Sponsors were three-star Vice Admirals and they controlled all of the resources; manpower, acquisition, and logistics, required to develop and sustain the capabilities of each platform community (air, surface, and undersea). Admiral Kelso demoted the
Resource Sponsor Barons from three-stars to two-stars and placed them directly under N8. Admiral Clark moved the Resource Sponsors from under N8 and placed them under a newly established three-star Deputy CNO for Warfare Integration. Admiral Mullen reversed that construct and placed the Resource Sponsors back under N8.

Table 3. Chiefs of Naval Operations since 1986

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Start</th>
<th>End</th>
<th>Duration</th>
</tr>
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<tr>
<td>23</td>
<td>Carlisle A.H. Trost</td>
<td>1-Jul-86</td>
<td>29-Jun-90</td>
<td>4.0</td>
</tr>
<tr>
<td>24</td>
<td>Frank B. Kelso II</td>
<td>29-Jun-90</td>
<td>23-Apr-94</td>
<td>3.8</td>
</tr>
<tr>
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<td>Jeremy M. Boorda</td>
<td>23-Apr-94</td>
<td>16-May-96</td>
<td>2.1</td>
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<tr>
<td>26</td>
<td>Jay L. Johnson</td>
<td>16-May-96</td>
<td>21-Jul-00</td>
<td>4.2</td>
</tr>
<tr>
<td>27</td>
<td>Vern Clark</td>
<td>21-Jul-00</td>
<td>22-Jul-05</td>
<td>5.0</td>
</tr>
<tr>
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<td>Michael Mullen</td>
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<td>29-Sep-07</td>
<td>2.2</td>
</tr>
<tr>
<td>29</td>
<td>Gary Roughead</td>
<td>29-Sep-07</td>
<td>23-Sep-11</td>
<td>4.0</td>
</tr>
<tr>
<td>30</td>
<td>Jonathan W. Greenert</td>
<td>23-Sep-11</td>
<td>Present</td>
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</table>

The current CNO created a new three-star Deputy Chief of Naval Operations (DCNO) for Warfare Systems (N9). N9 is responsible for the integration of manpower, training, sustainment, modernization, and procurement of the Navy's warfare systems currently resourced by the directors of Expeditionary Warfare (N95), Surface Warfare (N96), Undersea Warfare (N97), and Air Warfare (N98). This latest reorganization in effect restores the organizational construct of the Baron Era except that the “barons” are two-star admirals. Ironically, despite these changes the data shows that the decision making
processes have consistently produced an outcome – a smaller, more expensive Navy – that none of the CNO’s wanted.

1.2 No one can easily oppose the Chief

Contrary to what the title implies, the Chief of Naval Operations is not an operational commander; the Fleet Commanders and Type Commanders (two-star admirals responsible for operating platform types; Surface Combatants, Submarines, and Naval Aviation including the carrier forces) are responsible for the day-to-day operation of naval forces. The CNO’s principal job is articulating a coherent vision for the future Navy and during his term executing the first steps of a plan to get there. Success in the job entails a combination of strategic thinking and organizational/bureaucratic prowess. The CNO and his principal advisors must frame a convincing picture of what the world will look like in the next five, ten, and twenty years. They must then conceptualize a future Navy that is optimally equipped to operate in that world so it can protect and advance America’s national interests. At the same time the CNO and his staff need to engage with decision makers in the Navy, OSD, the Joint Staff, the White House and Congress to convince them to make decisions today about next year’s budget which is the first payment towards the future Navy.

Political Appointee A was in an ideal position to see how the CNO and other Service Chiefs struggled with the challenge of building a case for a future Navy, Marine Corps, Army, or Air Force. He observed that successive Army Chiefs came into office with very
clear ideas of what they thought the future Army should look like. In two cases “A”
described what happened when the Service Chief’s ideas turned out to be big mistakes.
Many individuals inside the institution will recognize that what the Chief is proposing is
not going to work; perhaps there are significant technical problems as in General
Shinseki’s [Army Chief of Staff between 1999 and 2003] Future Combat System, or huge
logistical challenges as with General Wickham’s [Army Chief of Staff 1983 – 1987]
concept for deploying light divisions in the mid-1980s. While there might be dissenting
voices, and some of them may be highly placed inside the headquarters according to “A”

... a Chief eager to get his idea executed will just bull his way through that stuff. ... [General Shinseki’s] technology guys said that [the Future Combat System concept was] not achievable ... the technical guys told me but they didn’t have the authority to challenge the Chief openly. So the Chief will get very far down the road on his agenda. (Political Appointee A)

Political Appointee A observed that embedded in the enterprise is what he characterizes
as an “institutional conservatism” that recognizes the impracticality of these ideas and is
often justifiably skeptical. But the fact remains that these skeptics do not have the
institutional power to openly defy the Chief. Instead the opponents must wait for an
opportunity to voice their concerns; one that usually only comes when the next Chief
takes over. The institutional memory is most often the cadre of non-political civilian
senior executives, who immediately upon the next Chief’s emergence whispers in his ear,
“boss you better fix this; … this ain’t going to work. This is going to cost an arm and a
leg.” So according to Political Appointee A, the new Chief frequently ends up taking
apart the old Chief’s agenda.
Senior Executive F described when Admiral Clark took over as CNO and immediately acted to diminish the power of the N8 and instead empower the Fleet Commanders and the Type Commanders. Flag Officer I who at the time was the Vice Chief of Naval Operations asked Senior Executive F to examine the proposed reorganization. After looking at the proposal Senior Executive F realized that it was the same construct which had been proposed a few years earlier. At that time the consensus in OPNAV was that reorganizing in that particular way would have been a mess, “these two organizations will be at each other’s throats there will be huge turf battles, there will be ‘analysis fighting’ going on all the time.” But when Admiral Clark, the new CNO, wanted to do exactly that, not even the VCNO could convince him not to do it.

*I said [to Flag Officer I] “remember that study we did two years ago where we made some tweaks to the organization and we set up some things and we looked at this and we said ‘don’t ever do this?’” He said yeah. I said “that’s what Clark wants.” He said “yeah I know.” I said, “It’s going to get ugly,” he says “I know, do it.” He was directed to do it. I was directed to do it. So we broke it asunder [Clark wanted] the resource barons out from underneath [N8] and they went to N7 (the new warfare integrator).

According to Flag Officer C and just as Political Appointee A would predict, Clark’s efforts to diminish the influence of N8 in the decision making process did not lead to lasting change and was reversed by Admiral Mullen, the next CNO. Almost immediately, Admiral Mullen, who himself had previously served as N8, and then as VCNO under Admiral Clark, demoted the three-star DCNO for Warfare Integration (N7) and placed it, and the Resource Sponsors back under the N8 organization.
1.3 Deputies are institutionally handicapped

It is not impossible to dissuade the Service Chief from his preconceived notions or agenda but the personalities and formal roles of the people trying to do so matter a lot. Senior Executive D describes that when he recognized that the CNO was about to make a big mistake, he and one or two other prominent Senior Executives could whisper into the ears of other powerful participants and say “Yes Admiral we’ve tried that before. You can do it but we’re tried it ...” followed by the assessment “that it didn’t work out well.” The experienced senior executives inside the Navy headquarters have the most pertinent knowledge and skills to advise and steer the other powerful participants who come to the headquarters; helping them avoid big mistakes. The data shows that while widely respected by the respective Flag Officers and Political Appointees they serve, the members of the Senior Executive Service who occupy these deputy positions are institutionally handicapped by their formal subordinate status.

By the time they are promoted into the Senior Executive Service (SES), Navy civilians will usually have between 10 and 20 years of experience. During their careers most of them have served in various government posts inside and outside the Navy. Most of the civilians who rise to the SES rank entered Federal service after college or graduate school. One thing that distinguishes government employees is that when they enter service they are all classified into one of several hundred job series defined by the US Office of Personnel Management (OPM). Budget analysts, for example, are classified as
GS-0560s. Most Federal workers spend their entire career in the same job series, being promoted into successively higher grades. Some may move into a different series but when they do they usually stay within the same group. Budget analysts for example occasionally move around within the GS-0500 group which encompasses all of the accounting and budgeting classifications. Some senior executives enter the ranks after a career in the military. Occasionally, though it is quite rare, someone who has never been in the civil service or military will be selected as an SES.

The most senior civilians in the headquarters serve as deputies to flag officers or political appointees. By the time they are promoted to the SES they have come up through the GS ranks and have extensive first-hand experience putting together the POM or budget; operating the analytical processes and producing products that inform decision making.

Senior Executive G speaks for most of the participants in this class:

*I have accumulated a fairly extensive knowledge of the decision-making process over 31 years inside as a civilian. The people who succeed in senior positions do so by understanding their limitations vis-à-vis the other actors. (Senior Executive G)*

Note that “G” also makes the point that the senior executives like himself are disadvantaged compared to the people they serve. I asked senior executive C, a veteran of nearly thirty years of Federal service as a budget analyst to say whether he felt he could be instrumental in making changes to the way things worked;

*... as much as I would like to say ‘I’d like to change this and this’ there are a lot more senior players. There’s only so much you can do. You make the best of the situation that you can. ... a lot of it is how you relate to your flag here. You’re still in a Deputy position here. (Senior Executive C)*
Ironically, political appointees often see the SES leadership as an extension of the military. Political Appointee B, who worked in the Army headquarters observed;

and the senior civilians – the SESs – given the organization of the military departments are part of the military even though under Title X they report to the civilians, so their loyalties are to the permanent structure, not the temporary structure. (Political Appointee B)

Senior civilians can get a bit jaded over time by not being able to effectuate change even though they are often the most knowledgeable participants in the process and better attuned to the “art of the possible.” Senior Executive B explained that:

as a deputy to a three-star my job is to make him happy, get him prepared to go, make sure the staff is happy, they are the doers. So I am certainly still an influencer in the whole process but I don’t own anything like I used to. (Senior Executive B)

Flag officer D saw the civilian deputies as animated by a different, more inside-the-beltway mentality while still firmly in the camp of the military leaders they directly support;

I see the senior civilians as supporting their military counterpart; I think they are more bound by the requirements to make it actionable in DC. To construct a story around the budget that will pass muster on the hill. Get it legislated, get it appropriated. (Flag Officer D)

Deputies do not automatically have easy access to the boss. Flag officer C described how when he took over as N8 he realized that his predecessor required his Deputy to schedule appointments with him. It can take a while for the deputy to get the pulse of the boss and carve out their division of labor going forward.
One of the biggest challenges is when the Deputy realizes that his or her new boss is unprepared for important aspects of the job. Political Appointee F described this phenomenon. On a visit out to the fleet she observed that one of the new Comptrollers was a Navy Captain who had almost no experience in financial management beyond the six-month comptroller school:

someone said to me when I pointed this out that “it’s really the senior civilians out there who do all the work anyway.” Do you realize how fundamentally insulting it is to someone to realize that they are good enough to train one unqualified boss after another but to never be good enough to hold the job? Why don’t you just give it to them? Give them a military deputy if you think you need that perspective on the problem. (Political Appointee F)

Senior Executive deputies in the resource management arena realize that few political appointees have been selected for these positions because they are subject matter experts in the way programming and budgeting is done in the Pentagon. Nevertheless sometimes the inexperience of the people who are appointed as senior decision makers causes problems. Some of them have a difficulty communicating or even understanding the sorts of information that is needed to make decisions. Senior Executive C described that in those cases;

I think both the politcals and the flags: depending on the organization: look for the civilians … to kind of work through all the details. (Senior Executive C)

Senior Executive C was a bit more emphatic when he described the time when an earlier incoming CNO was being briefed on the mechanics of the analytical and decision making process for the Navy POM. The new CNO asked “why am I hearing this? The Vice Chief should hear this; this is too detailed, this isn’t my job.” “C” went on in amazement that
“this is the guy who is now CNO who doesn’t know his job is to make sure that the POM is the POM!” The data shows that the permanent staff is often instrumental in keeping the process running largely independent of who is ostensibly in charge. This phenomenon is most apparent when information that makes it to decision makers is in effect predigested by the analytical processes which remain largely the domain of the senior executives in OPNAV and the Secretariat.

The observation that Senior Executive Service members occupy formal subordinate roles as deputies but serve as the participants most knowledgeable in the way the process works is congruent with Weber’s interpretation that the bureaucrat’s power comes from his/her specialized expert knowledge and that this is a central tension inside the organization (Mouzelis 1967, 21) run by political appointees (legal leaders) or flag officers (charismatic and legal leaders).

1.4 The system handles most decisions

The participants described that when decision makers are offered a real choice it is most likely because the underlying issues are so intractable that the staffs and stakeholders cannot agree on a solution. For the rest of the work, the staffs inside the Pentagon resolve issues at the working level so that the most senior leaders never get involved. Flag Officer C sums this up in his comment “it is hard to pin down where and how decisions are made. I cannot recall ever making a significant decision.” Flag Officer C continued
that the budget “just seems to roll along” and that during his tenure he couldn’t recall being offered a choice between distinct alternatives.

Participants related numerous stories of how subordinates select and package decisions for their bosses. Consequently senior decision-makers often have less discretion than they realize about what decisions reach them. There is no reason to conclude that this fact is the product of intentional deception or some other nefarious aim. The senior leaders operating this way were themselves subordinates and through their experiences observed and learned what to bring to one’s boss and what things bosses typically don’t care about. There is nonetheless a risk that when the bureaucratic process of teeing up issues becomes routinized, some important items are reflexively “handled” at lower levels of the organization. The result could be the loss of situational awareness by the senior decision makers which could morph over time into a more serious erosion of control. Flag Officer E describes a situation which illustrates how delegated authority can sometimes become quite substantial in practice.

As the head of the Operations Directorate in the Navy Budget office Flag Officer E was responsible for managing the CNO Reserve. The CNO Reserve is a pot of appropriated Operation and Maintenance (O&M) money that the Comptroller holds back from the Budget Submitting Offices (BSOs) every year during execution. It is generated by a small withhold or “tax” from all of the programs at the beginning of the fiscal year. At the mid-point of the fiscal year the Comptroller staff in the Operations Directorate conducts a
review where the BSOs report on execution and ask for additional money to support unexpected shortfalls or important emergent priorities.

When Flag Officer E managed this task, he conducted the process in a different way than his predecessors. As he explained it, before him the Operations Director would give the CNO a huge list of items to review and make choices about which ones he would fund or not. “E” considered it his role to carefully prescreen the items on this list and “rack and stack” them to advise the CNO which programs were worthy of additional resources.

*I managed it for [Flag Officer I] who was Vice Chief. People had to come to me with their requests and some folks had good stories and others didn’t. I put together the package and brought it to Lautenbacher [N8] and [Senior Executive D], and I showed them this thing and they were concerned that it was too digested; there wasn’t much for the CNO to do with it. I told them that this was my judgment; what was good, what didn’t make sense, and the CNO could make changes if he wanted.*
(Flag Officer E)

Flag Officer E returned to this theme again when he described how later as a senior leader in the Office of Program Analysis and Evaluation (PA&E), he chaired a regular meeting of all the Services programmers (the 8s in Pentagon speak). In this position he possessed a lot of power to adjudicate issues at this level so that they did not need to be elevated to the most senior decision makers in the Department.

*It was a forum to get issues on the table and work them out before it went to the big guys. ... We used it to get rid of the things that didn’t really need to go up to that level. Anything that could be resolved by the programmers didn’t need to go forward.* (Flag Officer E)

Several participants described how the organization carries on by handling the details; sometimes because doing so has become the normal practice, sometimes to help decision
makers who are not equipped to grapple with these issues or are preoccupied with other demands.

 all of them; ... only wanted to be involved in the issues that were headed to the [Deputies Advisory Working Group] but all of the rest of the stuff they couldn’t care less about. In the five years that I was in the position I had a lot of authority, not directly, but indirectly because nobody wanted to deal with all that other stuff. (Flag Officer E)

Sometimes the organization is actually trying to keep the newcomers who are suddenly put in charge from interfering with what the staff considers their area of expertise and responsibility. Political Appointee B described how when he came to the Army headquarters and was trying to figure out what he was going to do the permanent staff offered their own suggestions;

 And when I got to the Army there was nobody in that office who thought I was of any value. “They said these are the things that you will take care of” ... Accounting, Information Systems, and ... cost analysis and financial planning. ... What they thought was important was budget. And they didn’t want me to have anything to do with it. (Political Appointee B)

Political Appointee F described a similar situation after coming to office. At the time the entire department was struggling with complying with what was then whole new set of laws requiring it to subject its financial statements to audit, a requirement which incidentally has yet to be satisfied 20 years later. Political Appointee F was comfortable focusing on financial operations and leaving the program/budget tasks to the Office of Budget.

 Fortunately the budget process worked fine and [the Principal Deputy ASN] was on top of that so we kind of split the pie and she did some of the financial management
stuff as well but we kind of by default I landed more with unmatched disbursements and stuff like that, which I wasn’t all that familiar with. (Political Appointee F)

Having decisions in effect made by subordinates or through enduring processes may be the only practical approach to running an enterprise as large and complicated as the Navy, or DoD. Political Appointee C puts this into perspective by noting that in DoD “small” is relative as “in this organization [small issues] can mean tens and maybe hundreds of millions of dollars.”

While we have seen that the “who” who makes the decisions may not be determinative of the outcomes, we should recognize that the institution has successfully cultivated an ethos which all of the participants seem to embrace. Like many others, Flag Officer E’s perspective was colored by his years in the Navy headquarters which inculcated in him a respect for the role of the “honest broker.” In this capacity he saw it was his responsibility to digest the information and make the decisions on everything but the most difficult or most contentious issues. “E” also described other examples where important stakeholders or how he characterized them “advocates,” did everything that they could to keep from revealing important facts in decision forums. This means that not everyone in the inner circle inside the Pentagon and Navy headquarters is always as committed to the tenets of integrity and serving as an honest broker making decisions on objectively knowable facts. This observation highlights one of the risks when subordinate staffs operate the process in ways to handle issues without involving the statutorily
empowered officials. If a bad decision “slips through” without leaders’ formal approval they are still going to be held accountable for the consequences.

1.5 Getting leadership’s attention is difficult

An important reason why making enduring enterprise change in the headquarters is such a challenge is the difficulty in getting and sustaining the attention of the most powerful players who need to ratify any meaningful process changes. As noted previously, some of the participants who would be best positioned to make these recommendations are institutionally handicapped as they serve as Deputies to more powerful flag officers or political appointees. The first step in implementing change is to brief important stakeholders and internal constituencies.

Political Appointee C served as both a political appointee and a member of the Senior Executive Service. In 2003 as a member of the Defense Science Board (DSB) Senior Steering Group (SSG), Political Appointee C made the case that the DoD PPBE system was broken and that the Department needed to “identify and describe the elements of a radically improved DoD Decision Process.” (DSB Briefing 2003) In the briefing he prepared for the DSB he quoted Secretary Rumsfeld who on September 10th 2001 expressed his extreme frustration with the whole decision making system.

With brutal consistency, it stifles free thought and crushes new ideas. It disrupts the defense of the United States and places the lives of men and women in uniform at risk ... And there are plenty of people who look at it and don’t know what’s wrong. I sat in meeting after meeting, and people said, ‘Well, that’s the way we do it. This is how it works.’ (Unger 2012, 257)
Following the DSB meeting Secretary Rumsfeld established a special study group led by Pete Aldridge the Under Secretary of Defense for Acquisition, Technology and Logistics. The Special Study Group on Joint Defense Capabilities had representatives from the Principal Staff Assistants (PSAs) in the Secretariat and each of the Services who worked together for six months to develop a new end-to-end process for making decisions that avoided the annual exercise in December and January where OSD ends up making all of the big decisions over a few days just before the deadline for submitting the Department’s final budget to OMB. According to the final report of the study:

*This process has resulted in an annual “train wreck” during program review. The train wreck occurs because joint needs are forced into the process after each Service has developed its integrated program. The resulting budget does not optimize capabilities at either the Department or the Service level. The effort to modify the program and the budget late in the process is labor intensive and often adversarial.*
(Joint Defense Capabilities Study Team 2004, 2–5)

Several participants raised the fact that nothing can seem to force the Department to make difficult decisions early. The Joint Defense Capability Study recommended a new process where:

*Senior leaders would focus on providing guidance and making decisions in the “front end” of the process. The Secretary of Defense would provide strategic direction for capabilities planning and be iteratively engaged in the entire process. Major issues currently addressed in the program review would be examined early in the process, when there is more time for deliberate analysis and greater solution space for the Secretary’s decision making.*
(Joint Defense Capabilities Study Team 2004, iv)

In September and October of 2003 Under Secretary Aldridge and the team lead briefed out to the Senior Level Review Group (SLRG), the Joint Chiefs and the Defense Science
Board. In October 2003 Secretary Rumsfeld issued instructions to implement key elements of the study’s recommendation so that the next POM would be developed using these new methods.

In the end the only element of the Joint Defense Capabilities Study that was successfully implemented was the annual production of a Strategic Planning Guidance (SPG) document which was to be fiscally constrained. While a marginal improvement on the previously unconstrained Defense Planning Guidance, the fact is that the SPG did not end up forcing decision makers across the Department to make difficult choices any earlier; the end of year “train wreck” that so frustrated Secretary Rumsfeld persists to this day. The fact that issuing a fiscally constrained SPG did not make much of an improvement in the overall process contributed to the subsequent failure to implement the other important changes that the study team recommended.

As one of the champions for what he characterized as a radical new approach to PPBE, I asked Political Appointee C why he thought the Aldridge Study didn’t deliver? He observed that he had participated in a number of initiatives during his career which produced valuable results but that in general these are rare events and they always seem to be handicapped at the outset because so much of what happens inside the Pentagon is dictated by deeply embedded behaviors that inevitably constrain the range of possible solutions.
I’ve seen many QDRs [Quadrennial Defense Review], the Bottom-Up Review, I sat through that I participated in and that was a very good exercise. ... It produced interesting and challenging program direction change. If you are going to use the existing mechanisms, the existing mechanisms will give you the same answers. ... First I don’t think that the political leadership understands the system enough to be able to do it. And second, they won’t have the stick-to-itiveness to impose that kind of significant change. (Political Appointee C)

Like the serial efforts to reorganize OPNAV, the Joint Defense Capability study focused on the outer manifestation of the problems without recognizing or even conceptualizing that the problems in DoD stem from something deeper. The proposed solution, offered only incremental changes which in practice were not widely embraced because important constituencies in OSD were never enthusiastic about the proposals. We will see next what Political Appointee A called the institution’s inherent conservatism operates as a sort of governor which makes change difficult.

1.6 The institution can successfully resist most changes

The people in DoD are great, “The System is a mess.” Trying to implement something is almost impossible. DoD needs a Chief Management Officer, someone appointed to a 7-year term appointment which crosses administrations and signs a performance contract with the President. (Political Appointee K)

For quite some time critics of the way that the Department of Defense is managed have suggested that its problems could be addressed by establishing a Chief Management Officer (CMO) position which would be responsible for ensuring that the department ran efficiently. Some proponents of this, like Political Appointee K, urged the creation of a technocratic role at the pinnacle of the DoD and each of its components (the Military Departments and Defense Agencies) who would be appointed for a term of service not
tied to the Administration. The Chairman of the Federal Reserve, the head of the
Government Accountability Office (GAO) and the Director of the FBI are all appointed
in this fashion so their terms don’t end when a new administration is inaugurated.

Instead of this more expansive approach the FY 2009 National Defense Authorization
Act directed that the Military Department Under Secretaries be designated as the Chief
Management Officers. Political Appointee C was in the process of inventing this
organizational structure and the associated operational concepts to implement it when I
interviewed him.

we just took the [OSD] system that everyone knew, Small Group, Large Group, and
imported it in so it wasn’t as hard. Now for someone like me who has lived this life [I
was] able to run the PPBS … process right away. If you have someone come in who
is not familiar with how the PPBS process works it will be a shambles … the person
would be learning as they go and you literally don’t have time, there’s too much
change in the system. (Political Appointee C)

Political appointee C is making two points here. First is that the Department of the
Navy’s decision making process is well understood and tightly controlled. But he is also
saying that the decision making process is so complicated that it can only be managed by
technocrats who are intimately knowledgeable about how it works and are also
simultaneously attuned to the impact of the constant changes that are made to it every
year. During our conversation I asked “C” to comment on why people inside the
Pentagon might say that the decision making processes are opaque. His response was that
they “were only opaque to people outside the room where decisions were made.” By
contrast Political Appointee B emphasized that;
I would guess that it is pretty opaque to the people who are in it. ... most of the political appointees have very short time horizons. But the military appointees have short time horizons too and most of them aren’t resource managers by trade and so by the time they figure out the game they are gone. And it is unusual that you have people who both understand the game and have a perspective on what you are trying to do. (Political Appointee B)

Political Appointee C left the government before fully implementing the CMO organization and processes and went to work for a Washington think tank. When asked by the media why he was leaving C replied “I think after four years, I'm turning into an angry old man. I’ll do something for a while and then come back.” Political Appointee C’s departure illustrates that delivering on the enterprise-level change that the legislation envisioned depends on successfully developing a new organizational and operational construct within an institution when almost nobody is enthusiastic about it. “C” had to develop new offices, and move career civilians inside his organization.

Historically the Navy has the demonstrated the ability to resist changes that it does not support; the 1949 Revolt of the Admirals\(^6\) being a prominent example. Ironically, part of this resilience in the face of change stems from the fact that while political appointees and even senior flag officers come and go, the institutional Navy has been conditioned to carry on. Today the institutional Navy experiences long stretches when the positions held by political appointees, the ultimate authorities according to statute, are vacant for

\(^6\) In response to Secretary of Defense Johnson’s cancellation of the USS United States, a conventionally powered large deck aircraft carrier, Secretary of the Navy Sullivan and several prominent admirals resigned.
### Figure 5. OPNAV Key Program/Budget Billets 1988 - 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Chief of Naval Operations</th>
<th>Vice Chief of Naval Operations</th>
<th>Deputy CNO, Integration of Capabilities and Resources (NB)</th>
<th>Director, Programming (NB)</th>
<th>Director, Planning and Assessments (NB1)</th>
<th>Director, Budget (NB2)</th>
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Figure 6. Navy Secretariat 1988 - 2012
months at a time, typically in the period at the end of one Presidential Administration and the beginning of the next.

Figure 5 and 6 show the respective leadership maps for the key Program/Budget billets in OPNAV and the Secretariat. Note that the political leadership turns over completely every time an administration comes into office. As shown in Figure 6 between 1992 and 1993, 2000 and 2001, and 2008 and 2009 many of the principal positions in the Navy Secretariat were vacant or filled by civilian deputies.

During the last twenty-five years there have been frequent vacancies in the Navy Secretariat during which time political positions are filled by temporarily by a deputy, who is not statutorily empowered. In 2009 the Assistant Secretary of the Navy (FM&C) was not confirmed until November. Echoing several comments by participants, Senior Executive C explained that it takes time for the new political appointees to understand what goes on during the program budget review. In the last twenty-five years the average appointee in the Navy Secretariat has served 34.6 months and according to Senior Executive C “they spend a lot of that time just getting up to speed.”

Another important characteristic of OPNAV is how flag officers cycle through the important positions as they climb the ranks. For example the current CNO served in the Operations Directorate of the Navy Budget Office as a one-star, as the Deputy Chief of Naval Operations for Integration of Capabilities and Resources (N8) as a three-star, and
as the Vice Chief as a four-star before his current appointment. This contrasts with the civilians who typically occupy a single position and then leave the government entirely.

Summary

The interviews show that inside the Military Departments the Service Chiefs wield remarkable power to shape the decision making environment. In the Navy this includes the ability to populate senior military positions with trusted associates who are responsive to the Chief’s agenda. While the participants describe many instances where the power of the Chief was used to implement plans and processes which did not produce the desired results, nobody inside the institution has the power necessary to check the CNO.

While the civilians are notionally in charge they do not possess the institutional durability of the flag officers or career civilians as their ranks turn over completely with every change in the White House. Even the most senior political appointees sometimes mistakenly attribute Title 10 authorities to the CNO which by statute are delegated to him by the incumbent Secretary. While it is possible to dissuade the Chief from making the most egregious errors, many times the leaders of the institution, represented by the career civilians who run the analytical and decision making processes, simply wait out the Chief and are usually able to convince his successor to reverse the most problematic initiatives. While the career civilians do have power stemming from their durability and insights, they are institutionally handicapped by their assignment as Deputies to flag officers and
political appointees. Despite all this however, the institution itself demonstrates a resilience which makes enduring change very difficult.

The staffs in OPNAV and the Secretariat which number more than a thousand service members, civilians and contractors are conducting detailed analyses of the proposed Navy program throughout the year. By the end of the process, decisions are made that fully consume all of the Budget Authority that is granted to the Navy by OSD and the Office of Management and Budget (OMB). The data shows that the collective decisions over the last twenty-five years have produced a remarkably consistent outcome; the future Navy that the budget can afford is both smaller and more expensive than planned. We will now turn to the analytical process and examine what information is delivered to decision makers.

2. The analytical processes that support decision making have changed over the last twenty-five years

As noted previously, most of the large staffs inside the Navy’s Pentagon headquarters are working directly or indirectly on some aspect of the PPBES process. Offices tend to focus on one aspect of the process. The separate planning, programming and budgeting offices each specialize on their phase while also paying attention to the products of their sister organizations from the antecedent phases. At any one time multiple phases will be underway. Execution, for example, goes on continuously. Even when the Congress does not manage to pass appropriations acts, the Navy continues to execute funds from prior year appropriations.
Before 2003 the programming and budgeting phases occurred sequentially with the POM submission to OSD coming in May and the Budget Estimates Submission at the end of the summer. At the turn of the century, during Secretary Rumsfeld’s term, the programming and budgeting processes were merged so that both products were submitted simultaneously in July. The participants had mixed views of whether the merged process was better or worse. Generally the Political Appointees and Flag Officers viewed the change less critically than did the Senior Executives.

The different perceptions of the three classes of actor is understandable as Political Appointees and Flag Officers are somewhat disconnected from the day-to-day activities of producing the POM and budget. According to Senior Executive E the flag officers and political appointees “above our pay grade” do not understand what has to happen between when decisions are finally made and the deliverables that must be produced for OMB and the Congress are due. The Senior Executives are more engaged with the working-level staff who directly experience what is frequently characterized as the process “churn” as the formerly sequential process gave way to a concurrent one.

Throughout the twenty-five year period under review the Navy has operated a decentralized budget formulation process where the BSOs begin constructing their budget after the POM was complete. For the Navy the move to a concurrent program/budget review was very disruptive. Additionally, as this change occurred almost coincident with
the intensification of everything after the September 11th attack, the staffs working programs and budgets found themselves under constant intense pressure.

2.1 The focus is on the near term

The PPBES process has a seven-year window expressed in the Future Years Defense Plan (FYDP); basically a report that arrays defense spending by Program Element for the prior fiscal year just completed, the current fiscal year and the next five budget years. The FYDP which is submitted to the Congress as a classified annex is the only artifact of the POM process that leaves the Pentagon. A very small group of House and Senate staffers pay attention to the FYDP. Instead, the focus of Congressional staffers once the President’s Budget is submitted is on the single budget year which will be financed in the next fiscal year’s Defense Appropriation and Authorization Acts.

The focus on the near-term according to Political Appointee J inevitably leads to sub-optimal solutions as in his words “The best thing to do in the immediate term is invariably detrimental to the system in the long-term.” But as many participants observed the Congress drives much of what goes on in the process. As Political Appointee H summed up: “the whole process operates in this political fishbowl so that important fiscal choices can’t be made early because of the politics.”

This focus on the single upcoming fiscal year is particularly problematic for the Navy as building the future fleet require many years of sustained investment, both buying new ships and weapon systems as well as adequately maintaining the existing force. Even
inside the Pentagon the FYDP is a long-range planning document that nonetheless does not have a long enough window to include projections for the future costs of building, operating and sustaining Navy ships, many of which take more than five years to build and deploy for fleet operations.

2.2 Analytical processes are invented to handle specific problems

The short term mentality additionally manifests itself in how the analytical process deals with urgent queries. Many participants described how they were under constant, and in recent years increasing pressure to respond to requests for information from the Office of the Secretary of Defense (OSD). While these inquiries used to focus on the POM, or the budget separately, now with the concurrent processes, answering OSD requires cross-organizational coordination inside the Navy headquarters. Also, as the time frames have been compressed by the concurrent reviews, the answers to these queries must be produced and coordinated faster than ever. Organizations inside the Pentagon respond to these demands by developing ad hoc analytical capabilities which for a variety of reasons are rarely sustained.

Political Appointee B was a senior financial manager inside the Army headquarters during a period of extreme fiscal stress for that service as it was struggling to achieve a balance between supporting the ongoing wars in Afghanistan and Iraq while simultaneously sustaining the rest of the Army as he characterized it “a going concern.” It is not widely understood that for the last twenty-five years the defense

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budget has been designed to support the Military Departments and Defense Agencies at what is in effect their peacetime levels of operation. When the military is called to conduct military operations, the Department requests extra money from Congress in the form of Supplemental Appropriations.

Developing a Supplemental Appropriations request is a complicated exercise of precisely defining the extra, or incremental, costs of unplanned military operations. This phenomenon carried from the first Gulf War when much of the funding for conducting that war came from direct payments to the United States from the Gulf States made into the Defense Cooperation Account. One of the challenges of segregating the wartime defense budget this way is that it is extremely difficult to say exactly what costs are attributable to the war and preparing for it, against the day-to-day costs of running the Services. Take training for example. It is necessary to prepare military forces to deploy into a combat zone. How much of that training is legitimately charged to the war as opposed to the “Base” funding required to sustain military capability?

By 2006 after more than five years of continuous military operations, the Army was starting to see that the true cost of running the Service was greater than the sum of Supplementals plus regular appropriations. The Army Chief of Staff was so concerned about this that he reported to Secretary Rumsfeld that he could not produce a Budget at the then funding levels allocated in the Base budget plus supplemental (Speigel 2006).
This episode turned into a significant crisis during Political Appointee C’s term. As the Chief Financial Officer of the Army, “C” realized that he could not answer the basic questions “How much does it cost to sustain the Army as a going concern?” or “What’s the base requirement for the Army?” This led to the “Cost of the Army” exercise which was an ad hoc project run out of the “cost shop” in the Army Budget Office. From the outset this effort was designed to substantiate a large plus-up to the Army’s base budget. Flag Officer E, then in OSD PA&E conducted an independent review of the Army’s answer and ended up validating much of what the Army Staff asserted.

Once the Army had the answer it was seeking, the practice of defining the cost of sustaining the Army was not institutionalized. The effort which according to Senior Executive H, an OSD SES who served in the Army Budget Office during this time, took two to three months, has never been repeated. Though the methods used by the Army were validated by cost analysts in OSD PA&E, the answer that the Army staff created for this particular event is unlikely to be reproducible.

Other interviewees pointed to the prevalence of such one-time efforts as being a systematic weakness. Efforts like this are very difficult and because they are often prompted by emergent needs, and so have to be completed quickly. In the Army’s case the delay in submitting a POM and budget was holding up the entire DoD Program/Budget Review. Often by the time the answer is generated the enterprise has moved on to other priorities so that any thought of institutionalizing the techniques used
is abandoned as other priorities quickly emerge and capture leadership’s attention. The inability to sustain the good efforts of these ad hoc analyses leads some participants to conclude that the system is hard-wired in ways that doom these sorts of innovations.

The phenomenon that the “Cost of the Army” exercise illustrates is not new. Senior Executive F described how the Navy dealt with the hard fiscal constraint right after the end of the first Gulf War when the Department realized that it had to undergo a significant restructure when it was apparent that the Cold War was essentially over. To deal with this the CNO at the time, Frank Kelso, tasked Vice Admiral (VADM) William Owens (Deputy Chief of Naval Operations, Integration of Capabilities and Resources) to develop a forum that brought all the four-stars into the decision making process to hit the new, lower Topline for the Navy.

*Owens and I became just like this (crosses fingers), and we lived together. We built a brief that lasted for eight hours, we briefed every four-star in the Navy at that session on how we were going to reshape the Navy. ... And Owens was the ultimate facilitator ... he was magnificent at it. We took down the number of submarines from 40 to 32. We had all those options in there. And all the flags were screaming “this is too hard, it’s all a black box!” And I remember one afternoon Bill Owens brought them all into the N81 conference room, put the spreadsheet up on the wall and asked “what’s your idea?” (Senior Executive F)*

Senior Executive F’s point here is that VADM Owens knew that the Navy’s uniformed leadership at the time didn’t have a feasible alternative and that this process, painful as it was, was the only way they could grapple with changes of the magnitude they were facing. The Investment Balance Review (IBR) institutionalized the post-Cold War programmatic reductions to the Navy that were sustained through the 1990s. From this
perspective the IBR exercise demonstrates that the Navy can respond constructively to a fiscal crisis. The necessary ingredient in this instance was a hard limit that was imposed on the Navy and the rest of the DoD by the White House which was determined to deliver the “Peace Dividend” itself rather than letting the Congress make and impose choices on the military.

Because the IBR process looked at the whole Navy against the lens of a tight fiscal constraint that was imposed by the White House, it generated recommendations about things like the submarine force and number of aircraft carriers which would have been unimaginable in the normal process. Like the “Cost of the Army” exercise already described, the IBR was designed to address a single big problem. Even though the IBR methodology could have been expanded on, and used continuously to help keep making big Navy decisions, it was not institutionalized. It should be noted that as it was happening, the programmers in N80 and budget staff in N82 were skeptical that N81 was capable of running this sort of exercise. This illustrates some of the inherent tension inside the Navy headquarters between key players. While the IBR process was in progress and especially after it delivered the answer, other powerful players reasserted their traditional roles in the Program/Budget process.

Additionally, as Senior Executive F noted, the success of the IBR had a lot to do with the personal talents of VADM Owens as a facilitator. One of the enduring features of the Navy is that the military rotate to their next assignment in as little as eighteen months,
and almost always after no more than three years. This leadership churn is another reason why sustaining innovations or enterprise change is so difficult, as the institutional energy behind an ad hoc process often evaporates when the champion leaves.

2.3 Increasingly, the process interferes with “good” analysis

More than half of the Senior Executives made reference to the huge demands that the PPBES process has on the staff; how the iterative churning of the process to “feed the beast” consumes so much time and effort, sometimes so there’s no time left for actual analysis. To many participants the quality of the program/budget review seems to have gotten worse over the last two decades. For the budget analysts inside the Navy Comptroller the justification materials they produce constitute a story that needs to withstands the scrutiny of analysts conducting the next level of review, either in OSD/OMB or the Congress. In this context good analysis produces and delivers a budget without technical mistakes that makes it through subsequent reviews without changes prompted by mistakes or not getting all the information needed to identify problems before they can be caught by someone else. Like anything, higher quality analysis takes time and attention to detail which some participants claim is one of the primary victims of the compressed review process. In some respects the two previous examples, the 2006 Cost of the Army effort and the 1994 Investment Balance Review illustrate this phenomenon.
The IBR was an “all hands on deck” exercise where all of the senior stakeholders in OPNAV participated and achieved a consensus. While rudimentary, Senior Executive F’s complicated spreadsheet sought to present “apples to apples” cost estimates for different capabilities representing the four naval warfare communities (including the Marine Corps). The IBR created a “trade space” for decision makers that allowed them to optimally allocate what were then increasingly scarce resources to generate required capabilities. In comparison, the Cost of the Army exercise was explicitly designed to justify additional funds to fill what the Army considered a significant resource shortfall. Political Appointee C speaks for the Army leadership in his assessment that the project was successful because the Army received $7 billion more in FY 2007, about half of what it thought was the full requirement, but enough to allow the Service to submit a POM and budget. Neither of the two efforts was institutionalized.

While many participants acknowledged that the program/budget review process has never been perfect, several volunteered that they thought it has gotten worse in recent years. Senior Executive C made several comments about how the quality of the budget analysis process has changed dramatically in the last decade. By extending the POM due date from May to July, and moving up the budget due date from September to July, the Navy has a lot less time to conduct their budget review. The fact is that from the Navy’s perspective less scrutiny by OSD which produces fewer changes to the budget is not a bad thing.
if ... they’re not looking at the budget too hard I’m not going to complain. But you look at it, you step back objectively and things have changed. I remember how those reviews used to be in the old days and you know they would be a lot more rigorous. (Senior Executive C)

Political Appointee G described a process that is driven by increasingly short timelines and hard deadlines that the Navy Secretary has committed to meeting. According to “G” the quality of the information available to decision makers has not improved with the changes in the process, and in fact the product that goes out the door; the programs described in the annual President’s Budget submission are usually “broken.” Political Appointee G explained that they are broken for different reasons than they were years ago.

In the past, when the program/budget process was sequential, the programmers developed a POM and then turned it over to the budget side for a review aimed at making necessary changes to ensure that programs were executable. Under that scenario the budget was broken because often it could not accomplish everything that the POM directed, but what it did fund was executable. Now the program and the budget are put together simultaneously so that there is no time to scrub the program for executability. Now the resulting product is not only broken because it cannot achieve the program objectives, it also broken because individual program are not executable as presented.

2.4 Difficult decisions are never made early

An enduring characteristic of the program/budget process is the reluctance of the principal actors to make decisions early. Seven of the interview participants cited this
phenomenon as a problem. They also acknowledged that they thought it was just the way business is done in Washington. Political Appointee G spoke for many of the participants when describing the then looming threat of sequestration and deep cuts to Defense programs.

*There is a general awareness that the defense budget is facing a monumental squeeze but nobody is willing to make a hard choice early on. This is the standard operating procedure. In my long experience I have never seen anyone willing to make a hard choice early.* (Political Appointee G)

The risk of making an early decision is that if it leaks to OSD while they are examining the POM and budget, or worse yet, to Congress while they are making their final decisions on appropriations, either one might pre-emptively act to scoop up potential savings. If instead the Navy can scrub the program during their review then the Navy can use the saved resources to finance its own priorities.

Delaying decisions leads to what Secretary Rumsfeld characterized as the end of year “train wreck.” Near the end of that process, usually after the OMB Passback, OSD will issue a “bogey,” a Pentagon term for a targeted amount of savings. The MILDEPS scramble to define ways to fit under the new Topline. Senior Executive E explained that at that point the Navy has no choice but to come up with savings initiatives to meet the new Topline:

*[At that point] you don’t have the time to vet the issue well enough to know if it’s really something you can achieve and then you get saddled with it, and then you have to work it, and as you work it you go “wow, I don’t really know how we’re going to get this money out.” And the process of going back to the boss and saying “that efficiency didn’t really work” keeps people from wanting to go through that*
process, because you’re going to get beat up all along the way, and in the end you may be told “OK, I understand, you get relief on that but I still need $10 million, or I still need $20 million so find something else to take its place.” (Senior Executive E)

Last minute changes to fit within the new Topline foster an environment where a lot of changes are proposed to “see what sticks.” This fuels the pressure within the system as every proposed change generates a tremendous workload to produce, review and issue it, matched by a similar workload on the recipient’s end to review the proposal and coordinate a response.

2.5 Analysts resort to “Salami Slicing”

Big changes like the ones that came in the wake of the sudden end of the Cold War are exceedingly rare. Instead the program/budget processes emphasize a collection of small changes to programs that in turn are used to finance new initiatives or incremental changes to other more favored programs.

If you think about it the FYDP [Future Years Defense Program] describes the next year’s POM, and as you move to the next year and you start to build your POM you look at all the guidance that has come along, you look at the world conditions, but you’ve laid in programs, so now the question becomes what do I take out or put in? If the decision maker says “why haven’t you given me a decision?” You say “hey boss, you bought nine ships, you want to buy 12 I have to cut some airplanes, or I cut people or I cut something else. You want to do that we’ll do it.” (Senior Executive D)

Ironically the inability to make decisions early coupled with the compression of the time available to conduct program/budget reviews generates two complementary behaviors. The first is a tendency to avoid making big, so-called “vertical” cuts to cancel an important program. Canceling a weapon system is the kind of adjustment which is
guaranteed to get the attention of Congressional patrons. Program cancelations are rare events which make headlines and generate Congressional hearing. As vertical cuts are so rare, the program/budget analysts resort to the second behavior – making a large number of “tweaks” and minor adjustments to the program and budget, a process euphemistically called “salami slicing.” Both behaviors avoid the risk that could come by recommending sweeping and potentially risky decisions that would upset the status quo.

![Source: Program-Budget Information System (PBIS)](source)

**Figure 7. Cumulative Frequency of Issues in the DON Program/ Budget Database**

Every issue that adds or takes money from a Navy program is lodged in PBIS, the Navy’s enterprise-level program/budget database. Figure 7 shows that in the last 25 years analysts in the Navy headquarters have entered more than 71,000 separate issues. More
than half of them have been for between $5 million and $10 million cumulatively across the Future Years Defense Program. For a little perspective the Navy FYDP encompasses programs totaling more than a trillion dollars. A $5 million adjustment to a program constitutes a .0005% change to the Navy FYDP. Cumulatively over the last twenty-five years the issues lodged by program/budget analysts have produced a net change to the budget of 3.9%, with many years at or below 1%. This unexpected outcome is explained by the fact that the largest changes to the program are not made by analysts in the Navy headquarters or in OSD but are in effect laid in when the White House and OMB set fiscal guidance for the Department and the Services.

As each issue, regardless of its size, commands the attention of program/budget analysts and successive layers of review as it is adjudicated through the process, the tendency to make a large number of small changes consumes a significant portion of the capacity inside the Navy headquarters. Making so many small adjustments (increases and decreases) is a pattern of behavior inside the Navy headquarters which some participants had serious concerns about. Flag Office B noted that when the DoD experimented with a biennial review process where a full-blown review of the program was conducted every other year “we found that we made more database changes in the ‘off’ year then we did in the full up review.” The tendency of the staff in the program/budget organizations to measure their performance in terms of the number of issues they produce and the total value of the adjustments or “Marks” that are sustained generates a lot of work across the Navy enterprise, the value of which several participants were skeptical.
2.6 The fiscal and strategic environment shape the boundaries of the choices

The final observation has to do with the effect that the fiscal and security environment has on the institution, especially in terms of making decisions about the future of the Navy. Several participants noted that the last decade which saw steady growth in the Navy budget introduced many problems in running the Department. During this period total manpower costs have declined as the Navy went from a total of 382 thousand Active Duty Officers and Enlisted personnel in FY 2003, to 321 thousand in FY 2013. During this period Operation and Maintenance spending spiked in 2003 and slowly increased until 2011. Finally, Investment spending (the combination of procurement and research & development) grew steadily until FY 2010.

Flag Officer A was adamant that during the last twenty-five years the overall fiscal environment has had a tremendous impact on the way that decision making process works and the behavior of the enterprise in terms of financial discipline. During the lean years, analysis that supported decision making was very thorough. After the Defense budget started rising again around the same time that the Congress was dealing with a budget surplus for the first time in a generation, fiscal discipline eroded and was replaced by a prolonged period of abundance which for many in the Service has been in effect their whole careers.

When I first got to [the Operations Directorate in the Navy Budget Office] we got flying [hours] and steaming [days] by reprogramming and we kind of had to make sure all the shelves were checked for crumbs. That was hard, but that was healthy. We used every penny. (Flag Officer A)
An abundance of funding has not helped the Navy make better decisions about its future, in fact it has engendered what one participant described as a:

“culture of deprivation,” that is, the sense that whatever we have right now is not enough. An environment of bureaucratic consumption in which effectiveness is equated with having zero in the bank account at the end of the fiscal year (Flag Officer H)

Three quarters of interview participants and the all of the participants in the LMI Executive Forum panel cited Congress as a significant source of the problem, particularly when they make budget changes that run counter to the results of the long, internal review processes inside the Navy. Flag Officer A describes a recent episode that vividly illustrates this phenomenon.

Last year we said “you guys and OMB said we have to get off this OCO thing [Wartime Supplemental Appropriations] so we just want everybody to know we have increased our O&M budget by blank amount.” it was like several hundred million dollars, and this is to get off of OCO ... so we need your (Congress’) support. They needed to make a reduction so they took our request (whistles signifying they took it) base budget out and put OCO in. So put another way “I’m addicted right?” So I say “I got to get off this Heroin so I’m on Methadone, and the say ‘I can’t afford the Methadone here’s some more Heroin.’” (Flag Officer A)

Summary

The Program/Budget processes conducted inside the Navy headquarters are a massive undertaking that employees up to half of the Navy personnel in the Pentagon, and according to several key participants interviewed consumes up to 75 percent of their time. They begin with the development of unconstrained requirements in the planning phase which are successively whittled down in subsequent stages of the process. As many
participants noted, nobody in the process wants to make a decision early as doing so risks giving up something prematurely. The result of this is what Secretary Rumsfeld characterized as the annual budget “train wreck” at the end of the calendar year when there is no time left to avoid making final decisions. The result invariably is an allocation of resources which is not entirely satisfactory to anyone and further, is subject to myriad changes during execution. Changes to the process implemented by Secretary Rumsfeld and his Principal Staff Assistants have had the effect of compressing the time available to conduct the program/budget review and about a third of the interviewees observed that the resulting product is not as good as it used to be. In the Navy in particular rather than reengineer the whole process to do programming and budgeting simultaneously, they have instead attempted to do the same sequential process in less time. The intensity of work has not diminished but several observers noted that the product was not as well constructed as it was in the past.
The purpose of this study was to talk to the senior leaders who make decisions about the future of the U.S. Navy and learn from them how they operate within the department’s program/budget decision making processes. The expectation was that through this process I would better understand why a generation of Navy leaders has made choices that have consistently produced a smaller more expensive Navy. The research data which includes the interviews of Navy and Defense leaders, the notes from the LMI Executive Forum, a survey of Congressional testimony by the Navy Secretaries and CNOs since 1989, and program/budget data from each budget review conducted in the last twenty-five years produced findings for the two primary research questions:

1. Is the outcome of choices made over the last twenty-five years – a smaller more expensive Navy – affected in any measurable way by how the officials in the Navy headquarters engage in the decision making processes and by how their formal roles constrain or enable their participation in making decisions about the future Navy?

2. Do the analytical processes that support the Planning, Programming, Budgeting, and Execution System (PPBES) deliver the necessary information for Navy Decision makers to make optimal resource allocation choices?
According to Wilson the job of the government executives (in the case of the Navy, members of the three classes of leadership) is to “maintain the organization” by obtaining capital (appropriations), labor and political support (Wilson 1991, 181). When considered from this vantage point, it turns out that the interviews revealed the actors in the institution behaved in ways that were normal for a large public bureaucracy. This finding prompted me to consider a more radical notion; maybe the institution itself had a behavior which influenced the ways that decisions were made. The Navy headquarters and the people and processes within which decisions are made are immensely complicated. Many actors with competing notions of what the future Navy should look like interact with decision making processes in ways consistent with other large bureaucracies. They negotiate, argue, and collaborate with other actors to gain acceptance and support for their recommended courses of action. But what is clear is that no actor or group of actors consciously aims at the collective outcome of these deliberations – a Navy that is smaller and more expensive tomorrow than it is today. This outcome which is consistent over time calls for an examination of the situation in another way, through another frame.

The findings, presented in the previous chapter, revealed that despite the fact that certain individuals inside the Navy headquarters possess tremendous institutional power, especially the CNO, to shape decision making, the actors in the process are less important than the process itself and the framework in which choices are offered and decisions are made. Over the last twenty-five years the impact of any individual has been short-lived,
and despite their efforts, enduring qualities of the institution as a complex adaptive system that is animated by an application of a simple repertoire of enduring behaviors, are more influential than any specific individual.

During the last twenty-five years the program/budget processes used in the Navy headquarters have constantly changed. Changes in the way the process works flow from formal guidance by the Secretary of Defense and his staff, changes to the fiscal and strategic environment or through internal Navy-driven initiatives to shape decisions so that they are more congruent with the incumbent CNO’s vision. For at least the last twenty-five years, none of the changes have delivered decisions which produce a future Navy that is affordable and strategically relevant. The cost of Navy ships, submarines, aircraft, weapon system and personnel are growing at such a rapid rate that the service cannot afford to buy enough new systems to guarantee that the future force will be as capable as the current one. There is a risk that at the current trajectory of increasing costs and decreasing numbers, the Congress’ willingness to sustain the annual investment in a sizable Navy may diminish. While the trajectory of the so-called “Plans/Reality Mismatch” (F. Spinney 1985) has been apparent for over thirty years, many Navy leaders think that as Flag Officer K characterized it “it all boils down to making a better case that we need more money.”

During the interviews and panel discussion it seemed to me that all the participants were passionate about the Navy as an institution and earnest in their desire to make decisions
that ensured the Navy would continue to exist and flourish in the future. In my interviews I encountered what I took as a sense of bewilderment in many participants that the process worked out the way it did. These senior officials seemed troubled by what they perceived as a failure of the processes to make sound decisions. When I revealed to some of these participants the data in Figure 8 and 9 (below) they were not surprised by the unmistakable and persistent trends they report, yet none had seen the data presented this way before.

**Interpretation of Findings**

Figure 8 shows the long-term trend in terms of the average annual cost of US Navy combatant\(^7\) ships after adjusting for the effect of inflation. For this analysis the total number of combatant ships is divided by the total Navy Budget Authority. This calculation is based on the fact that fundamentally, the Navy spends money to buy, operate, and sustain combatant ships and the weapon systems they carry as a means to conduct naval operations in support of the National Military Strategy. The weapon systems on combatant ships include radars, fire control systems, missiles, torpedoes and aircraft. This measure also accounts for the cost of sustaining the Navy’s shore establishment including all of the Navy bases and the civilian and contractor staffs that provide management and support services.

\(^7\) Combatants include Aircraft Carriers, Strategic and Attack Submarines, Cruisers, Destroyers, Frigates, Littoral Combat Ships, and Amphibious Assault Ships.
Figure 8. Average Annual Cost per Combatant Ship FY 1984 - FY 2013
(Trendlines for FY 1984 - FY 1996, and FY 1997 - FY 2013)

Applying a similar method, figure 9 shows the average cost for each Sailor. Here the total
Navy Budget Authority is divided by the number of active duty service members
(officers plus enlisted). This calculation shows a similar though less pronounced trend.
The Sailors who operate Navy platforms are probably more accurately categorized as an
input to rather than an output of naval power. Figure 10 shows the profile for the active
duty military personnel budgets between FY 1984 and FY 2013.
Throughout the last twenty-five years the Navy has invested heavily in labor saving technologies that reduce the number of Sailors required to operate a ship. These efforts have intensified since FY 2001 as the average personnel costs (military pay and benefits plus retirement accruals) have increased more than 48% in inflation adjusted terms. A significant portion of that increase came with the implementation of TRICARE for Life, a

Source: Department of the Navy Highlights Books, FY 1986 through FY 2015 and OMB Figure 9. Average Annual Cost per Active Duty Sailor (Officer & Enlisted) FY 1984 - FY 2013

![United States Navy Active Duty Work Years FY 1984 - FY 2013](image)

Source: Department of the Navy Highlights Books, FY 1986 through FY 2015
Figure 10. U.S. Navy Active Duty Work Years (FY 1984 - FY 2013)

The information in Figure 8 supports one of the important observations in the findings; the fiscal and strategic environment appears to shape the choices that Navy leaders make. Between the end of the Cold War in 1989 and 1996 the average annual cost per combatant ship actually decreased from $462 million to $439 million, a decrease of
5 percent. The cost per ship decreased at a rate much slower than budget authority which during that span dropped 35 percent. Between FY 1997 and FY 2010 the average annual cost for each combatant ship has grown 96.4 percent to more than $871 million per year per combatant ship. During this period total budget authority rose 46 percent. Something happened to drive average costs up beginning in FY 1996.

The mix of combatant ships in the fleet does not explain the almost doubling of the total average cost of each combatant ship. The most significant change in the Navy force structure since FY 1996 was the retirement of 24 nuclear-powered attack submarines (SSN) and two SSBNs. Since FY 1996 the Navy also retired 32 surface combatants (Cruisers, Destroyers and Frigates). Finally, in FY 1996 the fleet added one nuclear-powered aircraft carrier and since then it has retired two.

The data presented in Chapter 1, Figure 4 illustrates what Political Appointee E theorized was the culprit; “The Navy wants to be at the vanguard of technology but is struggling with doing so because today technology is so perishable” Ships and their associated weapon systems (which include aircraft and missiles, and a panoply of C^4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance) technologies) are increasingly expensive. Since FY 1996 the Navy has spent proportionally more on investment (procurement plus research and development) than on Operation & Maintenance (O&M) or Military Pay – all while buying fewer combatant ships. As a proportion of the total FY 2010 budget (the recent peak) the Navy
spent nearly as much of its annual budget adjusted for inflation on the investment accounts as it did at the peak of the Reagan defense buildup in 1984. The data shows that a better explanation for this is the “Spend Everything” behavior which is an ingrained pattern throughout much of the Department of Defense specifically and the Federal government in general.

**Complex Adaptive Systems and the “Spend Everything” Rule**

Ant colonies are endlessly fascinating. Using just instinctive patterns of behavior they are able to create remarkable structures to overcome obstacles between their nest and sources of food. It is easy to imagine that the ants are following some plan or working constructively to build the nests, roads and bridges that enable the colony to gather resources. We think that the colony is somehow working at the behest of the queen. Complexity theorists use the ant colony as a model to help describe emergent behavior in Complex Adaptive Systems. Scientists know that the queen does not run the colony (Johnson 2001, 31; Holland 1999, 81–82). Like every other ant in the nest, the Queen is carrying out a defined function which is really quite simple. The complex structures that the ants create emerge from their collective and instinctive adherence to simple rules; search for food or trails to food, leave trails of their own, follow the trail back to the nest to bring back food, repeat. Throughout our world simple rules generate complex behavior and unexpected outcomes because of the endless patterns of interaction among the entities in a complex system whether in ant colonies or humans in organizations which untrained observers mistake for consciousness or intention.
Every few months as the Director for Financial Management Operations at the Navy Installations Command (CNIC), I get to brief the latest cadre of Installation Commanding Officers (ICOs) on financial management and audit readiness. Each ICO is in charge of one of the 70 Navy bases worldwide. Being a commander, of either a ship at sea or an installation ashore is a necessary stepping stone for further promotion. Newly selected base commanders come to Washington for a two-week training course at CNIC headquarters. During my session with them I brief them on my portfolio and explain everything that the command is doing to support the Navy’s efforts to finally be able to produce and audit financial statements, a requirement first mandated twenty years ago in the Government Management Reform Act of 1994 (P.L. 103-356).

To become ready for audit the entire Navy enterprise must begin conducting business: i.e., buying things, paying people and accounting for assets in a highly disciplined way so that every transaction is documented and done according to all the applicable laws, regulations, and policies. Because the Navy is not auditable today, it is necessary to do things differently from now on. Inevitably this means that conducting business is going to be more complicated and rule-bound. Recently during the Q&A following my briefing one of the new commanders asked “how do you expect me to do all this extra stuff and still be able to ‘push’ all the money out the door by the end of the fiscal year?”
This story illustrates that when it comes to a key daily activity the Department of the Navy has some qualities of a complex adaptive system because there is a deeply ingrained pattern that underlies everything that happens: “Spend Everything.”

To understand how the Navy operates like a Complex Adaptive System it is necessary to develop a model/thought experiment. In this model there are many actors who begin the experiment with a fixed amount of money which they have to spend in the twelve “months” which constitute a turn (i.e. a fiscal year). The agents in this model are to spend their money buying things without ever running out of money during a “month”. The agents don’t get all of the money in the first “month”; instead they get a quarter of the total at the beginning and another quarter after every three “months”. The only other rule is that at the end of the turn, the agent loses whatever money is left over. On the next turn the agent begins with the same amount they received in the previous turn minus the amount they didn’t spend that turn. If an agent starts a turn with no money it is out of the game.

The rules in this simple agent-based model are a little more complicated than the termites in the MIT model introduced in Chapter 3: Literature. Agents in the real world would quickly learn that to survive they needed to spend all the money before the end of the turn to avoid the penalty, otherwise before long all the agents would die off. Agent-based models are used by complexity theorists to test for the emergent behavior. This model actually illustrates the ingrained behaviors that apply in the Navy and much of the
Federal government where program managers must obligate all of the annual budget authority they are granted every year in annual appropriations\(^8\) before September 30\(^{th}\), the end of the fiscal year. Figure 11 below illustrates the exact phenomenon where agents learn that they have to spend all the money and do so.

Source: CNIC Command Financial Management System (CFMS)

Figure 11. Total CNIC Contract Obligations by Day (FY 2013)

\(^8\) Annual appropriations like Operation and Maintenance, Navy (OMN) and Military Personnel, Navy (MPN) have a single year of availability so they must obligate completely by the end of the fiscal year. Multi-year appropriations like Shipbuilding and Conversion, Navy (SCN) and Research, Development, Test and Evaluation, Navy (RDTEN) have two or more years to obligate.
Figure 11 shows the cumulative contract obligations by day posted by CNIC during FY 2013. Contract obligations at CNIC include purchases of everything from copying machines to consulting services, vehicle lease agreements and annual contracts to provide grounds-keeping services on Navy installations. In FY 2013 CNIC spent $2.4 billion, or 38.5 percent of its annual budget on contracts. In September of 2013, CNIC obligated fully 37.7 percent of its total budget for contract buys. For CNIC this pattern is consistent across every fiscal year and according to a study of year-end contract spending across the federal government is a common phenomenon across the federal government (Liebman and Mahoney 2010).

More than anything else, the year-end rush to obligate contract funding illustrates the pervasive nature of the “Spend Everything” rule. The “agents” in the Navy – program managers and commanders across the enterprise – have learned that the most important metric is making sure that they don’t leave any money on the table when the “turn” ends on 30 September.

In a second round of interviews I introduced participants to the notion of the Navy enterprise as a Complex Adaptive System whose emergent behavior yields the diminishing returns revealed in the phenomenon of the smaller, more expensive Navy. While these participants readily acknowledged the pervasive nature of the “Spend Everything” phenomenon and the behaviors it produces, few had thought much about
how much it contributes to the inability to effectively plan for a sizable and affordable future Navy.

Political Appointee H raised an interesting corollary to the “Spend Everything” phenomenon. “H” pointed out that he thought a lot of the dysfunction inside the Pentagon could be attributed to the urgency to spend money now because of what he called the “infinite discount rate.”

“I don’t know that flag officers would understand or appreciate these because they do come in and out. They are pros in the business but they are not pros in the business with something like the tenacity someone like me has. So the thing that I’ve observed, year after year, after year, decision after decision after decision is the infinite discount rate. So a dollar today is infinitely more valuable than a dollar in the out years so that just skews all kinds of decisions. (Political Appointee H)

Another key insight here is that the non-technocrat, the senior flag officer or political appointee, will never pick up on this underlying tendency. It is only visible once someone immerses himself in the business for years, if not decades and sees it play out again and again, Political Appointee H has.

“Spend everything” depends on how much money the Navy gets from Congress

The most important constraint on the Navy ends up being how much money it gets to spend every year. The Navy does not itself determine how much Budget Authority it requires when it presents its portion of the President’s Budget submission to the Congress. More properly stated, the Navy’s budget submission explains what it proposes to do with the resources that the Administration has allocated to the Navy as part of the National Security budget function (050). While the Navy may want more money, often
much more, it is constrained by what the Administration gives it and then further by any changes the Congress makes.

When the Administration and Congress both agree to provide more budget authority to the Navy, the decision making processes generally allocate more funding to all programs. Conversely, when the Congress decides to restrict or reduce Navy spending the subsequent program/budget decisions reflect the tighter fiscal discipline, and program cuts are more the rule than program increases.

While the actors matter, the process itself defines the range of options available to decision makers much more than most participants realize. The types of choices that are offered to decision makers are demonstrably different when the Department of Defense is operating in a loose (i.e. “easy money”) fiscal environment compared to when budgets are tight or declining. The last twenty-five years provide an excellent case study for this phenomenon, as the first half was a period of constrained budgets and the second half was a period of abundance.

During the immediate post-Cold War era the Navy budgets quickly fell by about a third and were sustained at that level for much of the 1990s. During this period the Navy leaders made long-term and strategic decisions about the future Navy under the auspices of VADM Owens’ Investment Balance Review (IBR) process. As the post-Cold War budget contraction lasted nearly eight years, the Navy’s foresight in making strategic
decisions was rewarded as the period represents an era of decisive leadership that numerous participants recalled favorably.

By contrast the years after 1998 and especially after the 9/11 attacks were a period of easy money for the Navy. In FY 1998 the Congress experienced something new, Federal budget surpluses and for the first time in seven years the Navy’s budget increased in inflation adjusted terms. For the next couple of years Congress was supportive of new expensive initiatives like TRICARE for Life. Flag Officer I who was the Department’s “Point Man” for this initiative observed:

*I can say that we got a whole lot more than we asked for. We made the mistake of presenting it in an election year.* (Flag Officer I)

Following 9/11 Congress provided the Navy supplemental appropriations every year between FY 2002 and FY 2013 to cover the extra incremental costs of fighting the wars in Afghanistan and Iraq as well as frequent Humanitarian Assistance and Disaster Relief (HADR) operations such as Hurricane Katrina, the 2004 Indonesian tsunami and the 2011 Japanese earthquake and tsunami. The Congress has long provided additional Supplemental funding for unexpected contingency operations which today fall under the rubric of HADR.

Many participants cited the era of easy money as a legacy that was making it difficult to make the sound long-term decisions that would position the Navy for what would follow when the funding started to dry up beginning in FY 2010. Because building the future Navy requires sustained investment over decades the Navy, perhaps more than the other
services whose individual weapon systems are not nearly as expensive as Aircraft
Carriers and Strategic Submarines, is handicapped by uncertainty in its funding. While
the post 9/11 era is characterized by easy money, there was also significant uncertainty as
to how long the “spigot” would remain open.

The defense build-down ended in FY 1998, it started in FY 1985, so for thirteen
years there was a build-down. Well starting in 99 we started this defense buildup so
no officers on Active Duty have ever had to worry about a year in which their topline
has either stayed flat or decreased. The entire generation of officers we have, have
known nothing but up. (Political Appointee D)

While money was easy the Navy, animated as it is by the imperative to spend every
dollar, was always successful in finding things to buy. Flag Officer A, compared the
fiscal discipline of the 1990s with the loose money of the last decade where:

By the end of the year we were sure [we had bought everything we needed], we
didn’t have everyone running around replacing their flat screens in September
because of this largess when the Supplemental showed up. (Flag Officer A)

Easy money has had a lasting effect on the Navy which might be hard to cure. The cost
growth to buy and operate ships, aircraft and all the ancillary weapon systems has led the
Navy to the point it is today where it cannot replace retiring platforms on anything close
to a one-for-one basis. While the curve appears to have bent downward after FY 2010,
the average cost of buying new ships and operating the existing fleet has grown so much
that sustaining the current fleet goal of 306 ships will require an increase in funding from
the Administration and Congress that would be unprecedented in peacetime.
In the current fiscal environment garnering these significant additional funds for new ships will be challenging especially as the Navy faces increasingly stiff criticism from the Congress about the management of the Littoral Combat Ship, the *Zumwalt Class* Destroyer and the planned replacement for the *Ohio Class* Strategic Missile Submarine. Twenty-five years ago the Navy was facing a similar crisis as it was struggling to sustain the Cold-War era fleet with what was turning out to be a fairly inflexible shipbuilding budget ceiling of about $15 billion a year (in FY 2015 inflation adjusted terms). The FY 1989 shipbuilding budget adjusted for inflation would have been $15.5 billion; a billion dollars more than the current request in the FY 2015 President’s Budget submission to the Congress. At the end of the Cold War the Navy dealt with the inflexible and declining shipbuilding budget and increasingly costly ships by halving the size of the Combatant fleet; dropping from a peak of 414 ships in FY 1987 to a projected 205 in FY 2015. A reduction of even half that percentage in the next twenty-five years could have a devastating effect on the future of the U.S. Navy and its ability to contribute to the National Military Strategy.
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

This qualitative research project produced valuable data from senior Navy, Defense, and Federal officials that explains how the three sets of actors inside the headquarters – i.e. flag officers, political appointees and members of the Senior Executive Service – interact while making decisions about the future Navy. This research is important because today’s Navy is endangered by the consequences that follow from the execution of the engrained pattern: “Spend Everything.” The cost of buying and operating the Navy has steadily grown over the last twenty-five years and at its current trajectory, the Navy risks reaching a point that the military capability it produces is simply too expensive. Over the course of the last quarter century military and civilian leaders have been concerned about the growing average costs of ships, aircraft, weapon systems and people that constitute the Navy’s offensive power. Since 1997, however, the trajectory has been pronounced and significant.

By connecting the key insights from the interviews about the power and influence of key actors in the process with objective facts about the outcomes of the decisions over the last twenty-five years, a more interesting and nuanced picture emerged. While key actors are instrumental in making decisions and shaping the decision-making environment, the changes and choices these actors have made produced a consistent and unexpected result
– the Navy is getting progressively more expensive. Interpreted through the lens of Complexity Theory this outcome makes more sense. This phenomenon is partially explained because across the Navy enterprise, during every stage of the PPBES processes officials are more focused on spending all the money the Navy receives in Appropriations than it is on getting the most value for every dollar. Political Appointee E explained it this way:

> A lot of what is wrong with the program/budget process is that without a compelling story the budget ends up being a document that says “with this money we can afford these things. . .” (Political Appointee E)

Since the mid-1980s, after adjusting for the effects of inflation, the cost to buy and operate Navy ships and aircraft has steadily increased. At the same time the number of ships and aircraft that the Navy operates has steadily declined. During that period there have been no public statements by Navy leaders or any data from the research interviews to suggest that this twin trajectory is intentional or even desired. The increasing cost of buying and operating ships and aircraft has simply meant that the Navy has bought and operated fewer ships in the last twenty-five years. While these weapons are technologically sophisticated and increasingly effective at destroying enemy targets, there is probably a point where numbers matter and if only one third of the force is deployed forward at any moment, then the projected FY 2014 fleet of 212 combatant ships produces a force of 70 combatant ships that can be deployed to potential international hot spots. According to Political Appointee I, Admiral Roughead, the CNO between 2007 and 2011, was increasingly convinced that the size/capability tradeoff was reaching a
point where the focus on increasing lethality was offering diminishing returns. Admiral Roughead’s 2010 Congressional testimony before the Senate Armed Services Committee emphasized that he thought the fleet could not go below what he considered a minimum of 313 ships.\(^9\) To him, numbers mattered. Since then the situation has continued to erode so that in the FY 2015 shipbuilding plan the Navy’s goal is 306 ships (O’Rourke 2014).

The analytical process of determining “How much is enough?” so that money can be allocated to where it can be used most effectively is incredibly complicated. The data shows that most participants are frustrated with these processes for a variety of important reasons including the toll on people, the fact that the results are so often unsatisfactory, and the fear that the process might not be capable of producing sound, evidence-based decisions because of what several participants referred to as a “strategy-resources” mismatch. The relentless nature of these processes and the repeated failure to develop a budget which produces an affordable and fully-mission-capable Navy breeds a certain discontent, bordering on cynicism among the participants.

**Limits of the Research**

As a qualitative research project that relies on the self-reported recollection of participants in the decision making process, it is possible that the data provides an

\(^9\) This figure includes Combatant and support and auxiliary ships.
incomplete or biased picture of how decisions are made inside the Navy headquarters. I believe that this risk is mitigated by the including complementary data from multiple participants, each presenting their recollection and perspectives on similar, and frequently the exact same events. In total, the complementary data suggests that this approach did produce a fair presentation of the environment and interpersonal interactions behind the closed doors where decisions are made.

Perhaps the most significant potential criticism of the analysis has to do with the concern that my critique of the outcome of decisions over the last twenty-five years – a smaller, more expensive Navy – does not adequately address the qualitative improvements in weapon systems that may make a smaller Navy more capable. I believe that the risk presented by a steadily declining force structure is real because at some point numbers do matter, and for the Navy, the visible presence of large grey ships on the horizon is in itself an important capability. Particularly as HADR missions become more central to the Navy mission, it is necessary to have large platforms (aircraft carriers and amphibious ships) deployed around the world so that they can rapidly move to where they are most needed and deliver aid and conduct search and rescue operations. If the ships and aircraft that the Navy operates become too expensive to buy in sufficient quantities, there will literally not be enough of them to have a significant military impact.
**Recommendation**

Solving this enduring challenge requires imagination and double loop learning. As noted earlier double-loop learning forces the people who want to foster change to get beyond the theories-in-use which govern the way things work in an organization. Argyris’ and Schöν’s idea of the theories-in-use is similar to Schein’s (2004) concept of underlying values which are frequently different from (and sometime incongruent with) the espoused values that the organization claims are its governing principals (Argyris and Schöν 1995). The Navy claims to be effective in the ways that it uses appropriations to produce military capability. But as Political Appointee C explained “the Department’s mission is to fight and win wars, not to fight and win wars efficiently.” Any proposal to address the twin trajectory of a smaller, more expensive Navy must include a notion of affordability when making decisions about capability.

When considering alternatives to the “Spend Everything” pattern, the discussion often enters into the area of incentives. What incentive does a government manager have to save money if when s/he does, they invariably lose future resources because they did not everything the year before? This perverse disincentive to economizing is in effect one of the rules posed in the thought experiment presented in Chapter 6. If there was an alternative rule, how would it be implemented across the enterprise? Phillip Anderson explains that the best way to do this is to alter the reward system as a way to shape the flows of behavior in an organization:
Managers of complex organizations can only dimly foresee what specific behaviors will emerge when an organization’s architecture is changed. Instead of relying on foresight, they rely on evolution; changes that produce positive cascades are retained, while those that do not are altered. (Anderson 1999, 229)

In recent years I have observed that analytical tools that focused on managing and revealing costs by transparently reporting execution information could be a powerful tool to modify behavior (Farley, Gallagher, and Streicker 2014). With the advances in data management and presentation it would be possible to take the cost estimates in the budget and compare them to actual experience and measure whether the program managers’ efforts produced better, more cost effective results. This measure could be used as a way to keep score and potentially reward decisions and decision makers who contained costs or even drove them down, all while buying what they needed to sustain mission objectives.

Ultimately presenting meaningful cost information and cost containment metrics could be a way to get Congressional overseers to engage more constructively in their oversight tasks. Revealing the behaviors that flow from the “Spend Everything” rule as I did in Chapter 6, especially in Figure 11, could be a powerful tool in that discussion. This information, while available inside the various authoritative financial management systems, is difficult to access and sometimes very hard to analyze. However, if the trend revealed in Figure 11 is pervasive across the Navy enterprise then presenting that data in an accessible and compelling fashion could potentially convince decision makers inside the Pentagon, the White House and even the Congress to enact legislation that curtails the
most egregious examples of wasteful end-of-the-year spending. Perhaps by changing the rule so that instead of forever losing the money that is left unspent, Agencies could get credit for some or all of it in a Federal “rainy day fund” which was recharged every year with unexpended appropriations and could be used to finance important projects.

**Conclusion and Next Steps**

When participants begin to consider that the outcomes highlighted in this research, a smaller, more expensive Navy do not happen because the headquarters is organized improperly or because the analytical processes do not produce and deliver the right information, they tend to be receptive to the notion that maybe the institution itself is responsible. Presenting these findings has the potential to open the door to thinking about the Navy enterprise itself as a complex adaptive system operating in response to a powerful animating principal; “Spend Everything.”

It is impossible to fix the problems the Navy faces today without understanding the root causes. Even when acknowledged as a problem, some of the most imaginative leaders inside the Navy headquarters struggle to propose a feasible solution to the “Spend Everything” dynamic or its complement, the “Infinite Discount Rate.” While almost every participant noted negative consequences of Congressional actions – e.g. passing Authorization and Appropriation Laws late, forcing the Department to buy systems they had decided to cancel or scale back, reversing well-reasoned decisions made through the exhaustive PPBES process – no one could propose a feasible solution. Most people cannot imagine significant changes to the ways that Congress makes Appropriation and
Authorization Laws to enable more effective oversight. In fact it is unlikely that any meaningful procedural change in Congressional governance and oversight is possible in the current hyper-partisan environment (Mann and Ornstein 2006, 239).

As a complex adaptive system the Navy enterprise exhibits the characteristics of a learning organization that is learning the wrong lesson. The thousands of analysts inside the Navy headquarters that struggle every day to make sense of the enterprise and make recommendations to allocate resources to their best use are aware of the macro situation, that the Navy’s ships and aircraft are becoming extraordinarily expensive. Many express real concerns about this troubling phenomenon yet no approaches have been developed to change this dynamic in a meaningful way. Instead most of the officials and their staffs keep “churning” by producing information and iteratively conducting the annual reviews which do not seem to address the underlying problems. This dynamic is like an evolutionary journey up various fitness peaks (Kauffman 1995, 248). The problem is that when an entity or an organization in effect reaches the top of a peak, it realizes that the peak it is on is not the highest one possible, getting to that new, better peak requires marching down the hill and starting over to climb up a new one. It is often easier to make the most of the peak you occupy rather than do all the hard work necessary to get to another one.
Next Steps

This research has produced important insights about how the Department of the Navy leadership makes decisions about the future of the Navy. As a participant observer who has applied a unique analytical lens on this environment I would like to make three concrete recommendations for Navy leaders.

First, the political appointees in the Navy headquarters should recognize and use their power as the ultimate statutory authorities inside the Navy. Respecting Title X authorities does not mean that the Secretary or Under Secretary must automatically ratify the CNO’s proposed organizational construct to change the decision making processes. There are some very talented and knowledgeable individuals who have served in these important roles. They can and should engage in a more constructive dialog with their OPNAV (i.e. senior flag officer) counterparts to collaboratively develop a model for making program and budget decisions that produce an affordable and strategically relevant Navy.

Second, the CNO and his key advisors in OPNAV need to understand that reorganizing OPNAV does not by itself produce enduring change to the way that the Navy headquarters works. The data shows that over the last twenty-five years four of the eight CNOs have launched significant changes to the way OPNAV makes decisions. Bending the “cost curve” to change the twin trajectory of a smaller, more expensive Navy requires more than serial reorganization. Real change demands a more holistic approach that appreciates not only how the Navy builds POMs and budgets but also how the thousands
of program managers across the Navy enterprise spend money to produce and deliver military capabilities.

Finally, my research has shown that the analytical processes that support decision makers inside the Navy headquarters do not provide the information (i.e. data and context) to substantiate the choice of alternative ways to produce a specified military capability. With the information technology systems now available which include Enterprise Resource Planning (ERP) systems and Business Intelligence (BI) tools placed on top of vast data warehouses, it is possible to collect and accumulate meaningful data on execution which can be used to substantiate cost projections. Reliable estimates of future costs could be used by analysts inside the Navy headquarters to ensure that money is allocated to its best use in the budget, where it will ultimately be executed.

The staffs in various Navy financial management offices have individually been working to develop and refine these tools for more than a decade. During the year of execution, these tools should make it easier to see where there are mismatches between what a program manager has in his or her budget and what they genuinely need in order to produce and deliver a military capability. When such a mismatch is identified early in the fiscal year, before the 30 September deadline for annual appropriations, money that is in excess of need in one program can be reallocated to programs which do not have enough resources to attain their approved objectives.
INFORMED CONSENT FORM

RESEARCH PROCEDURES
This research is being conducted to understand the role of senior Flag Officers in Department of the Navy (DoN) business decisions. If you agree to participate, you will answer questions during an hour-long interview to collect information about your experiences as a participant in financial management decisions in the Pentagon in the most senior position you occupied.

RISKS
There are no foreseeable risks for participating in this research.

BENEFITS
There are no benefits to you as a participant other than to further research in resource management decision making in the DoD.

CONFIDENTIALITY
The data in this study will be confidential. With the approval of the participant the interview will be electronically recorded. Every effort will be taken to eliminate personally identifiable information from the data used in the final study report. The research is descriptive and not prescriptive and not designed to highlight the behavior of any individuals so that participants will not be exposed to possible embarrassment or unwanted notoriety. The raw data will be retained by the researcher and the identity of individuals will be protected.

PARTICIPATION
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

CONTACT
This research is being conducted by Robin Lee Furley at George Mason University. He may be reached at (703) 220-3633 for questions or to report a research-related problem. The Faculty Advisor and Dissertation Committee Chair is Professor Ana Baker. Professor Baker can be reached at (703) 993-3805. You may contact the George Mason University Office of Research Subject Protections at (703) 993-4121 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT
I have read this form and agree to participate in this study.

I agree to audio taping.

I do not agree to audio taping.

Date of Signature

Revised 10/2010

1 of 1
INFORMED CONSENT FORM

Enterprise-Level Change in the Navy: The Role of Senior Flag Officers in Business Decisions

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This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT
I have read this form and agree to participate in this study. [Please let the researcher know whether or not you agree to be audio taped.]
This interview is designed for individuals who held senior resource management positions in the Department of Defense (DoD) and Department of the Navy (DoN). These interviews will collect data from individuals who have retired and/or left the government after serving as a Flag (or General) Officer, Political Appointee, or career member of the Senior Executive Service (SES). All participants targeted for this interview have held very senior positions where they were instrumental in some or all aspects of the department’s Planning, Programming, Budgeting, and Execution (PPBE) System. In this interview I will prompt the participant to recall their experiences at the pinnacle of their career.

Participant Information:

Name: ____________________________________________

Date of interview: ___________________ Location: ____________________________

Signed Consent Form: _______________ Agreed to be recorded: ______________

Years in Federal Service: ____________________________________________

Occupation (Military Specialty/Community): __________________________________

Current Occupation/Employer: ________________________________

Most Senior Resource Management Position Held: _________________________

(If appropriate) Graduating Class at the Naval Academy: _____________________

Duration of interview: ________________

Interview Questions:

1. Please describe the senior position you held where you regularly participated in PPBE decision-making.

2. How would you describe the quality of the decisions which flowed from the PPBE process while you were involved?

3. What was your previous involvement in resource management issues before entering this position? For how long? Did you retire from this position?

4. Is there anyone who you considered a role model that influenced your style and approach to the job?

5. The decision makers in the Navy headquarters are Political Appointees, Flag and General Officers, and members of the Senior Executive Service. (Depending on their role) How would you describe your interactions with the other two categories of decision makers? Did you think that the other decision makers were motivated in the same way that you were?
6. What did you consider your primary qualifications for this position?

7. What was the most rewarding part of your job?

8. What was the most difficult aspect of the job you held?

9. What, if anything, in your previous assignments helped you prepare for the most challenging aspects of the job?

10. How did your status as a (depending on the subject's role as a "fill in the blank") affect your participation in decision-making?

11. Do you think that your status (rank and/or position) enabled you to accomplish things in the resource management decision making processes that you would not have been able to accomplish before you achieved that status?

12. If you could make one change to the PPBE decision-making process what would it be? Why?

13. What effect do you think your expected time horizon (limited for Flag and General Officers, medium for political appointees, and long for SES) had on how you participated in the decision making system?

14. Did you have a patron/mentor? If so, did your mentor help prepare you for the leadership role you eventually played?

15. Thinking back to when you first entered your most senior position in the organization what was the most challenging part of taking on a senior leadership role?

16. How did you figure out what you could accomplish in that position? How long did you give yourself to figure things out?

17. Did you have a plan for what you wanted to accomplish by the end of your first year? If you knew that you were going to be in the position for a finite period of time, do you think that affected your expectations of what you hoped to accomplish?

18. In the Department of the Army officers, relatively early in their career, choose a financial management specialty (MCS) and for the rest of their career are assigned to a series of FM positions of increasing responsibility. Naval Officers do not have an FM specialty. Were you aware of this difference? Do you think that this practice has any effect on quality of the decision making process in the DoN?
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BIOGRAPHY

Robin Lee Farley received his Bachelor of Arts from the University of California at Berkeley in 1986. He received his Master’s in Public Policy from the Harvard Kennedy School of Government in 1989. He is currently the Director, Financial Management Operations at the Commander, Navy Installations Command headquarters in Washington, DC. He has been employed in and out of the Federal Government for the last twenty-five years.