

# Setting the Conditions for an Innovative Culture

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*So the first part of the problem appears to be whether we can now in fact discover the means to close the gap between the changes that destroy the old, which was not bad but is not, in the new dispensation, good and useful, and the developments which are to take the place of the old, but which do not take place fast enough.*

– Elting E. Morison, *Men, Machines, and Modern Times*, 1966 – notably the son-in-law of one of the Navy's greatest innovators – Admiral William Sowden Sims

This concluding talk for this very useful Symposium addresses five closely related matters:

- I. Defining innovation, adaptation, and change
- II. How one's image of organization affects how one understands innovation
- III. What do we know, generally, about organizations that change successfully?
- IV. Peculiarities of the Navy
- V. Some practical recommendations for setting the conditions for an innovative Navy culture, focusing on leadership

## I. Defining innovation, adaptation, and change

- A. Let me begin my consideration of the practical challenges of setting the conditions for an innovative culture in the Navy by re-engaging on how we are to understand the problem of innovation.

During this symposium, the speakers have been remarkably consistent in their understanding of innovation and adaptation – complementary aspects of the general problem of organizational change – even though approaching that problem from several different perspectives.

- B. The *Oxford English Dictionary*, that greatest of dictionaries, defines these key terms as follows:

**Adapt.** 1. To fit (a person or thing *to* another, *to* or *for* a purpose), to suit or make suitable. 2. To alter or modify so as to fit for a new use.

**Innovate.** 1. To change (a thing) into something new; to alter; to renew. 3. To bring in or introduce novelties; to make changes *in* something established.

**Change.** 6. Transitive. To make (a thing) other than it was; to render different, alter, modify, transmute.

- C. Differences between innovation and adaptation (along with improvisation) as applied to the military hinge largely on the American distinction between “war” and “not war.” The former is considered to take place during peacetime, the latter during wartime. We might consider that the challenge of innovation is to so narrow the effective range of surprise that our opponents may present us during active conflicts to that which can be overcome by improvisation and adaptation.

In practice, however, both are about changing the organization to more closely align it with the problems it is asked to solve and the environment in which it must work.

- D. *In this, I refer to making the organization more effective, that is, in service of producing the outcomes it wants (or is directed to achieve). Efficiency only makes sense as the determining objective if the organization is already effective.*

What changes? Everything!

Changes at the strategic, operational, and tactical levels. Changes in technologies and the concepts for their employment.

- E. Although a great American strength is the technology of war, especially in naval technologies, no change is ever purely technical.

F. **Two aspects to adaptation and innovation:**

**1. The cognitive:**

Deciding when innovation and adaptation is appropriate (given its costs)

Deciding what innovation/adaptation will answer the need.

**2. The political:**

Mobilizing the requisite political support within and without the organization to alter the existing distribution of scarce resources and ways of doing business.

Organizations cannot innovate without both.

Each requires certain skills and abilities; each is more likely under certain organizational arrangements; the organization effective for the cognitive aspect

and that for mobilizing the organization to adopt and implement an innovation are at antipodes from each other.

Similarly, persons effective at one are not necessarily effective at the other. Admiral William Moffett was not a great thinker; he was, however, gifted in mobilizing political support within and without the Navy to advance naval aviation.

G. ***Consider the problem of the Battle of the Atlantic during WW II.*** The challenge was to protect the shipping crossing from North America to Great Britain from the depredations of German submarines and aircraft who were conducting a classic *guerre de course*. It became evident relatively quickly that whatever actions the U.S. and Britain were taken were inadequate and poorly adapted to the problem. Effectively addressing the problem required changes in virtually every aspect of the naval organization.

1. Operations research (multi-disciplinary research teams analyzing actual operational data) demonstrated that a key element of successful transit by convoys was the size of the convoy, not the ratio of escorts to merchant ships. The U-Boats had a limited window of time and space through which to attack any given convoy and were usually able to sink only a relatively small number of ships; thus, larger convoys lost about the same number of ships as smaller convoys.
2. The destroyer was expensive to produce and its capabilities (speed, displacement, armament) exceeded those required for prosecution of the U-Boats. The destroyer escort was a useful innovation; less expensive and less capable, it could be produced in greater numbers, and was more than adequate to the anti-submarine mission.
3. The British conjured the concept of the escort carrier, to be built on oiler or merchant hulls, analogous to the destroyer escort, much less capable than the *Essex* carriers, but able to be built in large numbers and deployed quickly, provided adequate air protection for convoys.
4. Navalizing the B-24 heavy bomber into the PB4-Y1 and subsequently PB4Y-2 Privateer, designated as very long range bombers (VLRB) allowed effective long-distance land-based patrol aviation in support of the convoys.
5. Recognizing the German concept of employment of their submarines included central control by radio of multi-submarine “wolf packs” combined with effective interception of those signals, radio direction finding, and decryption of German signals all allowed fixing the location of the German submarines, which in turn permitted redirecting the convoy courses and successful attack on the submarines.
6. Early aerial depth charging of German submarines was ineffective, it was learned because the hydro-static detonators were set to explode too deep and the submarines had not reached those depths. New detonators were developed and deployed.

7. Magnetic Anomaly Detection (MAD) was developed to enable patrol aircraft to locate submarines and attack effectively.
8. The acoustic homing aerial torpedo was developed and deployed. Essentially a powered depth charge, the homing torpedo did not need to move very fast or very far, given the slow submerged speed of the WWII submarine.
9. The Navy also developed radio-controlled aircraft (essentially guided missiles) to be employed against the heavily fortified German submarine pens (and some other hardened targets) because conventional bombing was relatively ineffective. These also proved to be ineffective, for the most part.
10. ***Finally, and perhaps most importantly, in addition to all of the marvelous technical innovations outlined above, the Navy organized the Tenth Fleet.*** “Tenth Fleet’s mission included the destruction of enemy submarines, the protection of coastal merchant shipping, the centralization of control and routing of convoys, and the coordination and supervision of all USN anti-submarine warfare (ASW) training, anti-submarine intelligence, and coordination with the Allied nations. The fleet was active from May 1943 to June 1945” (Wikipedia).

All of these efforts required a willingness to grant the problem priority (Admiral King was not much interested in it for quite some while) significant changes in ways of doing business, technical innovations, and organizational restructuring, all of which in turn required a redistribution of scarce resources.

In contrast, the Japanese, also the target of a strategic sea and air blockade by the U.S. that included a submarine *guerre de course*, built very few escorts during the war, organized an escort command only late in the war, and relied primarily on land-based air to protect its shipping.

## **II. Images of Organization**

The Navy’s officers probably ought to understand systematically how organizations work. For, how one understands large scale formal organizations, such as the Navy, conditions how one thinks about innovation and adaptation, that is, organizational change. *Three images of organization are practical relevant to our concerns here: (1) as problem-solving entities, (2) as political systems, and (3) as social systems.*

### **A. Organizations as Problem Solving Entities**

Organizations effectively exploit the efficiencies derived from methodical specialization and division of labor by providing a formal means of coordinating the disparate pieces to produce a synthetic result (goods or services). In so doing, they render possible endeavors of a scale and complexity well beyond the capabilities of individuals or small groups.

From this perspective the organization constitutes a cognitive structure (or a structure of knowledge) that exists (1) to solve a more or less bounded set of problems, (2) with given types and amounts of resources, and (3) in a given environment. That is, the organization is a problem-solving entity that exists as an open system in exchange with its environment.

From the standpoint of the organization as a cognitive structure, the practical challenges are to (1) sense environmental changes, (2) be able to differentiate mere nuisances from occasional anomalies from significant secular trends, and (3) generate enough knowledge of those changes to make them well-structured enough to subsequently devise new, appropriate and effective structures, rules, and routines in a timely manner (that is, to change the organization before it fails). In many if not most cases, organizations will generate solutions while they are structuring new problems.

Because they require research (sensing and structuring new problems) and creativity (generating novel solutions), neither of which can be commanded, legislated, or directed, efforts to innovate and adapt are rarely successful in the context of the hierarchy of the organization which rewards conformity to structures, rules, and routines, and generally punishes departures from same. (Merton, 1940) Such efforts thrive in the relative unstructured setting of the flat, decentralized organization, which itself contravenes the very principles and foundations of the large scale formal organization. (Thompson and Tuden, 1959).

In practice, establishing and maintaining organic capabilities for innovation and adaptation within the organization often shows initial success followed by concerted (and typically in the mid- and long-run successful) efforts by mainstream components of that organization to disestablish, absorb, or marginalize those capabilities, so that their unique properties ultimately disappear. This is usually accomplished by (1) reducing or redirecting resources; (2) reorganizing, especially with regard to reporting lines; and (3) changing the character of the personnel assigned to those capabilities.

*Why?*

## **B. Organizations as Political Systems**

Even as large scale formal organizations are cognitive structures, they are simultaneously, intrinsically, and inevitably political systems. That is, they comprise competing groups forming shifting coalitions, in order to claim and acquire scarce resources (which include power, budget, and personnel). At any given point in time, the organization will be described by a dominant coalition of such groups as a dynamic equilibrium reached, resulting from a particular configuration of problems, resources, and environmental conditions.

*The political processes of large-scale formal organizations are embedded in their very reason for existence: the effective and efficient exploitation of specialization and division of labor.*

In the context of scarce resources, each specialized segment of the organization will almost inevitably come to believe that its particular contribution is the most important to the organization's problem solving, even to the extent of valuing its contribution *intrinsically* rather than for its *instrumental* value in solving the problems which the organization is charged to address, what Merton labeled the *displacement of goals* by routines.

That dominant coalition itself came to exist in its particular composition as a result of a peculiar constellation of problems, resources, and environmental conditions. To the extent that that peculiar constellation remains more or less stable, the dominant coalition will not much change in composition. The senior members of the organization got there by having the necessary expertise and skills during a previous period.

However, because organizational environments inevitably change at greater or less velocities, sometimes in disjunctive, punctuated ways, the prevailing political structure of the organization is typically profoundly affected, especially when the changes outstrip existing repertoires of response contained within that coalition.

***This means, practically, that innovation and adaptation inevitably threaten and disrupt the prevailing dominant coalition, which, not surprisingly, tends to muster all weapons at its disposal to maintain the existing equilibrium, even if keeping that balance causes the organization to become less effective, commit error, and possibly fail.***

The greater the disjuncture, the more likely more intense internal conflict in the organization among groups competing for scarce resources.

One of the traditional responsibilities of the organizational leader is the need to balance the interests of groups which have a legitimate call on the resources of the organization. Thus, the leader faces with fearsome regularity the need to assess conflicting interests, conflicting sentiments, and conflicting convictions within his organization. (Merton, 1976)

It is no easy matter to discover wherein lies the best interest of the total organization.

But the gravest error comes in trying to evade these conflicts. Nothing catches up with an organizational leader so much as a conscientious policy of evasion that seeks the appearance of peace and quiet by avoiding decisions that might alienate this or that sector of the organization.

Organizational decisions, especially those involving significant change, become transformed into organizational realities only to the extent that they engage the willing support of those who must translate them into day-to-day practice.

Without such support, the initially sound decision has a way of becoming converted into a subsequently unsound one. (Merton, 1976)

### **C. Organizations as Social Systems**

The organization, finally, is also a social system of groups in which the individual member finds and expresses identity through his or her role in the organization.

Dean Rubel referred to such social groups yesterday as tribes and cults. He showed their existence and importance in the development of jets in naval aviation.

That is, the member does not act in a purely instrumental way in providing necessary inputs in return for the incentives in turn provided by the organization.

Inevitably, the member attaches some intrinsic value to what he or she does on a daily basis. (Merton, 1940)

That identity is established and reinforced by the social group within which one works.

Notably, for some, movement upward through the organization entails a loss of that identity and meaning because they no longer are allowed to do what attracted them to the organization in the first place. Ask any senior officer what he or she misses most...

Any significant change in the organization promises to alter the conditions of one's work and occasions therefore anxiety and resistance.

*None of this is to suggest that change should not be sought when appropriate, or conversely that resistance to change is somehow pathological; such resistance is a natural and inevitable part of the life of any organization.*

*As Elting Morison observed: the fundamental tension in all organizations is that between stability and change.*

*The political and social aspects of organization must therefore be included in any clear understanding of change, and addressed by the practical measures adopted by leadership.*

### **III. What we know, generally, about organizations that change successfully**

**A.** *Innovation and adaptation in some ways are not at all remarkable.* After all, it's what human beings do to adapt to their environments in the interests of survival: problem solve. (Simon, 1976; Thomspson, 1970)

**B.** *Notwithstanding the strong urge toward and belief in the direction of the dramatic, game-changing innovation, there are no panaceas. There is no philosopher's*

*stone that will turn lead into gold.* Leaders who recognize this basic truth are more likely to

**C.** *Organizational change is almost always incremental and messy.* Nonetheless, it can occur with remarkable speed in an iterative process of problem-solving. As Art Corbett noted yesterday – war is a kind of “heuristic environment” in which trial and error provide practical insights into problems and which courses of action are more likely to prove effective than others.

FADM Nimitz’s oft-quoted remark from a 1960 address at the Naval War College that the Navy had worked out the Pacific War in plans, games, and exercises so thoroughly that the only real surprise was the *Kamikaze* obscures the tremendous innovations and adaptations the Navy produced during the war. As Tom Hone has pointed out in his extraordinary paper on 1942-1943 carrier operations, the process was messy and acrimonious, and produced a series of provisional solutions to problems not completely understood, which were in the end highly innovative and adaptive and enough so to make the carrier forces extraordinarily effective during the rest of the war.

**D.** *Organizational change often comes from the pragmatic exploitation of possibilities not originally intended by the creation of new technologies.* During WWII, combining the large number of fleet submarines, with their rugged construction, tremendous endurance and (surface) speed, with reliable long-distance radio transmission, and the interception and decryption of Japanese radio transmissions, along with networks of coast watchers essentially integrated actionable intelligence with operations to execute the Navy’s long-planned strategic sea and air blockade of Japan.

**E.** *Organizations are more likely to innovate if they protect idiosyncratic and iconoclastic individuals* who threaten the existing order but provide new and different ways of doing business. Some organizations, such as the Marine Corps have been better in providing such protections (Pete Ellis) than others.

**F.** *Innovation is generally associated with organizations that are able to generate and protect slack resources* (time, money, people, space, equipment, etc.) that can be used off-line to invest in innovative efforts.

**G.** *Organizations are more likely to innovate if they allow, facilitate, and protect certain organizational units that have significant discretion in their operations* – a kind of decentralization.

**H.** *Innovation tends to come to organizations that allow multiple lines of effort, competing centers of endeavor,* just as in the private economy. Competition tends to produce new ways of doing business, and those who must compete do not necessarily like to do so.

#### **IV. Peculiarities and Qualifications for the Navy**

A. ***In democratic states, militaries do not get to choose the problems they will solve. They are directed to do so by their civilian masters.*** This contrasts sharply with private sector organizations who elect to address certain problems and may discard problems if they find them too hard – thus, IBM could sell its PC business, and the Thinkpad PC's became Chinese Lenovo's. No such luxury for the Navy. It therefore must address problems it would rather not confront at all.

B. ***A military's competition with its opponents is lethal and the stakes for the nation may be existential.*** Livelihoods may be lost when private sector organizations fail, but death of individuals or of nations rarely ensue from such failures. The consequences of failure are profound

C. ***Militaries, more than most organizations, and for sound reasons, emphasize formal hierarchy.*** However, innovation and adaptation cannot be commanded and do not flourish in a command climate minimizing the discretion of individuals, especially subordinates.

The contemporary military pays considerable lip service to initiative and discretion, but in practice afford subordinate officers relatively little such.

D. ***For the most part, militaries do not compete for the support of others in the manner private sector organizations compete for markets; rather they compete directly against other militaries (and other sources of state power) which intentionally seek to dominate the other, usually by presenting type and scale of surprise too difficult to overcome.***

E. ***Navies get to execute what they will be asked to do big time only now and again.***

US Navy fleet actions: Civil War, Spanish-American War, WW II. None since. ***Little possibility therefore of inter-generation transfer of practical wisdom and expertise.*** The previous experienced generation is gone before the next generation to fight a fleet action has arrived.

***But, since navies operate their ships and aircraft regularly even during "peacetime," the prevailing system of incentives will tend to favor those adept at the lesser activities, and, perhaps, conformity to relatively conservative norms of behavior.***

US Navy has relied upon conflicts sufficient in length that officers could learn on the job – will such be afforded in future conflicts?

Meanwhile, new technologies and concepts of operation emerge, sufficiently different than those proven in earlier actions, to render them still incomplete when new conflicts start.

***Translated: this means that the Navy will really only ever know whether its hypotheses are correct after the shooting starts, and perhaps not even then.***

**F. *Routes of upward mobility for officers – like most militaries, the Navy can't hire from outside – it approximates a closed institution with respect to its officer personnel.***

Can't really hire promising commanders away from other navies (although British Commonwealth navies...)

Leaders will know the Navy well, its signal strengths and weaknesses, its style of command, the quality of its commanders, its living history and aspirations. But perhaps they may know it too well.

Actions based upon training, skills, and experiences that have been successfully applied in the past *result in inappropriate responses under changed conditions*. The very soundness of training for the past leads to maladaptation in the present. (Merton, 1976)

When new kinds of expertise become relevant, challenging to import it, except at the bottom or by converting existing expertises.

Navy has historically tended to defend its existing definition of line officer and when forced by circumstance, to import expertise into staff corps, restricted line, and limited duty officers, with whom it shares little power. (Chisholm, 2000).

Reserve officers performed the role of outside blood during World Wars I and II, less so today. WWII officer corps when from 20,000 in 1941 to 320,000 in mid-1945. Enormous number, most did not consider it as a long-term professional commitment, with concomitant limited patience with organizational routines they found mal-adapted or ineffective.

**V. *Some Practical Recommendations for the Navy***

Academic disputation about the finer points of innovation, adaptation, and improvisation is fine, but it doesn't provide practical guidance for organizational leaders

**Organizational Culture**

First, to what are we referring when we speak of an innovative organizational culture? A basic definition:

*An organization's culture comprises the set of shared values and assumptions that guide interpretation and action in organizations by defining appropriate behavior for various situations.*

Thus, in good measure, organizational culture is a matter of choice; it is how leaders shape their organizations.

Organizational culture is manifested in organizational symbols, is sometimes described and promulgated formally (e.g., core values: honor, courage, commitment...), but often important, influential aspects of organizational culture remain informal, implicit, and tacit.

***Facilitating a Navy organizational culture conducive to innovation and adaptation entails, for the most part, the same leadership characteristics that describe effective organizations, generally.*** These characteristics will, no doubt, be familiar to most of you in the audience.

At times maintaining such a culture will require courage, not physical courage, but moral courage, for senior leadership is the province of moral courage. By this I do not mean “moral exhortation.”

It also is advanced by certain identifiable characteristics of organizational structure and processes.

**A. *Recognize the centrality of the Human Element in warfare.***

***Although the Navy historically has measured itself in terms of its ships (and latterly, aircraft), the human element is the most important of all elements in producing a successful, effective Navy.***

*Material represents the means but not the end. A nineteenth century sailor would be bewildered in a modern warship, but regardless of the appearance of ships, there is one element, the most important of all, that remains unchanged – the man himself. (CNO/COMINCH Ernest J. King, War Instructions, Nov 1944)*

**B. *Know Your Stuff.***

- 1. Mastering the extraordinarily complex technological systems that comprise the modern Navy remains essential, as are the tactical solutions to war at sea; neither, however, are sufficient unto themselves to produce successful leaders.***

Rather, as FADM King observed,

*Leadership is the art of inspiring, guiding, and directing bodies of men so that they ardently desire to do what the leader wishes. **But the wishes of the leader will not bring victory unless as a commander he has the strategical knowledge and the tactical skill to make a good plan.** (CNO/COMINCH Ernest J. King, War Instructions, Nov 1944)*

***The Indispensable qualification for command, the art of war, was shown to be the ability in combat to apply the science of war to active military situations. (Bates, The Battle of Savo Island)***

Commodore Bates goes on to say that:

*The present senior officers of the Navy are well aware of the reasons for changes in established doctrines and in the development of new ones. But this cannot necessarily be said of the Commanders of the future, who very probably will be inexperienced in command in war. (Bates, The Battle of Savo Island)*

2. Vice Admiral Yoji Koda, former Commander in Chief, Japanese Self Defense Fleet (2007-2008), also a naval historian, distinguishes stupid, lazy, and intelligent officers. The stupid officer does not read history; the lazy officer reads history but only for the narrative; the intelligent officer reads history for its professional significance. He counsels officers not to be stupid or lazy.
3. This approach is entirely in accord with the prevailing Joint Officer Development Vision, which observes that professional development is a life-long process, most of which is accomplished by the individual officer outside of a formal school curriculum. That is, earning credit for JPME I and JPME II is only a baseline; it does not begin to exhaust the development necessary.
4. Historical knowledge, properly applied, enables officers to “know” quickly the essence of the problem with which they are confronted. This allows them to understand with alacrity what innovations and adaptations might be expected to “solve” that problem.
5. General MacArthur, whatever personal view one might hold of him, read widely and deeply in all manner of military and other history. As Wick Murray noted yesterday, there are some 5,000 years of recorded history one might plumb for understanding of the basic nature of warfare.

Of his decision to land at Inchon, the general said:

*The deep penetration in the rear of the enemy by amphibious assault is always the decisive maneuver in peninsular warfare.*

MacArthur reached his decision to assault Inchon on his first visit to South Korea only two days after the North Korean attack, and planning began immediately. He would not have the forces with which to execute for several more months, but he knew right away what the problem was and how to address it.

6. Admiral Kelly Turner and Raymond Spruance were well versed in history and understood the basic nature of warfare – knowledge obtained through intense and systematic study. They served as faculty at the Naval War College prior to WW II and there wrote and delivered original lectures. They went on to be among the greatest operational planners and commanders the Navy has known.

7. Thus...

***All officers must read history.*** Action reports, operation plans and orders, memoirs, histories.

However, they must simultaneously religiously avoid romanticizing the past.

***All officers must master the lexicon of warfare*** – principles of war, operational factors, operational functions, etc. This is the operational art.

**C. *Be Honest. Demand the same of peers and subordinates. Maintain practical pessimism.***

1. WWII US Submarine Action Report Instructions exemplify this vital attitude:

(1) Attack first – then collect data for this report

(2) ***Do not “gundeck” this report – if data cannot be estimated with reasonable accuracy, enter a dash in space for which no data is available***

2. A 1938 Naval War College lecture addressing the concept for employment of submarines was a model of clarity and it used no buzzwords or acronyms. And it was pretty much on target in the event.

3. ***Set an example for your juniors.*** It is worth repeating that no communication speaks louder or clearer than consistent actions.

4. ***Good news takes care of itself. Make it possible for your subordinates to tell you the “bad news.”***

Leaders of organizations engage in self-deception when they signal to their juniors that they do not wish to hear bad news. The sooner one gets the bad news, the sooner one can begin its remedy.

The preface to the Naval War College’s series of post-WWII analyses of major actions states it plainly:

*...all comments and criticisms are designed to be constructive. By indicating what appear to be sound and unsound decisions, and the apparent reasons for arriving at them, it is hoped to provoke earnest thought among prospective commanders and thus to improve professional judgment in command. (Bates, The Battle of Savo Island)*

5. ***As leaders, take responsibility for errors and failures. Set the example.***

General Eisenhower prepared two public statements, one in case of success, one in case of failure, for the landings at Normandy. His use of the singular pronoun “I” is instructive:

*Our landings in the Cherbourg – have failed to gain a satisfactory foothold and I have withdrawn. My decision to attack at this time place was based upon the best information available. The troops, the air, the Navy did all that Bravery and devotion to duty could do. If any blame attaches to the attempt it is mine alone. (GEN Eisenhower, 5 June 1944)*

Similarly, following the bitter fighting on Betio Island on Tarawa Atoll in November 1943, Admiral Kelly Turner, the amphibious commander, took personal responsibility for the inadequacy of the pre-landing naval gunfire bombardment.

**6. *Avoid the pleasant narcotic of wishful thinking. Increments of success can become self-limiting.***

*The leader must somehow arrange for that composite of pride that is justified by accomplishment and commitment but, at the same time, he must recognize that pride can become overweening, no longer sustained by continuing accomplishment. (Merton, “The Ambivalence of Organizational Leaders,” 1976)*

***That is... institutionalize disappointment. Even in success is embedded error.***

WWII *Battle Experience* Bulletins, issued as soon as possible after each major operation, and widely distributed to the fleet contained honest and candid extracts of unit action reports. Errors and flaws were identified, effective adaptations outlined.

**D. *Speak plainly. Set and communicate objectives clearly and succinctly.***

1. World War II senior officers firmly grasped that subordinates could exercise initiative, could adapt and innovate, only when objectives had been communicated clearly. Thus,

*The goal of command is unity of effort toward a common objective... Unity of effort exists when there exists, within and between the echelons [of command] such mutual understanding that each subordinate commander, in the absence of specific instructions, acts instinctively as his immediate superior would have him act. (CNO/COMINCH Ernest J. King, War Instructions, Nov 1944)*

2. These were not merely buzz words. The operational plans were models of clarity. In Campaign Plan Granite, which was “not in itself a directive for action, but a concept for the information of senior officers who will have to plan and execute”:

*The immediate strategic objective of the forces of the Pacific Ocean Areas is to obtain positions from which the ultimate surrender of Japan can be forced by intensive air bombardment, by sea and air blockade, and by invasion if necessary. The ultimate strategic objective is to establish our sea and air power, and if necessary our amphibious forces, in those positions and force the unconditional surrender of Japan. (Campaign Plan Granite, January 1944)*

**E. *Don't micro-manage. A central component of leadership is the exercise of restraint. Promote and reward initiative by your subordinates.***

1. Admiral Arleigh Burke's observations about his service more than fifty years ago still apply:

*...what do we have to offer the young Naval officers as their part in the military organization of the United States? I think it lies in our belief in decentralization (and this is at the other pole from Air Force, Rockefeller, Lucius Clay, et al). Decentralization means that we offer officers the opportunity to rise to positions of responsibility, of decision, of identity and stature – if they want it, and as soon as they can take it. (CNO Arleigh Burke Letter to RADM W.G. Schindler – 14 May 1958)*

2. At the same time, the exercise of initiative by subordinates must work within the intentions of their superior officer

*Loyalty to the intentions of the officer in command, as expressed in his general plan, is essential to the success of any operation... A subordinate commander may find himself confronted with a situation which has not been foreseen or has not been covered in his orders from higher authority and which necessitates action on his part before he can communicate with his superior and receive instructions... There is no substitute for common sense. (CNO/COMINCH Ernest J. King, War Instructions, Nov 1944)*

**F. *Plan against specific opponents in particular spaces.***

1. The several decades of devising and reworking War Plan Orange by generations of naval officers, and which formed the foundation for the great Central Pacific Drive against Japan, were notable for the discipline of mind, wide agreement on strategic objectives, and thorough and common understanding of factor space, that in the event permitted the ***“ruthless opportunism”*** which bred adaptation and innovation, and, ultimately, success.

They had thought the problem through. The process of planning was as important as the substance of the plan itself

*...what instills confidence between superior and subordinate is joint commitment: commitment to one another and to agreed-upon organizational goals. It is this mutual commitment that encourages even the leader who is temperamentally inclined to retain the reins of power in his own hands to delegate authority as well as responsibility to his subordinates, that allows him to rely more on corporate consensus than on authoritarianism in the making of decisions. (Merton, "The Ambivalence of Organizational Leaders," 1976)*

2. Thus, by 1931, first successful alongside refueling of DD Breckinridge by AO Salinas – beginnings of the SERVROns that made possible an accelerating operational tempo even as success lengthened lines of communications – “We always tried to be ready, but always you came too soon.” (USSBS Interrogations)

**G. *Submit all plans and proposals to independent analysis.***

1. This does not assume unbiased judgment on the part of the outside analyst, only that the analysis is independent. (Landau, “Redundancy, Reliability, and the Problem of Duplication and Overlap”)
2. Demand empirical warrant for all plans and proposals.

**H. *Recognize that innovation and adaptation cannot be legislated, but they can be facilitated by leadership choices about organization.***

1. It is by no means necessary that every organization member be innovative and adaptive; rather that the organization finds practical ways to encourage and *protect such members in numbers and places that are sufficient to supply the organization with the requisite proposals for change.*

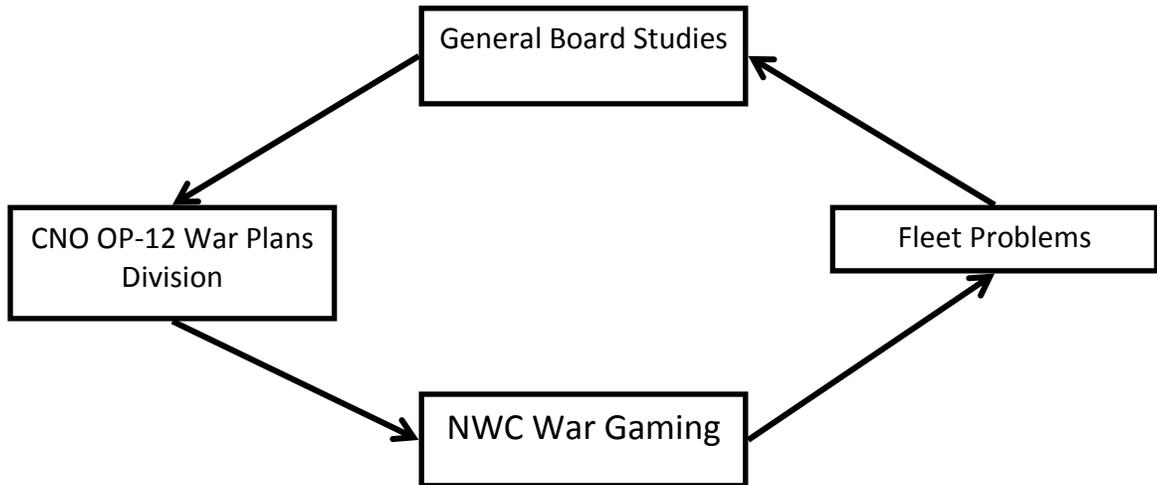
It is an organizational problem.

2. ***Leaders need to so arrange the system of incentives for individual members to contribute in adaptive and innovative ways:***

- Fitness Reports
- Statutory Promotion Boards
- Administrative Boards that screen for command
- Criteria for detailing to duty

3. ***Institutionalize effective organizational structures and processes for problem-solving***

During the Interwar period...



These were relatively independent organizational units with certain amounts of slack resources with which to try new and different things.

Each contributed to innovation and adaptation. To be sure, there were battles over the rules of war games and Fleet Problems, for the officers recognized that the rules would bias outcomes in certain directions.

Their outcomes each fed the others in a virtuous cycle of innovation and adaptation, and, were in turn fed into ship and aircraft design and programs.

*The Fleet figured prominently in budget decisions.*

#### **4. The Dilemma of the Time Lag**

There is frequently a discrepancy between (1) organizational requirements for immediate adaptive action and (2) the slow process of obtaining approval of it.

This comes hard for organizations whose members often prefer to pay the price of recurrent mal-adaptations in order to avoid the disequilibrium occasioned by the change necessary for effective adaptation.

*Thus, mobilization of support, within and without the Navy, for change must be effected once a direction for change is assessed to be the proper one.*

At the same time, those who generate innovative and adaptive ideas are often not the ones who possess the political and social skills required for their adoption and implementation.

**In the Navy, effective political entrepreneurs have historically been associated with successful large-scale innovation.**

**They need not be the officers most technically proficient in the matter, just sufficiently versed:**

**Naval Aviation**

William Moffett – Chief, Bureau of Aeronautics

Joseph Mason Reeves – Commander, US Fleet

**Nuclear Submarines**

Hyman Rickover – nuclear power

William Raborn – Polaris

**Aegis**

Wayne Meyer

**5. *But individual entrepreneurs will not suffice. An institutional home is probably necessary for success of large-scale innovation:***

- Bureau of Steam Engineering
- Bureau of Aeronautics
- Nuclear Reactor Safety
- Special Projects office

Dedicated billets, especially commands: aviation in the 1920s

Control of assignment of officers to duty.

**Some Final Words**

As I noted earlier, there is no panacea for organizational innovation and adaptation. It cannot be commanded or legislated. There is no philosopher's stone.

It is typically an incremental process, one that is messy, characterized by profound conflict over the organization's future directions, and *one that cannot be made efficient. It is inevitably simultaneously a cognitive and a political problem.*

*The challenge is to identify what should remain the same and what should change and in what ways and directions and then to mobilize support within and without the Navy to make those changes. Resistance to such change is natural and inevitable and should not be considered pathological or something that can be eliminated.*

***In so doing, the object is to reduce the inevitable surprise encountered during active conflict to a type and magnitude that the Navy can overcome it by in-stride adaptation and improvisation.***

I have identified some of the characteristics of organizations, generally speaking, that are more likely to innovate and adapt than others, noted some of the peculiarities of military organizations, especially the Navy, which render applying those lessons very difficult and necessary of careful qualification.

I have also identified some of the practical actions the Navy's leaders can take to set the conditions for an innovative culture. It is easier to identify these actions than it is to take them. The bulk of these correspond to what might be called good leadership practices, generally .

**Let me close by noting that, in the end, as Admiral King observed in his November 1944 War Instructions, "There is no substitute for common sense."**

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