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INFORMATION SERVICE
FOR OFFICERS
FOREWORD

Information Service for Officers was established by the Chief of Naval Personnel in 1948. It contains lectures and articles of professional interest to officers of the naval service.

The thoughts and opinions expressed in this publication are those of the author and are not necessarily those of the Navy Department or of the Naval War College.
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Issued Monthly By  
The Department of Correspondence Courses  
U. S. Naval War College  
Newport, R. I.
THE FOUNDATIONS OF FUTURE NAVY PLANNING

A lecture delivered by
Vice Admiral Robert B. Carney, USN
at the Naval War College
September 13, 1949

Much has been written about planning, and there is good machinery now in existence at all levels for its accomplishment. Workable formats, techniques, procedures, and organizations for planning have evolved under the pressures of war and in the atmosphere of joint effort. Strategic planning is being geared to logistical considerations; the necessary industrial and economic aspects have been woven into the planning pattern; and, more recently, the all-important dollar has been introduced as the yardstick for strategic capability as well as logistical implementation.

Not that this is the planner’s millenium; the need for improvement will always continue in some measure, and it can be safely assumed that, as the relationship of strategic, logistical and budgetary planning becomes more universally understood, methods will be susceptible of further improvement. Nevertheless, mechanisms and progress are reasonably well in hand.

Such being the case, it is well to pause from time to time to examine the philosophy and the precepts upon which our planning is predicated. Such introspection is always more or less in order, but there are added reasons for taking philosophical inventory at this particular time. This is a year critical in the annals of international developments, a year attracting the closest attention of economists and industrialists, and a revolutionary year in American military annals.

Vice Admiral Carney is the Deputy Chief of Naval Operations for Logistics. During World War II he served as Admiral Halsey’s Chief of Staff.
With the signing of the Atlantic Pact and the consideration of military aid programs, the United States—and, for that matter, all of the allied world of like-thinking peoples—are embarking on a new concept (or re-embarking on the old concept) of security through mutual strength. The United States must now consider the potential strength—and weaknesses—of those nations associated with us in seeking security for civilization.

In the world of economics, the United States is confronted with increasing demands on its resources, while at the same time facing the probability of diminishing national revenues from which our obligations must be financed.

Narrowing the field of consideration to military matters, those who are responsible for fashioning the structure of military security are confronted with the tremendously complex problem of best relating ideal strategy, strategic capability, forces, and logistic support to the dwindling dollars available. Budgetary restrictions prevent us from achieving the ideal in the land, sea, and air strengths which would guarantee complete security. It is therefore necessary to determine the character and degree of emphasis that must be accorded each service and each weapon—and here there is an inevitable clash between the convictions of the advocates of differing viewpoints.

Further delimiting the area inspected, we find that within the Naval Establishment many important needs must of necessity be subjected to paring in order to conform to the limitations of the navy’s purse.

The planners at the national level, the joint planners of the military establishment, and the planners in the military departments are all beset by problems of great gravity at this particular time; and, unless their respective plans are predicated on sound
philosophy and assumptions, our future as a nation could well be jeopardized.

This year of 1949, then, being a critical year in international, economic, and military affairs, it behooves us to indulge in some unbiased and objective thinking. Perhaps, theoretically, we should wait until the philosophy of the nation and of the security organization are well crystallized before venturing to an appraisal of the Navy's thinking, but pressure of events denies us that breathing spell; moreover, there are many factors which we can profitably examine now and which brook no delay.

So, at the risk of overshooting the mark, I shall essay a vignette of the Navy's current position, some of the factors that have contributed to our position, and some thoughts concerning courses of action for the future.

Any appraisal of the Navy's present and future must be done against the backdrop of unification. Unification is here; the will of the people was expressed in the National Security Act of 1947, and it has been forcibly reaffirmed by the modifications enacted into law this summer. The pattern is established; should parts of the mosaic appear to lack perspective from the Navy's point of observation, nevertheless we are bound by the laws of our country and by the time-tested military proprieties. "Fighting the problem" is unintelligent and may even come to be regarded as something more serious than lack of intelligence. Reasoned disagreements must be entrusted to the democratic processes—they take time, but proof of their merit lies in the record of American achievement.

As a philosophical point of departure, then, face up to the fait accompli of centralized authority and the potent fiscal controls through which this new plan for national military administration is being effectuated.
An objective appraisal of the Navy's current fortunes can only lead to the conviction that the Navy's position has been weakened. Measured in terms of forces, appropriations, and capabilities, there could be no other conclusion. If roles and missions are used as the yardstick, we are confronted with the fact that majority sentiment favors less comprehensive Navy functions than was the case in the last war. It also seems to be the consensus of opinion that in the realm of public relations our position leaves much to be desired.

To say that the Navy's over-all status has been impaired seems to be a sound basic assumption. However, the true significance of the fact can only be derived when we regard our situation in conjunction with an examination into the trend of world affairs, the complexion of our economy, the evolution of strategic thinking, and the fortunes of our sister services. Only in that way can we hope to measure our existing strength in proper perspective.

The national military budget affords a good starting point. It is obvious that fewer dollars and rising costs necessitate reductions. It should be equally obvious that our vast VJ-day forces, pipelines, and installations could not and should not be maintained. On this account, then, shrinking should be expected, accepted, and accomplished.

Inter-service competition for dollars has been widely deplored, but dollars furnish a measure of capability. Dollar-wise, the Navy's budget is declining, and this in spite of the Navy's thirty-nine-billion-dollar material inventory and its widespread D-day commitments. This sort of reduction we can not regard with complacency.

An even more serious matter concerns the various pressures in behalf of restricting the Navy's roles and missions. In this connection, the very potent influence of dollar limitations should be
noted—enforced defaulting on a responsibility through lack of appropriations to provide forces and facilities. Here again we must be alert to the need for disseminating the justification of Navy roles and missions.

At this point, it can be inferred that some of our reductions are right and proper, and that others, to our way of thinking, are not in the best interests of national security. The problem is to differentiate wisely between the logical and illogical.

Unfortunately, clear discernment is rarely a function of disappointment. The men who brought Naval Aviation from its beginnings to its peak find it bitter hard to see their life’s work whittled down. Likewise, the leaders of the Marine Corps who built and fought the Corps through its new and greater traditions of World War II can not accept with equanimity any diminishing of the stature of our elite fighting corps. The same could be said for the men who conceived and fostered the Seabees—and even the poor old battleship admirals.

In virtually every segment of the service, people are witnessing a lessening of lustre and influence. Naturally, these people fight back and fight hard.

And yet, a certain amount of change is inevitable. International alignments, political objectives, scientific developments, the geography of strategy, the distribution of natural resources, the facts of economics—all of these things point clearly to the fact that should another war befall us, it is only reasonable to expect that the composition of our forces will differ in many respects from the armies, fleets, and air armadas of World War II. They would differ if for no other reasons than that the potentialities of the adversaries would be different and many new battlegrounds would be involved. An objective view of such factors as these can lead
to recognition and acceptance of justifiable changes in our responsibilities. It will also serve to isolate proposals not consistent with sea power's verities.

The Navy reaffirms the need for naval attack aviation, the need for the Marine Corps as the masters of amphibious landings, the potency of the submarine, the essentiality of antisubmarine forces, the vital importance of seaborne commerce and seaborne movement, the need for navy-trained gunfire support and support-air operations for amphibious landings, the requirement that we control our own logistic support, and many other proven seapower principles and battle-tested techniques. Nevertheless, the character and geography of any possible opponents of the future are such as to make it most unlikely that an exact duplicate of our 1945 forces would again be required.

Without conceding the validity of any proposal to alter the basic functions and responsibilities of the Navy, common sense demands recognition of dollar realities and recognition of the fact that new tasks confront us in the future. By the same token, not every chapter of World War II will repeat itself in the history of the future.

The moral, at this point, is that in times of peace the tendency is to scale down all military activities, and that cutbacks of that sort are not per se, prima facie evidence of the abolition of roles and missions. Nicety of perception is called for in order to distinguish between wise economy and unwise efforts to handcuff the nation's ability to make full use of its capabilities for controlling the seas and denying it to our enemies.

In many respects, our most serious setbacks have been in the area of public relations. The causes are complex, deep-seated, and in many cases of ancient origin. Nevertheless, it is possible to
isolate and identify some of the happenings which influence thinking with respect to the Navy and sea power.

In the first place, the public has never been made properly aware of the Navy’s wartime accomplishments; this is largely attributable to ultraconservatism and a faulty evaluation of the advantages and disadvantages of secrecy. In any event, we are still suffering from wartime anonymity.

There were irritations that grew out of the war—pulling and hauling in Washington—conflicting demands between theaters—unfortunate interferences between services—smarting after-maths in the wake of publicity difficulties—dissatisfactions rooted in matters of service or individual prestige.

In one respect, good performance has boomeranged. Through farsighted planning and successful execution, the Navy had achieved most of its goals and was well satisfied with its position in the military scheme of things. In a manner of speaking, we had become capitalists in this military world and were quite content to be left alone; there was little that we envied or coveted. On the other hand, there is no gainsaying the fact that from other vantage points some of our treasures looked like ill-gotten gains. The thought has been expressed that in certain fields we had usurped functions not properly belonging to a navy, and had been guilty of costly and unnecessary duplications.

Without attempting to determine the merits or demerits of the matter, we must recognize the existence of such thinking in order to understand history and so to see more clearly the best paths leading to the future.

Then there was “merger”. For the purposes of this discussion, the subject deserves mention only as a factor which has a
bearing on the evolution of public opinion. Around the postwar council tables, the Navy has frequently been in a minority of one. The public is not aware of the many points of agreement, and the public heard nothing of Navy proposals for changes for the simple reason that the Navy was not seeking changes; readers only heard of Navy dissent. *Ergo*, there flowered the impression that the Navy was constantly blocking unification.

Rightly or wrongly, people wearied of the argument—and wearied of a navy viewpoint which nurtured argument.

So, oddly enough, wartime accomplishment and some fine, postwar achievements were lost to sight in the outer darkness created by the focusing of the spotlight on other matters. Some of these latter-day jobs deserve mention.

Immediately upon the termination of war, a comprehensive and well-planned Naval Reserve program was instituted; today the Naval Reserve is a model civilian component program. The Navy had demobilization plans completed before VJ-day and carried out a rapid, disciplined, and orderly demobilization. The preservation of the reserve fleet was a high achievement in the field of technical planning and management, with the result that the Navy’s reserve of weapons is preserved intact and available. The Navy’s disposed of its surplus material in orderly fashion and retained the items that would be needed for the future; the things on the retention list were retrieved, overhauled, preserved, catalogued, and then put on the shelf as a part of an integrated war reserve program. The Navy established an integrated supply system. The Navy immediately instituted a modernization program for its fleet, and a shipbuilding program specializing in prototypes which would embody the accomplishments from the fields of research and development. We promptly established an operational development force to evaluate new weapons and techniques and to put them
into workable shape for general fleet use. The Navy has main-
tained its combat efficiency in the face of every postwar obstacle.

These examples bespeak sound and effective thinking, planning, administration, and operational effort. Could it be that mere efficiency isn't news?

And now to briefly cast up the account.

We see the Navy position weakened.

We see logical reasons for some reductions in naval strength, and we discern other downward pressures which appear neither logical nor sound.

Organizationally, we have become a cog in a machine in which the other enmeshed wheels exert a continuous and interlocking pressure. Gone are the days in which we formulated our own concept of sea power, and, in collaboration with industry and the old naval affairs committees, blueprinted the composition and strength of the nation's fleets.

With an understanding of the past and the present, we can consider our plans for the future. With your indulgence, we will leave the details of planning to the planners; the foundations of our future planning are vastly more important.

Before worrying about our relative fortunes vis-a-vis the Army and Air Force, our first job is perfecting the Navy we have. I hark back to days after the first World War when we got down to 86,000 men, had only one active squadron of destroyers in the Pacific, and there was solemn conviction that the Navy had gone to hell. According to my best calculations, I would just about reach my hundredth birthday before achieving four stripes (I gave no thought to the age of the gentlemen on the selection board).
Fortunately, some tough old characters took the wheel and restored discipline, efficiency, hope, and self-respect—the elements of the much-abused term "morale".

If I exhume the good old days, it is only by way of reminding ourselves that a fighting navy can, did, and will overcome every obstacle to preeminence.

And now to convert philosophy to plain talk.

We of the Navy are American citizens, members of the Department of Defense, professional experts in the business of sea power, and practitioners in the art of leadership. As such, we have a multiple obligation to the citizenry, to the American military team, to our naval seniors, to our subordinates—and to ourselves. None of those obligations must be evaded.

Being a military service, we properly draw inspiration from our traditions, but the story of the past must be screened to find lessons useful for the future. We can look to John Paul Jones for the criteria of a fighting gentleman's character without letting contracts for sisterships of the Bon Homme Richard. Don't confuse the weapons and techniques of past glories with the basic principles of sea power, for, although the fundamentals of sea power are immutable, its tools change.

The past yields lessons and traditions, but do not bemoan its passing. Devote yourselves to finding quicker, cheaper, and better solutions to the myriad problems of the present and future.

Perfect yourselves in every job to which assigned. Learn the art of command by seeking opportunities to lead, and by sitting attentively at the feet of experience. Knowledge is the foundation of strength, usefulness, and leadership.
Work unceasingly to perpetuate the Navy’s rightful pride in its thoroughness, integrity, loyalty-up, and loyalty-down.

Learn all you can about the Army and the Air Force; unification is a fact of life, and there are countless new tangencies with the other services.

Do the best you can with what you have. If circumstances give the Navy less than you think is needed, find new ways of maintaining our high and uncompromising standards.

Subordinate your corps or specialty to the general welfare of the Navy.

Subordinate your Navy partisanship to the laws, rules, and regulations of unification in furtherance of the American military team. Competition is healthy and esprit de corps is vital to a fighting organization, but good judgment is needed to prevent esprit de corps from degenerating into unproductive isolation.

Adhere to the sound tenets of sea power’s credo. The Navy needs the tools to defeat any obstacle to our control of the sea, whatever those tools may be. As experts in sea power, we are convinced that this is so, and we should unswervingly adhere to our convictions. Your country must not be beguiled into giving up one of its great and dearly-bought power aces—sea supremacy. Your loyalty to sea power is loyalty to your country and deserves your keen, constant, and articulate support.

Be frank and fearless in your considered counsels. No valid exception can ever be taken to forthright and mature opinion; there need be no inconsistency between honest belief and loyal compliance with the dictates of constituted authority.

Unceasingly study the possible threats to sea power and seek to devise new means of exercising it for our own benefit and
denying its use to enemies. By so doing, we will not only solve the future's problems, we may well shape the future itself.

Do these things and the country need have no fear for its supremacy at sea. Do these things and you need have no fear for the Navy's future—you will be too busy.

Gentlemen, twice in my lifetime I have been through periods of demobilization. Once, I observed a decline of American sea power resulting from a weary world's hope of finding peace in disarmament. I have witnessed the crumbling of Germany's and Japan's sea power as a sure prelude to their defeat. In American history, we find even drearier chapters telling of the utter desuetude to which our Navy came early in the nineteenth century and again after the Civil War. Today—and I am being completely frank—there is again apparent a tendency to minimize the need and importance of sea power. In such times the Navy is put to its greatest test.

There must be no folding up—the challenge must be accepted. Disappointment is no acceptable signal for discouragement—that would be betraying our traditions.

There is boundless opportunity for the individual in the Naval Service—and boundless opportunity to serve the United States by continuous, intelligent, and courageous advocacy of the Navy's proper goals. The opportunities for distinguished service did not pass with the distinguished servants of the past.

There is a job to be done—a job that requires the epitome of brains, industry, leadership, and missionary work. The job is an all-hands maneuver. If every man does his bit unremittingly, cheerfully, and to the best of his ability, we will always be able to take pride in the fact that this country has a Navy second to none—and that the Navy is occupying its proper place in the scheme of national security and world peace.
Important changes were made in the whole structure for national security when Congress passed the National Security Act of 1947. During the past two years most of us in the armed forces have become more or less familiar with these changes and with their impact on all phases of military operations.

As you know, the President has recently signed another bill entitled "The National Security Act Amendments of 1949." It is particularly timely, therefore, to discuss the Organization for National Security in the light of these newest changes with which we must also become familiar.

All of us urgently need to understand what is going on. If I can indicate how some of the pieces of the puzzle fit together, we may be better able to see the present Organization for National Security as a whole picture. During the year you will have the opportunity to examine the picture in more detail.

At the Naval War College graduation ceremonies last May, Under Secretary of the Navy Dan A. Kimball made some significant and challenging remarks.

"The very nature of the National Military Establishment is being altered at the top and all of you will be remiss in your duty if you do not endeavor to comprehend what these changes mean."

Colonel Mangrum is a member of the Naval War College Staff.
“The trend is now toward closer and more intimate control at the center, a control that goes far beyond policy. This means, naturally, less flexibility of action for the man on the spot. If you are to function properly under these new conditions you must give them cool and studious reflection, and more than that, you must apply yourselves with care to working within the limitations they impose.”

It very patently behooves us, therefore, to see what these new conditions are and what new kind of organization this is, if we are to operate usefully within it.

The National Security Council.

Under the general title, Organization for National Security, I wish to discuss first the agencies which are outside of the Department of Defense and responsible directly to the President.

The first of these is the National Security Council.

The Council brings together officially the civilian heads of those Federal agencies which are largely responsible for our national security. The permanent membership of the Council now consists of the President, the Vice-President, the Secretary of State, the Secretary of Defense, and the chairman of the National Security Resources Board. The changes recently made in the law added the Vice-President, and removed the three service secretaries. The President has authority, subject to the advice and consent of the Senate, to add other members on a temporary basis, and he has added Secretary of the Treasury Snyder. Mr. Sidney Souers is the executive secretary of the Council.

The function of the Council is to advise the President with respect to the integration of domestic, foreign, and military policies relating to the national security. In brief, it outlines and attempts to correlate our foreign policy with our military policy.
sees that our foreign policy does not involve commitments that are beyond our capabilities, or, if it does involve such action, that we accept it as a calculated risk.

We won a great victory in World War II, only to find that after liberating a good part of Europe from one totalitarian regime, it is quickly falling under the influence of another. Political critics believe that if we had had a national objective—if we had known what we were after—such a situation would not have arisen. There is a certain amount of substance to that criticism. The formation of a National Security Council should prevent the recurrence of errors in foresight, provided that it functions the way it should and it appears to be functioning that way now.

This does not mean that the State Department has abdicated any of its responsibilities. Secretary of State Acheson and his department still have the central responsibility for formulating important decisions at top policy levels. The National Security Council provides assurance that decisions are made only after a thorough-going estimate of the situation has been made.

The State Department assumes the leadership role in the charting of foreign policy. Yet the process allows the men in the Pentagon—and also spokesmen for the domestic economy—to know what is going on, and to contribute their views before an issue is finally decided.

The composition of the Council gave rise to considerable concern over possible military domination of our foreign policy. These fears may be somewhat allayed by the removal of three of the four civilian heads of the military departments. As a matter of practice, matters that come before the Council are referred to the Joint Chiefs of Staff for a military point of view. The Joint Chiefs are said to confine themselves very definitely to a military
point of view, so there seems to be not too much cause for concern about military domination of our foreign policy. In any event, it is sheer folly to imagine that policy can be made in these times without reference to the immediate realities of the strategic situation.

The President has personally attended about a fourth of the Security Council sessions, which usually take place every two weeks. Whether he attends or not, the deliberations of the Council are brought to his desk within twenty-four hours by Mr. Souers and the President takes prompt action on the recommendations which have been made. Most authorities now seem to feel that the National Security Council is making a material contribution to our security and to our foreign policy.

Central Intelligence Agency.

Under the National Security Council we have the Central Intelligence Agency. It is established for the purpose of coordinating the intelligence activities of the several Government agencies and departments in the interests of national security. There is no intention that Central Intelligence should supersede departmental intelligence. As Admiral Hillenkoetter, the Director, says:

“We couldn’t get along without the departmental agencies. They are our biggest suppliers as well as our best customers. CIA would be a head without a body if it did not have them.”

The CIA has no police, subpoena, law enforcement, or internal security functions. The Federal Bureau of Investigation, which does have these functions, operates only in the domestic field. The FBI is required by law to make available to the CIA anything which may be essential to national security. Again to paraphrase Admiral Hillenkoetter—“they work very closely together.”

The function of the CIA, in brief, is to obtain information
which concerns the national security, correlate it, evaluate it, and disseminate the results to those who need to use it. Thus, it serves not only its principal, the National Security Council, but all other appropriate agencies of the government as well.

National Security Resources Board.

On the same level as the National Security Council we have the National Security Resources Board. It is also directly responsible to the President. It's membership consists of the Secretaries of State, Treasury, Defense, Interior, Agriculture, Commerce and Labor, and a Chairman appointed by the President.

The job of the NSRB is the allocation of the human and material resources of the nation in furtherance of a war effort.

It advises the President concerning the coordination of military, industrial, and civilian mobilization. It has no direct command function. The board provides the nuclei, which in time of war would be expanded into such offices of economic command as an Office of War Manpower, Office of Economic Stabilization, Office of Economic Warfare, Office of War Transportation, Office of Price Administration, and so on.

Part of the NSRB’s “Preliminary Plan for Economic Mobilization” is the drafting of emergency legislation to provide the President with emergency powers, and for the creation of these economic commands.

The delays in the mobilization of this country in World War II would have been disastrous had our Allies not acted as a buffer between us and the enemy while we organized our resources. The Congress has presently foreseen that if the nation is to be better prepared in the future to defend itself against aggression, it is necessary to plan our economic command beforehand.
It is important to maintain the clear distinction between the NSRB and the Munitions Board, which comes directly under the Secretary of Defense. The two Boards work closely together. The Munitions Board consolidates the requirements of the Armed Services and sends them to the NSRB. When the NSRB has allocated certain resources to the military establishment, the Munitions Board handles the detailed arrangements for the use of this allocation. I shall have more to say about the Munitions Board later on.

Mobilization planning must be continuous. The Security Act recognizes the interdependence of strategic and economic planning. The NSRB and the Munitions Board together are assembling the data for testing the economic feasibility of strategic plans developed by the Joint Chiefs of Staff. Quick approximations will be made of military requirements on 240 items which the Munitions Board believes will represent a significant percentage of total requirements. The NSRB, with the aid of other government departments, will develop estimates of the requirements of the industrial and civilian economy. Total requirements will be compared with estimates of resources so that, within a short time, the Board can tell the military establishment the degree to which its strategic plan is feasible.

The two chief criteria for unification efforts were to be efficiency and economy. The key function of the NSRB is the effective wartime use of resources, balancing military and civilian requirements. Wartime effectiveness is the ultimate goal. It may be necessary in times of international tension, as well as in wartime, to forego economies and administrative efficiencies which could be achieved under purely peacetime conditions. Conversely, it may be necessary to sacrifice some mobilization potential to meet budgetary realities during peacetime—in which case, economies and administrative efficiencies are invoked, not by military choice, but through practical necessity.
There is some difference of opinion about how things are going in the NSRB (as indeed in the whole organization for National Security). Mr. Bernard Baruch recently quarreled with the White House about the extent of, or lack of, mobilization planning. At present the NSRB does not have a permanent chairman. The President has not yet submitted a new nomination as chairman since Mr. Wallgren was turned down by the Senate Armed Services Committee. Mr. John Steelman, of the President's Staff, is acting chairman.

The National Security Resources Board, the National Security Council, the CIA, and the Department of Defense constitute the present structure for National Security. If we are to understand fully the structure of the Defense Department itself, it is important to have thorough-going recognition of the functions of these other agencies. They are the political and economic balance-wheels for the military.

**The Department of Defense**

The Department of Defense is a 15 billion dollar insurance business in this fiscal year 1950. No one in this room is unaware of the fact that the policy holders haven't been too happy about the way the business is being run. They seem to have the idea that the directors could reduce the cost of this insurance by large percentages if only they would leave their brass knuckles outside the board of directors' room and agree on everything. One school of thought would simply hand all the brass knuckles over to one individual who would use them only when necessary, of course, but for the common good.

The record shows, however, that much progress has been made in two years under new management. It is a different kind of management and not easy for people either in or out of the service to understand quickly. Habit patterns change slowly.
A quote from the conclusion of one of the speeches by the late Mr. Forrestal is to the point:

“'I do not wish to leave with you the impression that the job is done. It is far from done and it will be a substantial time before it is. I say to you quite frankly that I have preferred to make haste slowly, because I have had constantly in mind that we are charged with a heavy and great responsibility—the security of the nation. In the process of achieving a new form of organization, we must be sure we retain the capacity to fight successfully. Charts cannot win battles.'

Let us turn then to an examination of what composes this job of reorganization as specified by the National Security Act.

First, what did the Congress intend to do? The Declaration of Policy in the Act is short and it will be useful to keep it in mind. It reads as follows:

"Sec. 2. In enacting this legislation it is the intent of Congress to provide a comprehensive program for the future security of the United States; to provide for the establishment of integrated policies and procedures for the departments, agencies, and functions of the Government relating to the National Security;

to provide three military departments for the operation and administration of the Army, Navy, (including naval aviation and the Marine Corps), and the Air Force, with their assigned combat and service components;

to provide for their authoritative coordination and unified direction under civilian control of the Secretary of Defense but not to merge them; *

*Italicized portions indicate additions to this section by the National Security Act Amendments of 1949 (Public Law 216).
to provide for the effective strategic direction of the armed forces and for their operation under unified control and for their integration into an efficient team of land, naval and air forces, but not to establish a single Chief of Staff over the armed forces nor an armed forces general staff, (but this is not to be interpreted as applying to the Joint Chiefs of Staff or Joint Staff). *

This is, of course, an attempt to improve the administration of National Security.

Regarding administration, Mr. Reginald Gillmor, former Vice-Chairman of the NSRB and for many years president of the Sperry Corporation, has some timely things to say. He speaks of an “Ultimate Science”, as old as history, which has no name but whose objective is order; order among men; order which will permit their free cooperation and the release and use of all their varied talents and skills.

The instruments for this potential science of order are known by such terms as government, management, organization, and administration. Administration is the broadest of these terms and can, therefore, be used to include all the others.

In brief, he says, the two political ideologies into which the world is divided are primarily two ancient and mutually antagonistic concepts of administration.

One, the centralization concept, based on the assumption that the governing organization is omniscient and that the best results will be attained if all others obey its will.

*Italicized portions indicate additions to this section by the National Security Act Amendments of 1949 (Public Law 216).
The other, or decentralization concept, based on the assumption that the governing organization is a ministry for providing order and that the best results come from the maximum of delegation and individual freedom.

So, the new organization for national security can be said to be a foray into the field of this “ultimate science“ with a greater degree of order as its objective. Mr. Gillmor’s definitions may help to explain why the road we are traveling has not been without its bumps.

**The Secretary of Defense**

The National Security Act Amendments of 1949 makes the Defense Department an Executive Department of the Government. The Army, Navy, and Air Force Departments are no longer executive departments. They are now military departments of the Department of Defense. The three service secretaries retain their titles but they no longer have Cabinet status and are now clearly subordinate to the Secretary of Defense.

The Office of Under Secretary of Defense was established in April of this year and Mr. Stephen T. Early is the first incumbent. The title of this office has now been changed to Deputy Secretary and he takes precedence over the three service secretaries.

The principal changes effected in the Secretary’s Office by the Amendments Act clarify Mr. Johnson’s authority to direct and control. He is now provided with direct authority over the military budget.

The 1947 Act provided for three Special Assistants to the Secretary. These special assistants are now given the rank of Assistant Secretaries of Defense and they take precedence next after
the Secretaries of the Army, Navy, and Air Force.

There probably will be some internal changes in the organization of these offices, but it is too soon to tell what they may be. Until the present time, the three special assistants have presided over such offices as:

- Office of Counsel
- Office of Legislative Liaison
- Office of the Budget
- Office of Accounting Policy
- Office of Progress Reports and Statistics
- Administrative Office and Secretariat

Mr. McNeil’s Office of the Budget is, of course, a vitally important function in the new Secretary’s Office. The 1950 budget is the first to be submitted in accordance with the National Security Act. It was bound to run into many new administrative difficulties. These are particularly sharpened because of the colossal size of the military budget compared to the remainder of the Federal Budget.

In a lecture at the National War College last year, Mr. McNeil said, relative to the problems of his Office of the Budget:

“The concepts of what should comprise the budget function may be as numerous as the number of agencies or the number of people asked to comment on the subject. They would range from the concept that the budget’s primary job is procurement of funds, to the other extreme wherein the budget function dictates to all phases of operations. My own concept of the budget function is that it should be much more than a procurement device. It must be an effective tool for management.”
The influence of the budget on the whole organization of the Department of Defense, and indeed, on national objectives and national strategy, cannot be minimized. It is well to try to understand all that we can of the principles which underlie the new administration of the military budget.

This is a good place to mention, briefly, another of the changes recently effected. Title IV of the 1949 Amendments Act contains various provisions all of which are intended to implement the Secretary’s authority over the military budget, and to revise the whole fiscal structure. While it is a vitally important provision of the new law, it can be excluded from this discussion of organization.

The Act also provides that one of the new Assistant Secretaries shall be the Comptroller of the Department of Defense. The Office of Comptroller is also established in each military department.

Armed Forces Policy Council.

Dropping down now from the Office of the Secretary, let’s see who advises or works for the Secretary. First, there is an advisory body, the Armed Forces Policy Council. This was formerly called the War Council. It’s name and composition have been changed by the 1949 Amendments to the National Security Act.

It now consists of the Secretary of Defense and the Deputy Secretary, the three service secretaries, the Chairman of the Joint Chiefs and the three Joint Chiefs of Staff. The Council advises the Secretary on matters of broad policy relating to the armed forces. Examples are the military aid program, and policy under certain budget cuts.

We don’t need to spend much time on the Policy Council. It should be noted, however, that the Secretary of Defense is Chairman of the Council and the law provides him with power of decision.
This gives force to his position, and in a sense, gives him direct command powers, emphasizing the trend toward the “centralization concept.”

**Joint Chiefs of Staff.**

We should take up next the organization of the Joint Chiefs of Staff and the Joint Staff. All the remaining activities of the Department of Defense are conditioned by the work of the Joint Chiefs.

It should be noted and remembered that the Joint Chiefs of Staff actually were an outgrowth of the Combined Chiefs of Staff. Here, the military leaders of sovereign nations met to formulate broad strategy and programs for World War II. To insure prior agreement among U. S. members, it was necessary that they first meet together for preliminary discussions. Thereafter, they became known as the Joint Chiefs of Staff.

No legislative or executive action was taken to formalize the existence of the JCS until passage of the National Security Act of 1947. The absence of any specific charter gave great flexibility to the organization and allowed it to develop according to need as the war progressed.

The National Security Act incorporated the JCS organization into law approximately as it existed at the end of the war. The Act preserves the Joint Chiefs’ status as the principal military advisors to the President, and gives them a similar status with respect to the Secretary of Defense.

Now, the office of Chairman of the Joint Chiefs of Staff has been created. He takes precedence over all other officers of the armed services, but does not have military command over the Joint Chiefs or of any of the military services. He is the presiding
officer and provides agenda for meetings of the Joint Chiefs, and assists them to prosecute their business promptly. He has no vote in Joint Chiefs decisions, however. It is also his job to inform the Secretary of Defense and, when appropriate, the President, when the Joint Chiefs cannot agree on an issue.

The functions of the Joint Chiefs of Staff are summarized as follows:

1. Preparation of strategic plans and provision for the strategic direction of the military forces.
2. Preparation of joint logistic plans and assignment of logistic responsibilities.
3. Establishment of unified commands.
4. Review of material and personnel requirements.
5. Formulation of policies for joint training.
6. Formulation of policies for coordinating military education.
7. Provision for representation on Military Staff Committee of the U. N.

One of these functions, you will note, is the establishment of unified commands in strategic areas when such commands are in the interest of national security. Initially, unified commands were set up where possible hostile action might require a single commander who could act without waiting to hear from Washington. Time and experience have proven that it is necessary to go even further in the delegation of authority to these unified commanders. This is required mainly in the logistic field in order to secure greater unification of both manpower and material. It is evident that the unified command plan is here to stay as the means of directing offensive operations in time of war.
At present, there are six unified commands. These are: Far East, Pacific, Alaska, Caribbean, Atlantic, and Europe. The Commanders-in-Chief of these commands report directly to the Joint Chiefs of Staff. Three other commanders also report directly to the Joint Chiefs—the Commanding General of the Strategic Air Command, the Commanding General, U. S. Forces, Austria, and the Commander-in-Chief, Naval Forces in the Eastern Atlantic and Mediterranean.

The Joint Chiefs of Staff organization has two major elements, the Joint Chiefs of Staff Committees and the Joint Staff. The Committees are charged with the preparation of plans for the JCS. The committee members are officers whose primary assignment is with the Department of the Army, Navy, or Air Force. The chairman of each committee is a Deputy Director of the Joint Staff. The three principal committees are—Strategic Plans, Intelligence, and Logistic Plans.

The Joint Staff is headed by a Director and consists of 210 officers, the limit under present law. They are drawn equally from the three services, and their sole duty assignment is to the Joint Staff. The Joint Staff is divided into three main Groups, Strategic Plans, Intelligence, and Logistic Plans, and each Group is headed by the Deputy Director of the Joint Staff who is also chairman of the related committee. The relationship between the groups and their parent committees is substantially the same as the relationship between a commander and his staff.

The size of the Joint Staff precludes it from becoming a fact-finding body in its own right, and it depends, therefore, upon information received from fact-finding agencies, boards, and committees of the services. Joint Committees under the Joint Staff Director have been organized for this purpose. For example, the
Joint Communication-Electronics Committee is composed of the senior officers of the communications components of the three services; namely, the Chief Signal Officer of the Army, the Chief of Naval Communications, and the Air Force Director of Communications. This committee is concerned with establishing common communications procedures and doctrines.

The most difficult of the several types of strategic plans which the Joint Chiefs must face is the outline war plan for Mobilization Planning and Industrial Mobilization Planning. If we consider this type of plan for a moment, you will see the extent to which the whole Defense Department is dependent on the proper production of such plans by the Joint Chiefs.

It must be understood, first, that the outline war plans of the JCS are not detailed operational plans. The outline strategic plan, as such, consists of four essentials:

(1) A statement of national war objectives.
(2) Statement of enemy capabilities
(3) A broad general concept of operations, and
(4) A statement of a number of time-phased military tasks to be undertaken by our forces, including statement of the major tactical units to perform the tasks.

This outline war plan for Mobilization Planning and Industrial Mobilization Planning forms the basis for the Mobilization Plans of the three services, and for the Joint Mobilization Plan. It is, in fact, the basis for the work of the Munitions Board. Thus, you can see that things must move along smoothly in the Joint Chiefs' office if anybody else is going to do his work properly.
Munitions Board

This is a good point at which to move our discussion along to the Munitions Board. The Munitions Board must have the phased requirements of the three Mobilization Plans for end products, raw materials, industrial installations and facilities.

Thereafter, in order to avoid the possibility of doing a lot of unnecessary work on Industrial Mobilization Planning for a strategic plan which is too fat for the industrial capacity of the country, the Munitions Board conducts an industrial feasibility test early in the planning cycle.

To do this, they choose about 240 of the more important end products and get “flash” estimates of these requirements from the services. These are compared with estimates of industrial plant capacity.

It might be said, by way of summarizing the foregoing, that in the logistic field the Joint Chiefs are responsible for determining the “what”, “where”, and “when”, and the Munitions Board the “how”.

It would require too much detail to explore further the functioning of the Munitions Board. Members of the Board are the Under or Assistant Secretaries of the Army, Navy, and Air Force, with a civilian chairman appointed by the President.

The Board clearly possesses certain executive authority, stemming from the Secretary of Defense. It differs in this respect from the National Security Resources Board. Those who criticize the weakness of the NSRB seem to fear that the Munitions Board, as part of the Department of Defense, would usurp the functions of
the NSRB if war should come suddenly, and that the national economy would thereby come under military domination.

**Research and Development Board**

So much, then, for the major planning and directing agencies of the Department of Defense. The last statutory agency created by the National Security Act of 1947 is the Research and Development Board. This board is an outgrowth of the Joint Board created in 1946 by the Secretaries of War and Navy.

The Board consists of a Chairman, appointed from civilian life by the President, and two representatives from each military department. The present chairman is Dr. Karl T. Compton. The Board is our means of keeping abreast of scientific discoveries and of finding military applications for them. The chief responsibility of the Board is to prepare integrated programs of research and development, in the light of which the individual projects of the Army, Navy and Air Force can be evaluated. The Board decides who develops what weapons. It makes sure that there is no unnecessary duplication in the activities of the three services.

The Board operates principally through its twenty odd committees, covering the whole broad field of science. The committees are composed of top-ranking civilian scientists, officers of the three services, and representatives of other government agencies.

The Research and Development Board is, then, a staff agency of the Secretary of Defense, to insure maximum exploitation of the scientific potential of the nation. Both the Research and Development Board and the Munitions Board are affected in the same way by the National Security Act Amendments of 1949. The authority of the Secretary to direct and control is clarified, and the responsibility of both Boards to the Secretary is made specific.
In view of the high cost of research and development, the Board gave serious consideration to evaluating weapons and weapons systems at an earlier stage. As a result of its recommendations, the Secretary of Defense established the Weapons Systems Evaluation Group last December. This Group takes its direction from the Secretary but is now responsive to both the Research and Development Board and the Joint Chiefs. The directive which established the Group provided that after one year of organization and trial, it would become a component of the Joint Chiefs of Staff.

This is a good example of the many evolutionary processes that have been going on in the Organization for National Security in the past two years.

Conclusion

Each of the several agencies of the Organization for National Security provides ample material for study which is important to us here. As a matter of fact, you will hear visiting speakers from a number of these agencies during the year.

I have summarized what we might call the staff and command aspects of the Organization for National Security. The three military departments complete the structure and you will hear about them in presentations to follow.

This presentation was designed simply to highlight the relationships between the various parts of the organization and provide an introduction—a point of departure for your own further study.

This is the way things are today. I mentioned earlier that not everyone was satisfied and happy with this new organization. No
doubt further changes will be proposed in time. If the past is any criterion, we can probably expect strong differences of opinion on new proposals to alter the structure.

I will conclude this presentation, then, by referring again to Mr. Kimball’s admonishment of last May—

“You will be remiss in your duty if you do not endeavor to comprehend what these changes mean.”
KEYS OF THE KINGDOM OF THE MIND
A lecture delivered by
Dr. Daniel L. Marsh
at the Naval War College
March 22, 1949.

“Mens Regum Bona Possidet,” said Seneca, a Roman Philosopher of nineteen hundred years ago. Translated into English, this is what he said: “A good mind possesses a kingdom.” A similar sentiment was expressed by Francis Quarles, an English poet of three hundred years ago: “My mind’s my kingdom.”

Without irreverence, we may find a suggestive similarity between the keys of the kingdom of a good mind and the keys of the Kingdom of Heaven. Jesus used the metaphor of the keys after Peter, in a luminous moment of inspiration and enthusiasm, had made a memorable utterance in which he revealed a profound knowledge of the nature of Christ. Then Jesus said that He would deliver to Peter the keys of the Kingdom of Heaven. A little later, He used the same metaphor and gave the same power to all the Apostles. The dynamic element in the metaphor is knowledge, expressed in the old proverb, “Knowledge is power.” On another occasion, Jesus upbraided the lawyers because they had “taken away the key of knowledge.” What they had done was to substitute a false faith in the wrong kind of knowledge, with the result that the right kind of knowledge was ignored and forgotten.

Reduced to its simplest terms, the keys of the Kingdom of Heaven meant the proclamation of the Gospel, the heart of which was the knowledge which Peter had attained, and which he declared at Caesarea Philippi, which knowledge was later attained and proclaimed by the other Apostles also. It is still the key of

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effectual preaching by Christ’s true followers, of whatever name or sign.

I have evoked this familiar passage of Scripture, not to expound it, but to draw an analogy. Let me therefore shift the metaphor to the keys of the Kingdom of the Mind, and I shall name certain indispensable attributes of intelligence,—characteristics essential to the gaining of knowledge which, when transmitted in the alembic of experience, becomes wisdom—the knowledge and wisdom which makes one’s mind a kingdom. I cannot, of course, name all the keys of the Kingdom of the Mind, but I am going to outline for you five essential traits indispensable to anyone who would be intelligent.

Curiosity is the first, the curiosity which goads one to investigate, to find out, to know. “Why?” is life’s most arresting question. An insatiable hunger and thirst after knowledge is the goad and spur and push of all science. Curiosity sends men to libraries and museums. Curiosity has led mankind to unearth buried cities and to explore the upper atmosphere. Old Samuel Johnson declared that “Curiosity is one of the most permanent and certain characteristics of a vigorous intellect.” It is the first and the last passion of a great and generous mind.

Benjamin Franklin had the most full-orbed mind of the colonial period. He is esteemed by many European critics as the finest intellect that America has yet produced, and he was incredibly and ineradicably curious. “What?” and “How?” and “Why?” were constantly welling up from his insatiable curiosity. When he went to Europe, the ship on which he traveled was slow, had no newspapers and no radio, and yet Franklin never found the journey tedious or boresome; for all the way he was trying to learn something, now measuring the depth of the ocean, now taking the temperature of the water, now studying the stars or the sun or an eclipse, now
making observations concerning the weather, and the course of the
ship, and winds, and flying fish, and rainbows, and everything else
that came across his vision.

Attention is the second attribute of true intelligence. There
is no use in investigating what curiosity discovers unless you pay
attention to what you are investigating. After many years of ex­
perience in education and in dealing with human beings, I am fully
persuaded that the difference between the superior and the mediocre
student is more often a matter of attention than it is of quality of
brain. Oh, to be sure, power of attention is quality of brain! But
the principal difference between stupidity and alertness is in this
single element of attention. Isaac Newton said he was not aware
that he excelled anyone “except it might be in the matter of paying
attention.”

By attention, I mean close and shrewd observation; volun­
tary thinking; the taking possession by the mind, in clear and vivid
form, of one out of what seem to be several simultaneous possible
objects or trains of thought. Too many persons pay no attention
to what is going on about them. Their minds go wool-gathering.
They will read a page, and when they have finished, they have no
idea what they have read; for while their eyes scanned the page,
their thoughts idled. While they are supposed to be listening to an
address or a sermon, they are inattentively whispering to some­
body else, or dreaming about something that happened yesterday,
or scheming for tomorrow. They hear the voice of the man talk­
ing like a buzz-saw over their heads, and they suppose that he is
saying what he ought to say, and they let it go at that. Such persons
are self-doomed to mediocrity. I repeat that precisely focused at­
tention upon the matter in hand is a principal ingredient in mental
superiority.

Pope, in his *Essay on Man*, observes that “Strength of mind

...
is exercise, not rest,” and Musonius warns us that “To relax the mind is to lose it.” The person who wishes to possess the Kingdom of the Mind should require himself to practice the giving of precisely focused attention until attention becomes habitual. A good exercise is to require yourself, when you are out in the country, for instance, to note meticulously and consciously what you see: the varying tints of green across the landscape, the moving shadow of a cloud, the flash of a bird or the flutter of a butterfly, honeybees over flowers like sparks flying upward from a flame, cornstalks like marching armies waving their banners over the battlements of want, or shocks of corn like tattered wigwams across the field. And then require yourself to note what you can hear: the whispering of the breeze in the tops of the trees, the drowsy drone of bees, the far barking of a dog, the calling of a bird to its mate. Or as James Whitcomb Riley’s Hoosier farmer would put it: see “unwrit poetry by the acre” and “hear nothin’ but the silence.” And then require yourself to give attention to what you can smell: the smell of bruised grass, the varying odors that come from the leaves of different trees, the smell of fresh-plowed ground, or of rain in the dust of the road. If we would be intelligent, we must pamper curiosity and cultivate the powers of observation, so that we shall go through life with the alertness of Earl Musselman, who had been born blind, but who at twenty-two years of age, by an almost miraculous operation, had been given his sight. Then he looked upon everything with the attention and the enthusiasm that an astronomer sees a new world swim into his ken.

I have mentioned Benjamin Franklin’s insatiable curiosity. He had commensurate powers of attention. He gave attention until he became informed concerning everything: electricity and balloons; earthquakes, fogs, and gulf streams; flying fish, hop toads, elephants and houseflies; the history of the human race and the behavioristic responses of individuals.
It was said that Darwin never slept, which simply meant that he kept awake to what was going on around him. Maeterlinck observed bees and Sir John Lubbock observed ants until they knew all about them, their policy and economy, method, battles, conflicts, conquests, and all their wondrous systems of society. Ten or twelve years ago a little book was published under the title, The Insect Man. It was the story of Jean Henri Fabre, who had studied insects in general and wasps in particular until he became the world’s greatest authority upon them. He based his work on direct observation. He accounted for his intellectual enthusiasm by relating that while he had always been interested in insects, yet one day he had read an uncommon essay by a great student, and that the effect was as if a spark had fallen into his mind and set it all alight. “What matters in learning,” he said, “is not to be taught, but to wake up. A spark must explode the sleeping explosives.” That would mean that education is more a matter of ignition than of erudition; more a matter of attention than of pedantic pretensions.

Reflection is the third key to the Kingdom of the Mind. To think follows along with curiosity and attention. First we have the desire to know, and then we give attention to the thing about which we want to know, and then we use the third key to unlock further doors of the Kingdom of the Mind; that is, we think upon what we have observed or read or heard; we ponder, we meditate, or as Shakespeare says in Julius Caesar: “My noble friend, chew upon this.” Samuel McChord Crothers points out that “Our thought is the key which unlocks the doors of the world. There is something in us which corresponds to that which is around us, beneath us, and above us.” Emerson notes that “Man carries the world in his head, the whole astronomy and chemistry suspended in a thought.”

The mentally lazy person breaks down at this point. This
key is too hard for him to handle. James Bryce, one of the most learned Ambassadors Britain ever sent to the United States, declares that "to the vast majority of mankind nothing is more agreeable than to escape the need for mental exertion. . . . To most people nothing is more troublesome than the effort of thinking." Henry Ford, in an interview at the height of his powers some twenty years ago, said: "Thinking is the hardest work there is, which is the probable reason why so few engage in it." Ford's distinguished friend, Thomas A. Edison, posted on signs about his laboratories this dictum: "There is no expedient to which a man will not go to avoid the real labor of thinking." Psychologists assure us that the average man has twelve billion brain cells, but uses only a small fraction of that number. No Kingdom of the Mind is possible without rigorous and disciplined thinking, patient and persistent thinking, independent and critical thinking, openminded and flexible thinking, straight and accurate thinking. The very word *man* suggests that the human being's distinguishing characteristic is *to think*. Wherever the word *man* appears in the various Aryan languages of the whole Indo-European group, it bears the double meaning both of human being and also of the ability *to think*. The root word is in the Latin *mens*, and in the English *mental* and *mind*.

Man is not man merely because he stands at the terminal end of evolution, with an elaborately developed body and an amazingly complex nervous system. It is in the capacities of his spirit that man differs from the rest of the animal creation,—his reflective consciousness; his power of abstract thought, to think about the use of tools, and about the essential qualities in human life, and about creative living; his amenableness to moral law; his power of choosing supreme ends, being drawn up from above by a sort of law of celestial gravitation, instead of being pushed forward only from behind. Goethe, the greatest German thinker of the nineteenth cen-
tury, sums it up in three words: Gedenke, zu leben: “Think, to live.”

Memory is a fourth characteristic of true intelligence. We have seen that there is a difference between erudition and intelligence, but memory is essential to both of them. Alexander Smith opines that “a man’s real possession is his memory. In nothing else is he rich, in nothing else is he poor.”

What is the use of encouraging a desire to know, or of paying attention, or of thinking, if we cannot remember what we wanted to know, or what we found out, or the conclusions of our thinking. A good memory is not only a mark of superior intellect but is essential to it. Can you name any person in history who was essentially great who did not have a reliable memory? I recently read B. C. Forbes’s America’s Fifty Foremost Business Leaders. The distinguished author’s scrutiny of these foremost leaders impels him to list certain qualities that are necessary for outstanding success, such as foresight, statesmanship, ability to select, to lead and to inspire other men, great mental and physical stamina, and so on. But prominently among these essential qualities, he names “abnormal memory” as a quality necessary for outstanding success in business leadership.

Hitler was a bad man and accomplished great evil; but everybody will admit that he was a man of amazing abilities and superior powers. Goering, who was as close to him as anybody ever was, believed that Hitler’s success as a strategist was due largely to his “prodigious memory for detail.” Let me quote Goering: “Hitler carried in his head the details of armaments, armor, speed and draft of practically every important warship in the world. Ask him for the figures on, say, a Brazilian cruiser, and he could provide them at a moment’s notice.”

Franklin D. Roosevelt was by no means as great a man as his idolatrous followers think he was; but, nevertheless, he was a
dynamic personality, and undoubtedly he was a great leader of men. Harry Hopkins, who certainly was in a position to know his hero, says that Roosevelt had a “phenomenal memory,” and Hopkins thinks that his phenomenal memory was one of Roosevelt’s most distinguishing traits.

John Wesley set into movement world-shaping currents of thought and experience. An historian at Oxford University said once in my presence that, measured in terms of his influence upon mankind, Wesley was the greatest Englishman of all the centuries. Wesley was at once a profound thinker and a practical organizer, and at the same time a shrewd observer of men. He once forthrightly declared that he doubted whether anyone was called to preach if he did not possess a good memory.

Let these illustrations suffice. Forbes says that “abnormal memory” is essential to leadership in the business world. Hitler had a “prodigious memory.” Franklin D. Roosevelt had a “phenomenal memory.” John Wesley said that no man was called to preach who did not have a “good memory.”

Someone will say that unless a person is born with a good memory, he cannot have it, and that therefore he is not to be praised for the superiority which a good memory affords him, nor blamed for the mediocrity that results from a poor memory. This is specious arguing. A good memory is partly a gift and partly a growth. It is not so much a legacy as a triumph. It is not bought with a price: It is a natural product. It cannot be commanded by fiat: It is an effort. There is no reason why anyone should not have a dependable memory.

“What rules can one follow to acquire a reliable memory?” is an oft-asked question. In attempts to answer it, all kinds of artificial memory methods have been proposed. I remember one good
illustration. Some years ago a man had been imported from outside Boston to be the executive of a sporadic community committee. One day I entered the committee room and was introduced to this committee executive. In acknowledging the introduction, I remarked that I had met the gentleman, whom I shall here call Mr. Smith (although that was not his name). Whereupon, Mr. "Smith" said: "I know I have met President Marsh several times, but I have no memory at all for names or faces." And then he enthusiastically said: "I am now taking a course of study that is going to enable me to remember what I want to remember. It is memory by the law of association. The present circumstance will furnish a good example. I have met President Marsh several times, but I have never been able to recall his name, even though it is not an uncommon name. From now on, I am going to remember it, and this will be the method. Dr. Marsh is President of Boston University. His office is in the Back Bay of Boston. Long ago, the Back Bay was marsh land. The University of which he is now President is the most important institution in the Back Bay. That means that the Back Bay is still Marsh land! There I have my association! The President of Boston University, whose office is in the center of the Back Bay, and whose name is Marsh, and the Back Bay was once marsh land—there you have it: The law of association will henceforth take care of my memory on that subject."

The next day I was going along one of the streets of Boston, and I met this gentleman. I said, "Hello, "Smith." He stopped and looked at me with a question mark all over his face, murmuring: "Hello——, Hello——." "Don't forget your law of association," I said. Whereupon he replied: "Yes, I know that I was going to remember your name by some association; but I can't remember the association!"

Not by such stilted, involved, and artificial means is memory developed; but in a perfectly natural way. Let me mention six
points of fellowship with a good memory,—points which you may not find in books on the subject.

First: Be logical in your thinking. Thomas Fuller in his *History of the Worthies of England*, uttered a profound truth when he said: “Method is the mother of memory.” Be orderly in your mental processes, habitually orderly. Nothing can take the place of orderly arrangement of observations and thoughts, or of systematic procedure in studying, writing, and public speech.

Second: Pay attention! It was the dictum of old Samuel Johnson that “the true art of memory is the art of attention.” When one says that he has no memory for direction, or for time, or for names, or for anything else, he is in all probability confessing that he does not pay attention to where he is going, or to the time element in his schedule, or to the name that is given him, or to the matter before him.

Third: Use your memory. If memory is a key of the Kingdom of the Mind, then how pertinent are the words of wise old Benjamin Franklin: “The used key is always bright.” The blacksmith’s arm is strong because he uses it. The violinist has whipcords in his wrists because he uses them. The scholar develops a rich vocabulary because he uses it. Not contrariwise, a man may develop a strong memory by use.

Fourth: Trust your memory, and you will find it trustworthy. The power of suggestion is recognized by every student of human nature as a psychological fact. What a great mistake, then, for a person to suggest to himself that he cannot trust his memory. The better way is to place a burden upon your memory, and then let it carry it without crutches.

Fifth: Require your memory to be exact. The person who is content to remember approximately will have an approximate mem-
ory. Require yourself to remember things in sharp outline, and not with fuzzy edges. I was driving across a bridge recently with a man who ought to have known the answer to my question when I said: "What did this bridge cost?" This was his reply: "Two hundred thousand dollars—I think; or was it two million?" Well, there is considerable difference between two hundred thousand and two million! So far as his knowledge was concerned, he might as well have had no memory on the subject as to have had one so inexact.

Sixth: Be truthful. Nobody stands in greater need of a good memory than a liar,—to save him from becoming entangled in his own falsehoods; but it is impossible for a liar to have a good memory. That verdict is written in the very nature of things. When a man trifles with the truth, calling black white, and white black, the time comes when he does not know what the truth is. Most liars lie so as to create a sensation. If a man wants to impress or startle others by saying now that peach blossoms are white, and then that they are blue, and another time that they are green, and still later that they are yellow, he will soon reach the place where he does not know what color peach blossoms are. Stick to fact, and fact will stick to you. Tell the truth, and your memory will have no trouble in recalling the truth. The liar has thrown away a very important key to the Kingdom of the Mind.

Practical application of the results of one’s curiosity, observation, reflection, and memory is the fifth key to the Kingdom of the Mind. What is the use of investigating, of paying attention, of thinking, of remembering, if one does nothing about it? I have mentioned Benjamin Franklin. He was the most practical of men. He was always applying his knowledge. His eyes were not strong, and therefore he had to carry two pairs of glasses, one pair for work close at hand, and the other for distant seeing. As a result of his
observation and reflection upon this fact, he invented bifocal glasses. He noticed that most of the heat went up the big chimney flues of the old colonial houses, so he invented what is called the Franklin stove, which brought the heat out into the room. He improved globes for street lighting, he invented the one-arm lunchroom chair, he established a public library, he organized a fire company, he founded an academy that became the University of Pennsylvania, he introduced into the Assembly of his Colony a Bill which provided for the paving of the streets of Philadelphia,—and so on it went; he was always giving practical applications to things that his curiosity prompted him to observe, and upon which he reflected. Lord Brougham, an English statesman, complimented Franklin by saying that “he could make an experiment with less apparatus and conduct his experimental inquiry to a discovery with more ordinary materials than any other philosopher that ever was. With an old key, a silk thread, some sealing wax and a sheet of paper, he discovered the identity of lightning and electricity,”—and then invented the lightning rod!

The practical application of the knowledge one possesses is what gives that knowledge meaning. I have heard students say that they knew their lesson in history or mathematics; in philosophy or chemistry; in theology or biology or law; but that they did not know how to tell it or express it. That is sheer nonsense. If one knows a subject, he can state it, and he should be able to make some application of his knowledge in its counterpart realm.

In fact, there is no real mastery of a subject until it is given its pertinent application. One of the most sovereign dictums of modern education is that we learn to do by doing. I might be curious about swimming, and my curiosity might cause me to give attention to the way fish swim, and the way dogs swim, and the way human beings swim. I might cogitate upon specific gravity, and upon how
a human body which is heavier than water can be kept on top of the water. I might remember all I have observed and thought and read on the subject, yet I shall never be able to swim until I get into the water and swim. So also, all knowledge, to be fully mastered, needs to be appropriately applied. Teachers of art tell their students that they know and excel by doing, by sketching, by drawing and by painting. Teachers of science demand that all theoretical knowledge shall go hand in hand with experimentation. It is only by applying his knowledge, by repeated appeals to nature, that the student learns the truth and becomes a real scientist.

I have given you five keys of the Kingdom of the Mind. The person who uses them—who becomes intellectually awakened so that he has a genuine thirst for knowledge, who observes shrewdly and reads attentively, who thinks and remembers and applies—such a person's mind is, indeed, a kingdom. He is conscious of his dominion over the earth and the forces of nature. All things have been put under his feet. He is at home in the world as a potter is at home with his wheel and clay, as an artist is at home with his canvas and colors. He has an appreciative understanding of the past of the race from which the stream of history gathers momentum and direction. He marches in Caesar's far-flung legions. He walks with Plato in his academic grove. He roams the hills of Palestine with Jesus and the Prophets, and sings to the lilt of David's harp. The glory that was Greece and the power that was Rome are his. With Emerson, he shouts:

"I am the owner of the sphere;
Of the seven stars and the solar year:
Of Caesar's hand and Plato's brain;
Of Lord Christ's heart and Shakespeare's strain."

But we cannot stop here. If we give the right kind of attention, we shall not only see, but we shall see more than we see.
We shall see not only the light that shines on things, but also the light that shines through things. All nature becomes a translucent veil through which the spiritual pours its light and inspiration into our hearts. Thus we find our way to the Unknown through the known; to the Invisible through the visible; to the Infinite through the finite. And so we advance through the Kingdom of our Mind to the Kingdom of the World Mind.

The human mind can understand and interpret only that which is itself the product of mind. If this is true of a musical score, it is no less true of this great piece of cosmic music that we call the universe. If there is meaning to the twenty-six letters of the alphabet only when they have been arranged by mind into words and sentences and paragraphs, so also we must conclude that a universe which has order and laws which the human mind can understand must itself be a product of Mind.

Christopher Morley, in his Safe and Sane, declares: “My theology, briefly, is that the Universe Was Dictated But not Signed.” Probably if he had looked more diligently he might have found the signature. We are now reading the record written in the pages of the rocks. We are interpreting the laws of chemistry and physics and astronomy. We are translating this amazing book of the universe, with its chapters on geology, and chemistry, and physics, and astronomy, and anthropology. This explains why the greatest scientists of the age are also believers in God, such scientists, for instance, as Einstein, as Arthur Compton and Robert Millikan, as Eddington and Sir James Jeans. Einstein, generally accepted as the foremost scientist of this generation, says: “My religion consists of a humble admiration of the illimitable superior spirit who reveals himself in the slight details we are able to perceive with our frail and feeble minds. That deeply emotional conviction of the presence of a superior reasoning power, which is revealed in the incomprehensible universe, forms my idea of God.”
It would be tragical to talk learnedly about the mechanism of the universe, but to ignore the Mechanician; to know the garden, but not the Gardener; to enjoy the mammoth painting that we call the cosmos, but to be ignorant of the Divine Artist; to be acquainted with the creation, but not to recognize the Creator.

This intellectual concept of God is forced upon us by the logic of scientific fact. Happy are we, if under the inspiration of revealed religion, the intellectual concept can be unfolded and developed into a vital and experimental faith, such as was expressed by Maltbie D. Babcock.

“This is my Father’s world,
   And to my listening ears.
All nature sings, and round me rings
   The music of the spheres.

This is my Father’s world;
   I rest me in the thought
Of rocks and trees, of skies and seas;
   His hand the wonders wrought.”

If the kingdom of our mind enters into a vital alliance with the World Mind, then we must apply this reasonable faith. We must make our lives square with our profession. The best psychologists know that there should always be practical fulfillment of every good emotion or impulse. We are familiar with the practice of certain business and professional men of putting on the walls of their offices suggestive mottoes. I know one man who keeps in front of him the word THINK blown up in big white block letters on a nebulated ground of black. All of which prompts me to share with you a little poem I came across recently, which reads as follows:

“You may bring to your office and put in a frame
   A motto as fine as its paint;
But if you’re a crook when you’re playing the game,
   That motto won’t make you a saint.
You may stick up placards all over the hall,
   But here is the word I announce:
It isn’t the motto that hangs on the wall,
   But the motto you live that counts.

If your motto says SMILE, and you carry a frown;
   DO IT NOW, and you linger and wait;
If your motto says HELP, and you trample men down;
   If your motto says LOVE, and you hate,—

You can’t get away with the mottoes you stall,
   For the truth will come forth with a bounce:
It isn’t the motto that hangs on the wall,
   But the motto you live that counts.”

So also what counts is not some intellectual assent to scientific logic or to creedal dogma, but the practical expression you give to your belief. True religion is always more a matter of life and experience than it is of dogma. One time Jesus was talking to His Disciples about the dignity of lowly service, and then He summed it up in these words: “If ye know these things, happy are ye if ye do them.” For the sake of clearness, let us shift the punctuation: “If ye know these things happy are ye,—if ye do them.”

The natural application of our faith in the Kingdom of the World Mind is to make our lives square with what we know to be the will of the Divine Sovereign of that Kingdom. Reduced to simplest terms, that means that we are to love God with all our mind, heart, soul and strength, and our neighbor as ourself. We must keep step with the Commandants of God against all the forces that oppose us. We must make our attitudes conform to the Beatitudes. We must “seek first the Kingdom of God and His righteousness.” We will reverence the sacred value of personality, stand for the essential equality of individual human rights, promote the brotherhood of man as interpreted by the Golden Rule, glorify serv-
ice as the standard of true greatness, embody faith as the means, and self-sacrificing love as the motive of the Kingdom of God, and will consecrate ourselves to live and work for the domination of ideas, purposes, and intentions of the most lofty and sacred sort.

"He rules the world with truth and grace,
And makes the nations prove
The glories of His righteousness,
And wonders of His love."

Thus do we make ourselves co-workers together with God, establishing upon this earth the sovereignty of great and holy principles whose royalty will survive the splendor of material pomp, a Kingdom which is a human, universal, spiritual emancipation.

Along these lines do I charge you to build a new world.

"Beat down you beetling mountain,
And raise yon jutting cape:
A world is on the anvil,
Now smite it into shape.

Whence comes this iron music
Whose sound is heard afar?
The hammers of the world's smiths
Are beating out a star."