Duplicate

Command and Staff and Staff Classes
of December, 1945

THESIS

THE ORGANIZATION OF THE NAVY
AN ANALYSIS

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144
(Room No.)

20 November, 1945

NAVAL WAR COLLEGE
Newport, R. I.

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PREFACE

I have long had a conviction that an organization could be designed in the abstract to fit a set of specifications in the same manner that a physical structure can be designed to meet a given requirement. But since design must be based on a principle or a fundamental truth it is necessary to first have the fundamental principle. A search of the writings on the subject of organization,—commercial, industrial and military, failed to reveal such a principle. Organizational writing confines itself to a description of what is. It justifies certain designs because they worked somewhere else, not because they are based on principle. In fact the reverse is usually the case; that the organizational structure is the result of trial and error and empirical formulae. References to so-called "principles of organization" are vague and incomplete, often a mixture of truisms and unrelated rules.

The continued search for a fundamental principle was rewarded by partial revelations. These revelations served the need of the moment and were proven by application as they occurred. The pressure of war coupled with personal responsibility, and the general lack of organizing ability inherent in man,-both intensified the search for a fundamental principle upon which to base organizational design. Again what are now corollaries were revealed to thought sufficient to meet the demand. They were proven in application. It is odd that the fundamental principle, the Principle of Unity, was the last to be revealed.

The Science of Organization as presented in Part I of this thesis is an original concept, reduced to writing for the first time. While glimpses of the fundamental truth, in retrospect, appeared during the reading of organizational writings, the concept was not there. The author therefore believes that he has made a discovery. He has named it "Science" because it rests on a fundamental truth.

I wish to acknowledge a comforting assurance that I was on the right track recently found in the thinking of Charles DeLano Hines as expressed in his book, Modern Organization (1916). While he had not found the principle, nevertheless there were some glimpses of it

which aided me in my search.   It was his use of the term "unit" which suggested to me the term "unit type" as a name for a form of organization which I had previously designated by a different title.

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November 11, 1945

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DIAGRAMS

"We can see and feel the waste of material things.
Awkward, inefficient, or ill-directed movements of
men, however, leave nothing visible or tangible
behind them.   Their appreciation calls for an act
of memory, an effort of the imagination."
(PRINCIPLES OF SCIENTIFIC MANAGEMENT - Taylor -1911)

INTRODUCTION

The organization of the Navy is difficult to understand.
Organization charts of the Secretary of the Navy and subordinate
commands do not show evidence of design or basis in principle. The
variety of concepts is evidence of uncertain fundamental thought.
Questions concerning organization are met with the half statement:
"it worked" as though that is all the explanation necessary, whereas
the complete statement could well be : "it worked, not because of it,
but in spite of it".

A study of all available Navy publications and professional
literature did not reveal any principles of design or consciousness
that there are different types of organization to be selected for
different sets of specifications. The bibliography for this thesis
will show titles on the subject of Naval Organization, but the refer-
ences all limit themselves to presenting what is, not why it is.
Sometimes allusion is made to "principles of organization" but that is
all. The principles never appear.

But there are principles of organization by means of which any
organizational structure can be designed as surely as one can design
a building to meet specifications. The author believes that he has
discovered these principles, at least he has not been able to find
his concept in any literature on the subject; military, naval, or
civil. And more than discovery, he has been able to prove them to
his satisfaction in practise.

The discovery of the principles of organization by the author
was the result of applying, over a period of many years, the truism
that anything, no matter how complicated, can be reduced to simple
terms. A book can be reduced to a synopsis, a sentence, and yes,
even a title. The meaning of a paragraph is supposed to be contained
in the topic sentence. This led to forcing the determination of a
basis before rendering any decision, because decisions must stand on
a basis separate from the person making them.

This practise of finding the basis first was most difficult in
organizational problems. A search of all literature on the subject
was not revealing, although it did stimulate thought. The first glim-
mering of light came as a result of dissatisfaction with the vague
and indefinite use of the term "chain of command" and "command channels".

The realization that the chain of command was purely and simply the chain of commanders was the key that unlocked the door to the subsequent flow of ideas. The pressure of war forced the crystallization of thought.

The combination of being puzzled by the apparent lack of a common basis for organizational design in the Navy as expressed in organization charts and publications and of believing to be the discoverer of principles upon which such a design could be made, resulted in the desire to analyze the development of Naval organization in the light of those principles. While it was breath taking, the idea persisted that perhaps the author could make some contribution to the Navy's organizational problems in spite of the risk attendant upon such an analysis being made by a person "outside" the profession.

It is therefore, the purpose of this thesis to analyze the development of the organization of the Navy in order to determine the principles upon which the development was based, and in the absence of principle to determine what forces were acting to mould the development. Having isolated the forces, it may be possible to neutralize, reduce intensity, change direction, or introduce counter forces. Since the analysis must be made in the light of principle, the subject of organization in the abstract as conceived by the author must be presented first.

It is planned, therefore, to develop the Science of Organization progressively from a known point, and then to trace the development of the organization of the Navy in the light of those principles underlying the science. In the discussion of the Navy it is the author's earnest desire that objective analysis be not misread as criticism, and that the tone represent the sincerity of purpose which underlies this thesis.

Since there is no precedent or similar approach to the subject in any organizational writing which has come to the attention of the author, it will be necessary to express ideas by words which may have a different meaning in the mind of the reader from that intended by the author. For that reason many ideas have been restated in different forms and frequent resort made to the physical in order to convey the idea of the abstract.

PART I THE SCIENCE OF ORGANIZATION

The unit is to an organization as the atom is to the
molecule. In the Principle of Unity as applied to
organization, the unit is divisible only with loss of
stability accompanied by the release of potentially
destructive forces. It is a striking parallel that,
in terms of matter, the atom is similarly divisible
only with loss of stability accompanied by the release
of potentially destructive forces. Different combinations
of atoms result in molecules having different character-
istics as different combinations of organizational units
result in mental molecules of organization having dif-
ferent characteristics.

Chapter One

WHAT IS ORGANIZATION?

Organization is a state of mind, usually accidental and rarely designed. It is a mental structure held together by the thought force created in the minds of the key members. The lines on an organization chart really represent the thought force which holds the structure together, as a line on a drawing can represent the strong tension or compression member in a physical structure. Most organization charts show the froth, the interrelation of functions, coordination and cooperation, and not the fundamentals of the organizational structure.

Organization has only one reason for being,- to make it possible for the man at the end to perform an act efficiently, be it fire a gun, drive a truck, repair an engine, operate a radio, or cook a meal. All that counts is the man at the end who does something,—performs an act. All the rank, office, and much ado above him counts for nought. The man at the end must carry the load and the organization above him can justify itself only to the extent that it makes his load lighter and easier to bear. He is entitled to see clearly the chain of leaders above him, through to the leader at the very top.

Ideally, the man at the end must reflect the man at the top. An organization must have standards, policy and a basic state of mind. The man at the top sets these standards. They must be implanted in the man at the end so that they are accepted and made a part of him, together with the desire to live up to them at all times and under all conditions. It is the impact of the leader at the top which must be felt by the man at the end.

But the distance between the two is too great, and the spread of men at the end or bottom of the structure is too wide. The personality impact of the man at the top is so diluted when it reaches the bottom that it may be entirely unnoticeable. There must be booster stations along the way. Each next subordinate leader must pick up the idea, digest it, make it locally applicable, energize it and send it on. And so for each subordinate leader until a squad, section, group, or gang leader puts it over to the men and follows it up to see that it sticks.

It is obvious that this line from top leader to bottom man must be quick, sure, loyal and straight. The idea cannot drop into the well of a vague "office" or "headquarters" to be lost or diluted. No, it must pass from leader to leader, each of whom makes it fit his organization and his particular group. All depends on the "chain of commanders",--and "staff", "bureau" or "office" are not and cannot be in that chain.

Chapter Two

THE FUNDAMENTAL PRINCIPLE

The fundamental principle of the Science of Organization is the Principle of Unity. Unity is to organization as the Principles of War (e.g. Mass, Concentration, Surprise) are to the employment of a military organization. Today the emphasis is on principles of employment but the creation of something to employ is left to instinct, chance, accident, and blind faith in what others have done. It is a paradox that the simple is so difficult. The great mistakes have been the result of violation of simple principles.

But the simple Principle of Unity is too simple for direct application. Its meaning may be conveyed by different expressions of the idea. The whole is the sum of its parts. The parts are mutually supporting and interdependent. A part of unity cannot function as a unit. (The bodily function of movement cannot be accomplished by separating the legs from the body) Unity is not divisible into exact divisions because the parts are intangible and abstract. The parts are so overlapping that the line between then cannot be found. The parts of unity are held together by a force. In a unit of organization this force is the force of loyalty. Unity is to organization as the atom is to matter. The force of loyalty within unity is to organization as the atomic force within the atom is to matter. Units can be handled, arranged and rearranged in combinations so as to form a structure of great strength, far greater than the strength of any one unit, or for that matter, far greater than the strength of any arithmetical sum of the units used. The force that holds the combination of units together is also the force of loyalty.

For use in design, there are corollaries to this Principle of Unity. These corollaries must be incorporated in the design just as bending moment, shear, tension, compression and slenderness ratio are considered in the design of a physical structure.

The force of loyalty is the fundamental force within unity.

The force of ego is the opposite of loyalty.

Equilibrium in the organizational structure requires that the force of loyalty be greater than the opposite force of ego.

The opposite force of ego is composed of lesser included opposite forces:

    The force of jealousy

    The force of false pride

    The force of envy

    The force of false loyalty

Unity is not divisible into separate parts.

The parts of unity are not identifiable as separate parts.

No two units are necessarily alike.

    The parts which make up unity are not exactly equal to similar parts of other units.

    A load on a unit forces readjustment of the load bearing strength and size of the parts relative to each other, but

    All the parts are present in all units.

Command of a unit requires that the unit be there to be commanded.

    Partial command of a unit, when a unit cannot be less than the whole is a paradox.

        Partial command of a unit is not good, rather it is the choice of the lesser of two evils.

        Partial command of a unit is unstable and cannot be in a state of equilibrium, since unity is indivisible and the subtraction of a part of unity must leave less than the whole.

The organizational unit in the abstract is composed of the combination of abstract parts resulting from the resolution of man and the machine into ontology and technology.

Since neither man nor the machine is divisible, ontology and technology are not divisible. Therefore command of an organizational unit, which is the summation of man and the machine, is not divisible.

The atom of unity has as a nucleus the mission of the unit. This nucleus is surrounded by the electrons of ideas representing the elements of ontology and technology, particularly those elements pertaining to the wants of man and the machine. The nucleus and electrons make up the atom.

Consider the creation of an organization in the abstract.

Visualize a huge organization chart consisting of a space for each man or combination of man and machine. Each space has a place on this chart according to the design. Each space is tied to some other space by a line on the chart. Now place each man, or combination of man and machine in his allotted space on the chart as you would lay out chess men on a chess board. For the moment neutralize the initiative of man which will always find something to do in the absence of a purpose. Survey the result. We do not have an organization

yet. There is no life. The breath of life needs to be "breathed" into the body, the organization.

Now "breathe" a purpose, a mission into the top leader. He stirs, is filled with life, becomes active. He frames a purpose and a mission for each of his subordinate leaders and "breathes" it into them. They in turn are filled with life and activity. And so on to the man at the end, when the whole structure begins to live and move and have being. This life giving force of purpose and mission is the great generating force producing the energy of accomplishment.

This energy of accomplishment is flowing one way down the lines which connect the spaces on the chart. This one way force will tend to separate the occupants of the spaces from their designed positions. A single force cannot be in equilibrium. It will cause movement, in this case, separation, in the direction of the force. An opposite force must be designed. This force is partially generated by the one source we have had up to now, the source of purpose or mission. A force of common loyalty reaching up to that source will be produced by the same great generator which has already produced the energy of accomplishment. This force of loyalty to a common purpose, reaching up, will produce a kind of equilibrium. But this is not enough.

The structure as a whole is not yet in perfect balance because the origin and source of the two forces; energy of accomplishment, and it's companion, loyalty to a common purpose; is at the top of the structure.

The great majority of organizations do not pass beyond this point in the design. They operate, it is true, after a fashion. Our standards accept this result because the organizational consciousness of the average individual does not progress beyond this point. We have only the over-all organizational structure. We have done nothing about the units, the atoms which make up the molecule of the over-all structure.

As an aid to this thinking, let us carry on from here a running analogy to the structure of matter. The physical molecule is dependent upon the physical atom. The great force which makes the molecule possible is the atomic force of the atom. Likewise the great force which makes possible the perfect mental molecule of

organization is the force of unity within the organizational atom or unit.

Let us now consider how we can create this force within our units. It must be a force similar to atomic force, that is, it must hold the elements of the unit together. The greater the force the greater the strength of the unit, and hence the greater the strength of the mental molecule of organization which is made up of those units. To the author, this force is the force of loyalty and it's attributes.

It is unfortunate that we must use the word "loyalty", a word which has been bandied about and talked "around" until familiarity without appreciation of the depth of meaning makes it something to be taken lightly, as a common thing, something that just is without any particular reason or cause.

But this force of loyalty must be felt both "down" and "up" within a unit. It is a force of attraction. It "ties" the unit together and gives it great strength. It is the atomic force of our organizational atom. The creation of this force is a function of leadership which is beyond the scope of this thesis.

However, it is within scope to know that the leader must be placed in the organizational structure so that the unit of which he is the embodiment is encouraged to develop the force. It is a pre-requisite that the unit must be a unit and not one from which parts have been separated with resultant instability. This means that we cannot violate the Principle of Unity by attempting to divide any unit in the course of designing the organization. Therefore each leader, as he is placed in the structure, must feel that he is the embodiment of his unit; that he is concerned with each of all the elements of ontology and technology in the degree appropriate to his mission.

This does not mean his leaders above him, or coordinate leaders, do not provide him with assistance. They do and should. For example such service as supply, entertainment, food, fuel, shelter makes possible greater freedom of action for some leaders. But that does not take from him his consciousness of such elements. It only reduces the degree with which he and his staff need concern themselves about them.

Let us leave principles and analogies for now, and proceed with

the development of types of organizations.   The application of
the principles will serve to make their meaning more clear.

There are three types of organizations: unit; departmental;
and functional.   The unit type is based on the Principle of Unity;
the departmental type is based, not on principle, but on a need for
checks and balances; and the functional type is based on economy
of specialist knowledge.   Since the functional type is a variation
of the departmental type and of extremely limited application, it
is not essential for the purpose of this thesis and will not be
developed.

Chapter Two

THE UNIT TYPE OF ORGANIZATION

The unit type of organization is a simple designed structure. It's steel framework of loyalty has an overall triangular shape with the "doers" at the base. It rises from the base through successive levels of a decreasing number of leaders until one and only one leader is reached at the top of the structure. Each leader represents a unit complete within itself for the mission he has to perform. The structural strength is derived from the simple direct clear force of unified loyalty in both directions. Let us represent this structure diagrammatically.

"L" is a leader   1st Level Leader

                                                                 2nd Level Leaders

Men   Men   Men   Men   Men   Men   Men
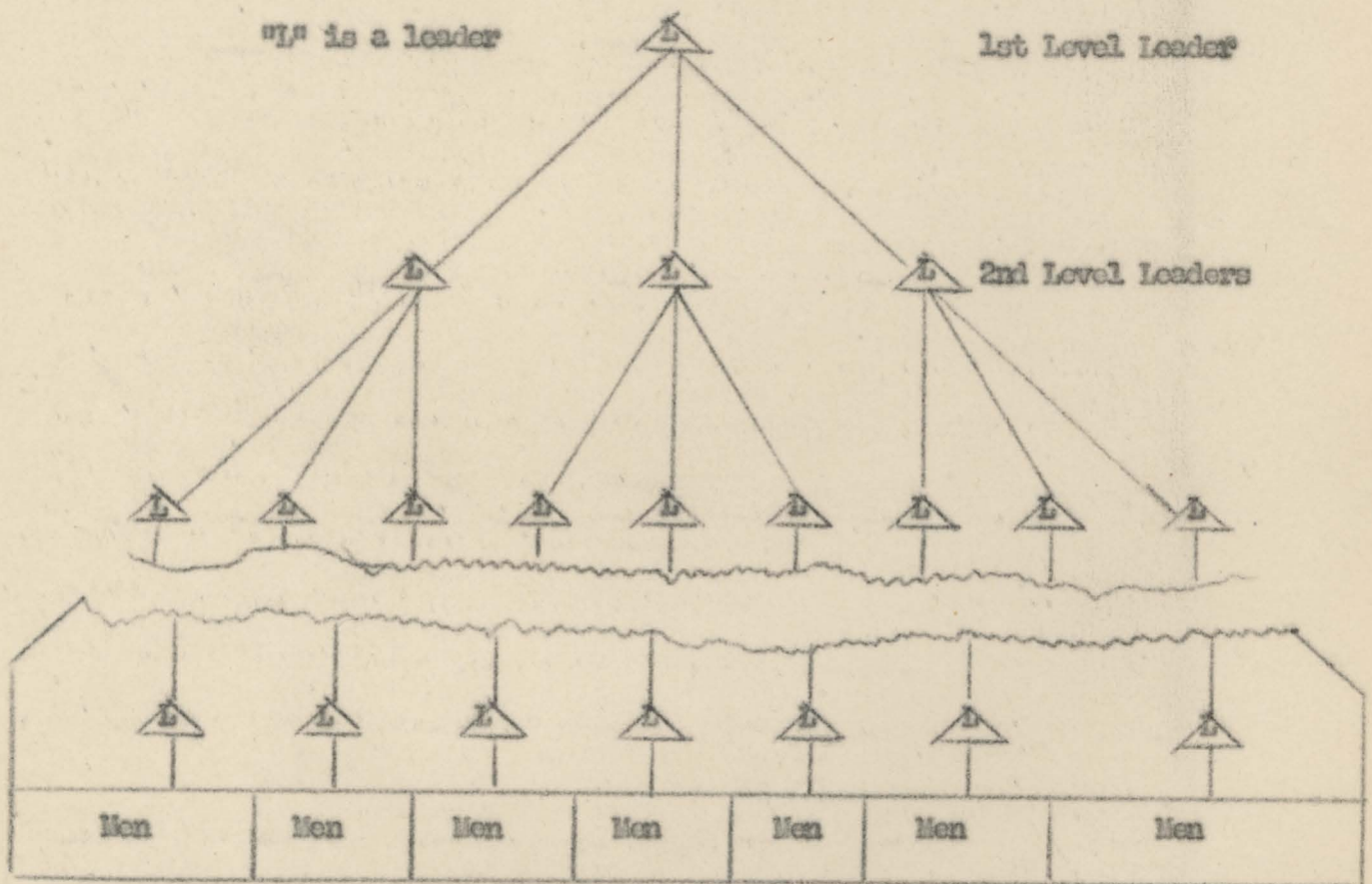
"Men" are the doers at the end or bottom of the organization.

Each "L" is unity, a unit or "atom" of the leader and his staff.

Each "L" is also unity, in the sense that it is the embodiment of the summation of all the units below it.

The combination of all the "L"s is an organization or molecule.

The structural strength of this organization is derived from the force represented by the lines joining the units and men. The force within the "L", leader and staff, is not shown.

Of course, as the scope of the leader increases he requires assistance. This assistance takes the form of a staff, but the installation and employment must not change the structural framework. A staff cannot be permitted to alter the basic design of the structure.

Since a leader has everything in his mind which pertains to his unit, and since unity is indivisible, it follows that his staff which is thinking for the leader cannot be divisible from the leader. Absolute reasoning would therefore require that the leader and his staff be shown as a unit on organisation charts since they are in fact a unit. However, the need to show the force between units, coupled with the fact that only the leader can embody the unit, results in the paradox of showing the leader and his staff physically as separate parts. The staff is therefore placed on the frame work, not in it:

Ldr is Leader
S is Staff
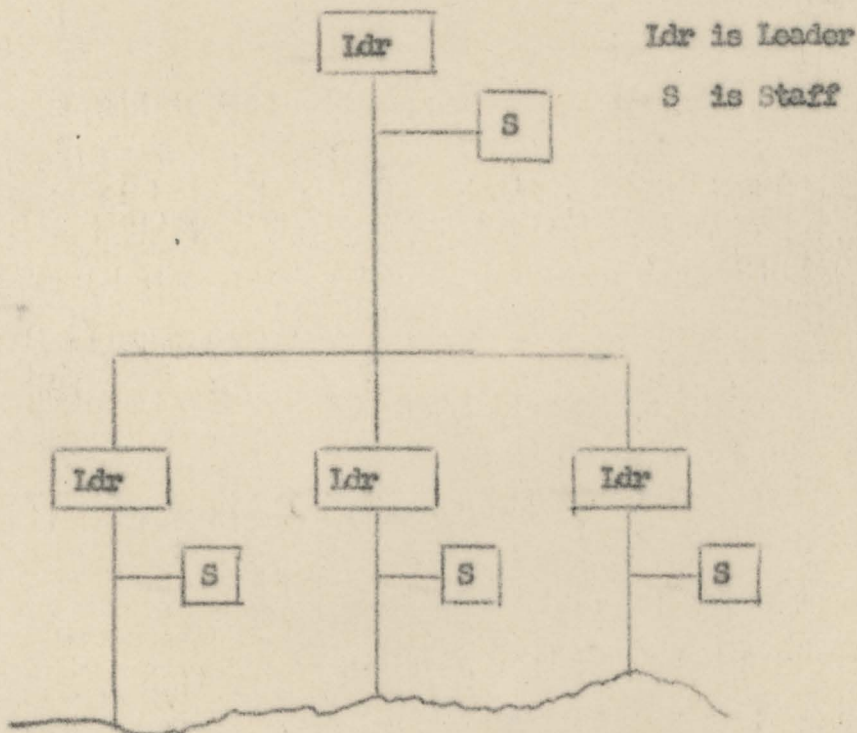
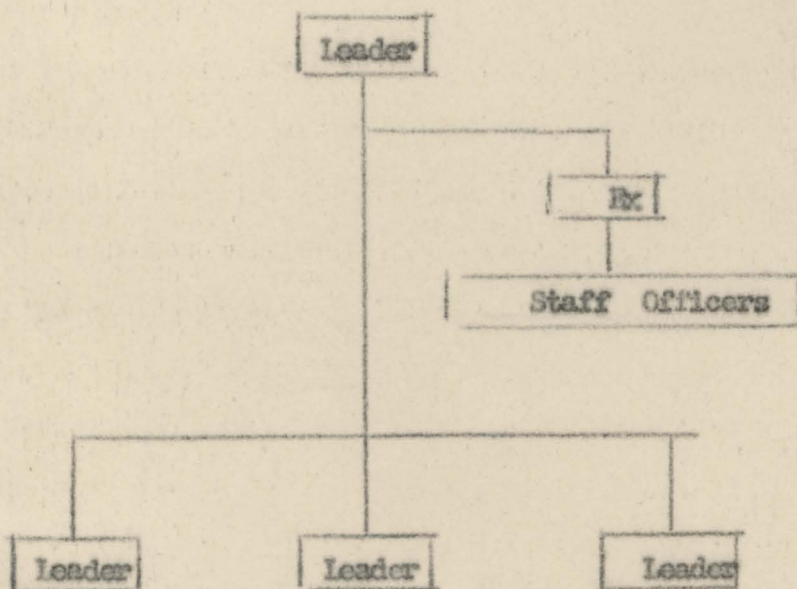Note that anything coming "down" appears to emanate from one source

The Leader controls how much the staff goes down the line without his personal knowledge.

The chain of leaders is pure and simple.

Now let us examine this staff more closely, for this is where the majority of the design and construction errors are found. This examination can best be accomplished by developing the staff from the time when the leader, for our purposes is doing all the work without a staff.

The leader, alone and without assistance, can classify his work into fundamentals, ideas, policy and technique or specialty. He selects an assistant with a "passion for anonymity" who can handle a portion of the leader's work as the leader himself would do it had he the time. This assistant takes over the work under the classification of technique or specialist knowledge and the work necessary in the execution of the leader's established policies The leader is now free to devote his thinking to fundamentals, ideas and formation of new policy.

As the work of the assistant grows, he finds specialists who can supply the knowledge of technique as he, the assistant, would do had he the time. The specialists are given the title of "staff officer". Since there is more than one of them, the assistant to the leader must now add a coordinating function. His title therefore changes to "executive". As such, then, he receives policy, makes supplementary decisions, and coordinates the work of the staff in the execution of the leader's wishes. This is the relationship:

```
                  ┌────────┐
                  │ Leader │
                  └────┬───┘
                       │
              ┌────────┴───┐
              │    Ex     │
              └───┬───────┘
          ┌───────┴──────────┐
          │  Staff Officers  │
          └───────┬──────────┘
       ┌──────────┼──────────┐
   ┌───┴───┐  ┌───┴───┐  ┌───┴───┐
   │Leader │  │Leader │  │Leader │
   └───────┘  └───────┘  └───────┘
```

The next step in the development is forced when the executive finds that his work requires more assistance. He cannot use any more staff officers because it is not specialist knowledge or tech-

nique load which is involved. He has already appointed staff officers to do this for him. He needs assistance in his function of executor, policy custodian, and coordinator. But these are all functions which he cannot pass on to staff officers since the functions are not divisible. However, he might design some assistants to him, as differentiated from separate staff officers. Further, it might be possible to so establish the inter-relationship of these assistants and their relationship to him so that they, together, are a unit.

As a basis for the apportionment of his functions to these probable assistants, there must be something different than that of specialty or technique. That basis has already been used in determining the staff officers and has produced more than one executive can properly handle. Another basis must be found which will meet this new requirement. The idea comes to think in broad terms of accomplishment of the mission. The following steps are fundamental in the accomplishment of any mission in any activity,—military, commercial, industrial or governmental:

Determine the obstacles to be overcome.

Procure the tools required to do it (personnel and materiel)

Employ the tools required to do it (personnel and materiel)

Maintain the tools (personnel and materiel)

A moment's reflection will show that the summation of these four steps must be the accomplishment of the whole mission.

Obviously, the difference between the live tool of personnel and the inert tool of materiel is too great for the same person to handle both concurrently. So the following rearrangement is made:

Determine the obstacles

Procure and maintain personnel (as individuals)

Employ (operate) the tools (as units)

Procure and maintain materiel.

This appears to be a reasonable basis for the allocation of executive thinking to four assistants. Therefore the following assistants to

the executive are designated, corresponding to the preceding
classifications:

Assistant to the Executive for Intelligence
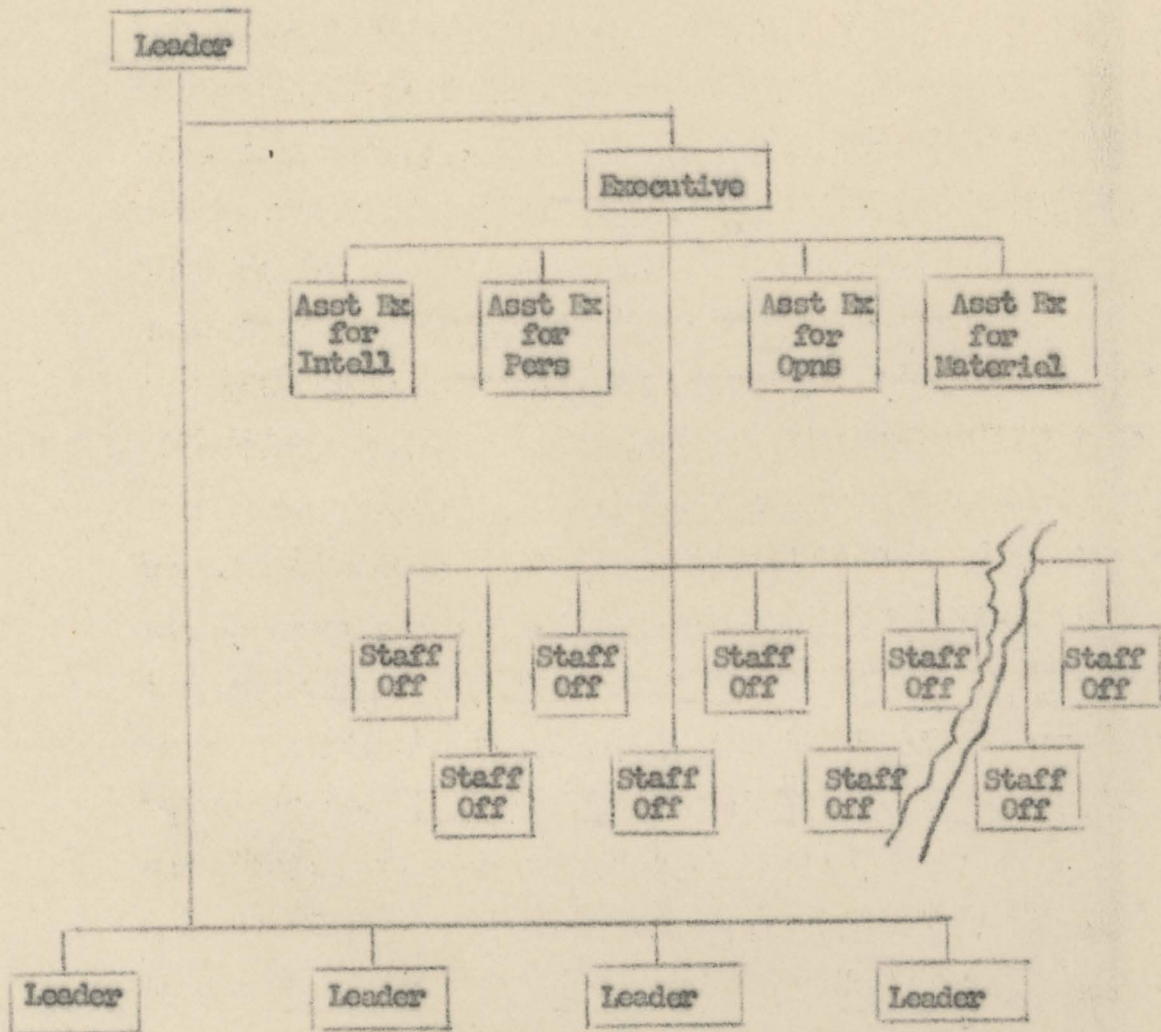
Assistant to the Executive for Personnel

Assistant to the Executive for Operations

Assistant to the Executive for Materiel

Since, by development, the summation of the four classifications
includes everything that must be done, it follows that every matter
that comes to the executive can be placed within one of the four
classifications of Assistants to the Executive.

Notice that there is no place or basis for inclusion in this
group of such items as "administration" or "plans" which are too
often seen erroneously classified as additional members of the above
group. Administration is a broad term and is often improperly used
to mean "paper work". The pure sense of the word may be gained
from the following sentence: The executive officer executes the
policies of his leader, but administers or manages the affairs of
the headquarters in the process of execution. The act of manage-
ment or of administering is known as administration. Since it em-
braces the whole, to try to place administration in a staff section
is like trying to place unity into one of its parts. "Plans" will
be developed subsequently.

But to return to our development of the organizational structure. By derivation and development the assistant executives must be placed in the structure as follows:

```
                        Leader

                              Executive

        Asst Ex    Asst Ex        Asst Ex    Asst Ex
         for        for            for        for
        Intell      Pers           Opns      Material


          Staff    Staff    Staff    Staff    Staff
           Off      Off      Off      Off      Off

               Staff    Staff    Staff    Staff
                Off      Off      Off      Off


  Leader      Leader      Leader      Leader
```

But this arrangement does not solve the problem. All the staff officers still report to and do business with the executive. There must be a device so that they can deal with the assistant executives for the particular classification with which they are concerned. In designing this device we are bound by two requirements:

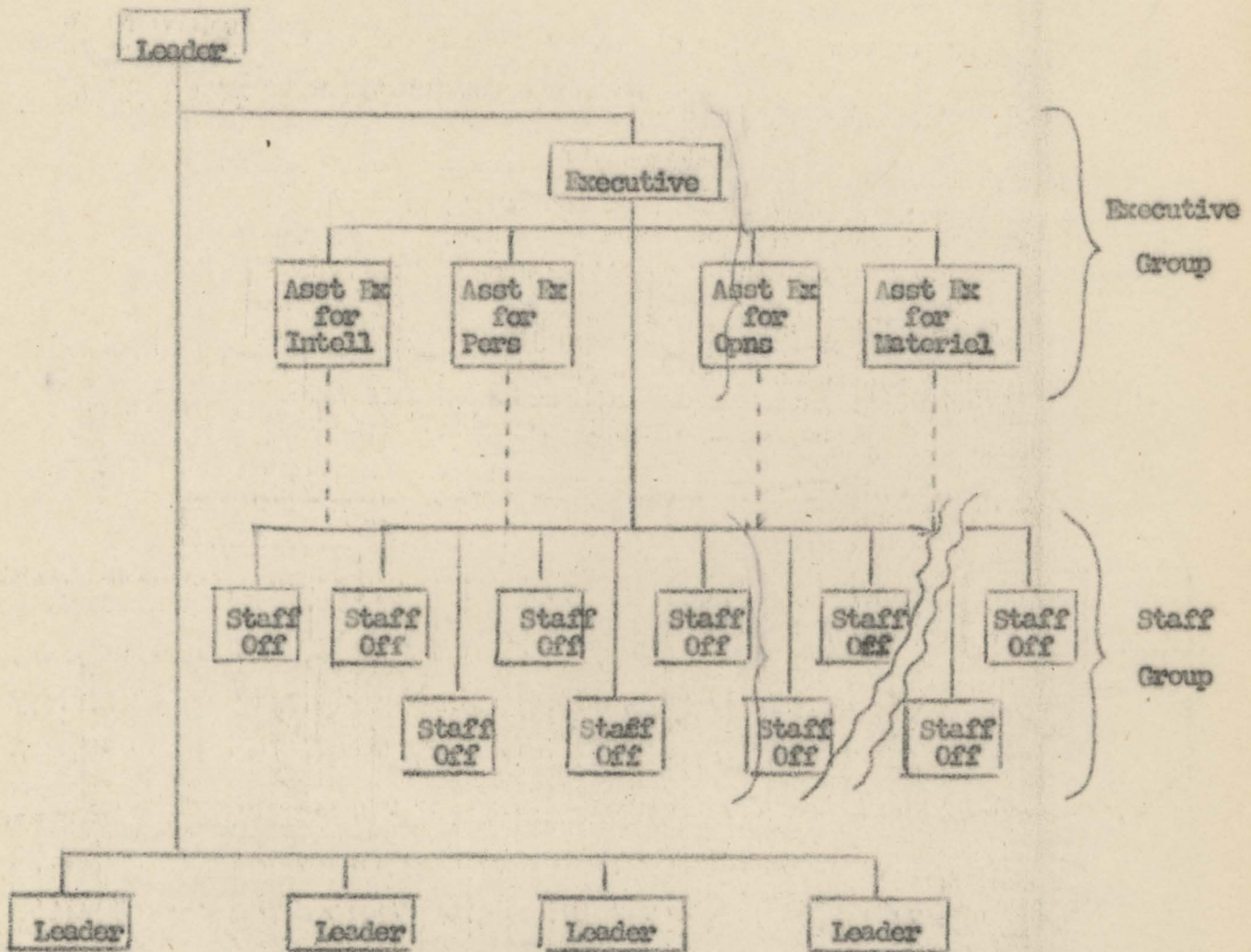That one cannot serve two masters.

That staff sections must all have an equal status and

That jealousy and envy destroy good staff work

That a true staff cannot have a staff within the staff

The following device of dotted lines will accomplish the
desired result and not violate the requirements:

------------- Line of responsibility

- - - - - Majority of business transacted along this line
according to the subject matter involved.

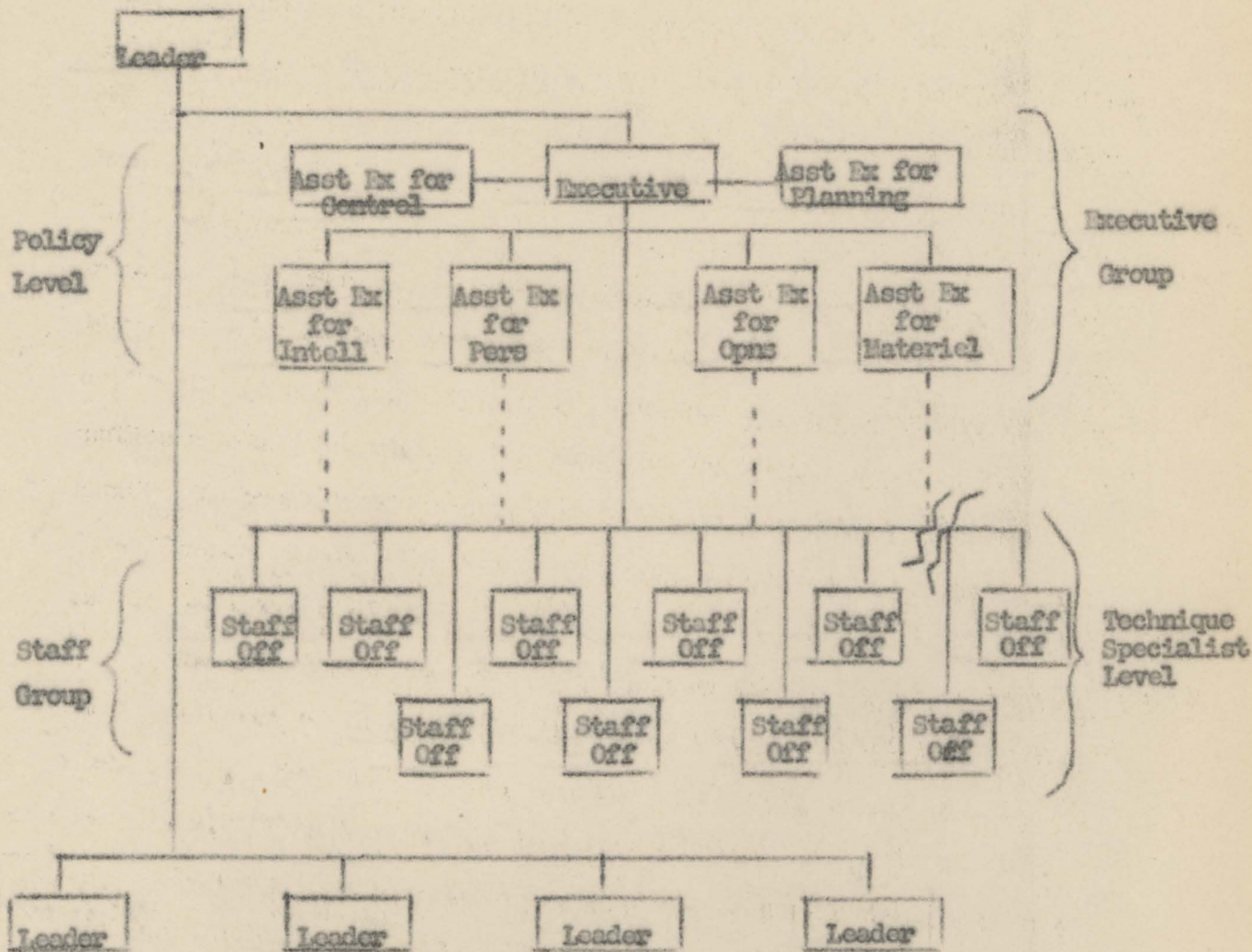The device of the dotted line gives a fluid, flexible staff.
Each of the Assistant Executives can deal with any of the staff
officers for technique and conversely, any of the staff officers can
deal with all four of the Assistant Executives according to the sub-
ject matter of the problem. But for overall problems the staff of-
ficers go to the Executive. We have definite fixation of responsi-
bility, definite "boss", no staff within a staff, and no opportunity
for jealousies or other expressions of ego. There are still only the
two functions, the executive functions in the executive group and the
staff functions in the staff group.

One method considered in developing the preceding structure was
to group certain staff officers under each of the Assistant Executives
according to their major interests. For example, staff officers

having to do principally with supply could be grouped under the Assistant Executive for Materiel. But then we would have compartmentation. These staff officers would, from time to time, also have an interest in Operations, Personnel, and Intelligence. With compartmentation such access would be discouraged if not denied. But worst of all, such a set-up would cause the Assistant Executive to lose the status for which he was designed. He would cease to be an Assistant Executive looking at problems in his field in the same manner as the Executive would do had he the time. He would become a staff officer, the head of a large staff section, with a feeling of responsibility to the Executive which would pull away from the unity of the Executive Group as it was developed. Too many headquarters have organization charts which violate this basic concept by grouping and compartmenting their staff officers under what corresponds to the Assistant Executives. The results observed by the writer have not been good, as was to be expected.

One contributing cause of the above considered compartmentation is the tendency of the Executive to "duck" his responsibility for the whole staff, which must be his, and "pass the buck" to his Assistant Executives. This tendency is insidious and bears careful watching.

There are two responsibilities of the Executive which have not yet been mentioned and which have remained with him during the development of the staff to this point. The responsibility for the presentation of statistics to the leader, efficient procedures, and for planning can and usually does assume large proportions. It is obvious that if any of these items were given to any member of the staff, or to any Assistant Executive thus far developed, their handling of them would be from a view point of less than the whole corresponding to the responsibility of each such staff officer or Assistant Executive. No, the Executive must find some one to discharge these responsibilities as he would do had he the time and from his view point. Accordingly, he selects two more assistant executives, one for control and the other for planning. By the very condition of their development, required view point, and overall function, there can be only one position on the organization chart which will satisfy the requirements. Their place on the chart is shown on the next page.

Leader

Asst Ex for Control — Executive — Asst Ex for Planning

Policy Level

Asst Ex for Intell | Asst Ex for Pers | Asst Ex for Opns | Asst Ex for Materiel

Executive Group

Staff Group

Staff Off | Staff Off | Staff Off | Staff Off | Staff Off | Staff Off

Staff Off | Staff Off | Staff Off | Staff Off

Technique Specialist Level

Leader | Leader | Leader | Leader

——————— Line of responsibility

- - - - - Majority of business transacted according to subject matter or cognizance

Note: Only two groups in the staff, the executive group and staff group.   Likewise there are only two functions, executive functions and staff specialist functions.

Policy level and technique or specialist level.

The staff does not obscure the line from leader to leader

Assistant Executives for Planning and Control reach the staff only through the Executive or in his name

There still is only one "boss" for the whole staff

Thus we have arrived at a designed structure, based on principle, which will work smoothly and efficiently. If managed or administered in accordance with the principles upon which it was built it will be free from the petty jealousies and jockeying for importance too often seen in organizations where whims, blind copying of other "charts", and "inspiration" form the basis for the design. This staff conforms to the principle of unity. Each member was selected to do the work of the leader in the same way the leader would do it had he the time. Each member was placed in the unit of leader and staff in such a manner that the summation of them all equals unity. The line of responsibility between leaders is pure and simple,—uncluttered by the interposition of staff officers, executives, deputies and others which only serve to obscure the fundamental unity and muddy the waters.

> A staff of average officers, each doing his part on a team basis for the good of the whole and using team plays based on sound principle will be superior to a staff of brilliant players working individually for self if not for the "grandstand".
> (Staff Organization, Col. Leland B. Kuhre, France, 1944)

But this organizational structure is designed to operate and function. The technique of doing this from the leader's and executive's viewpoint is simple if they will base all moves on principle. However so many thoughtless "red herrings" are seen which deviate from principle. Departures from principle expressed physically in format of publications, improper quotation of delegated authority, separate "office" letter heads within the staff, executive not working through his assistants,—all these are seen and absorbed by the headquarters personnel as a whole. Since the physical is more impressive than the abstract, erroneous physical manifestations of thought breed more error. Soon the staff finds its thinking unconsciously colored and it departs from the sound basis and framework of design to become an inefficient structure. Unfortunately, small departures from principle seem to increase in geometric progression. Then we have the headquarters of which we hear "a house cleaning was necessary to straighten it out". A continuous return to principle and a close watch on all manifestation of departure therefrom, however slight, is essential in the supervision of staff work.

However, the technique of operating this structure is properly an operating manual and is beyond the limitations of this thesis.
                                    designed and used by the author
The following part of an operating manual/is shown here as being pertinent inconnection with the relationship of a unit of leader and staff with the next higher and next lower units:
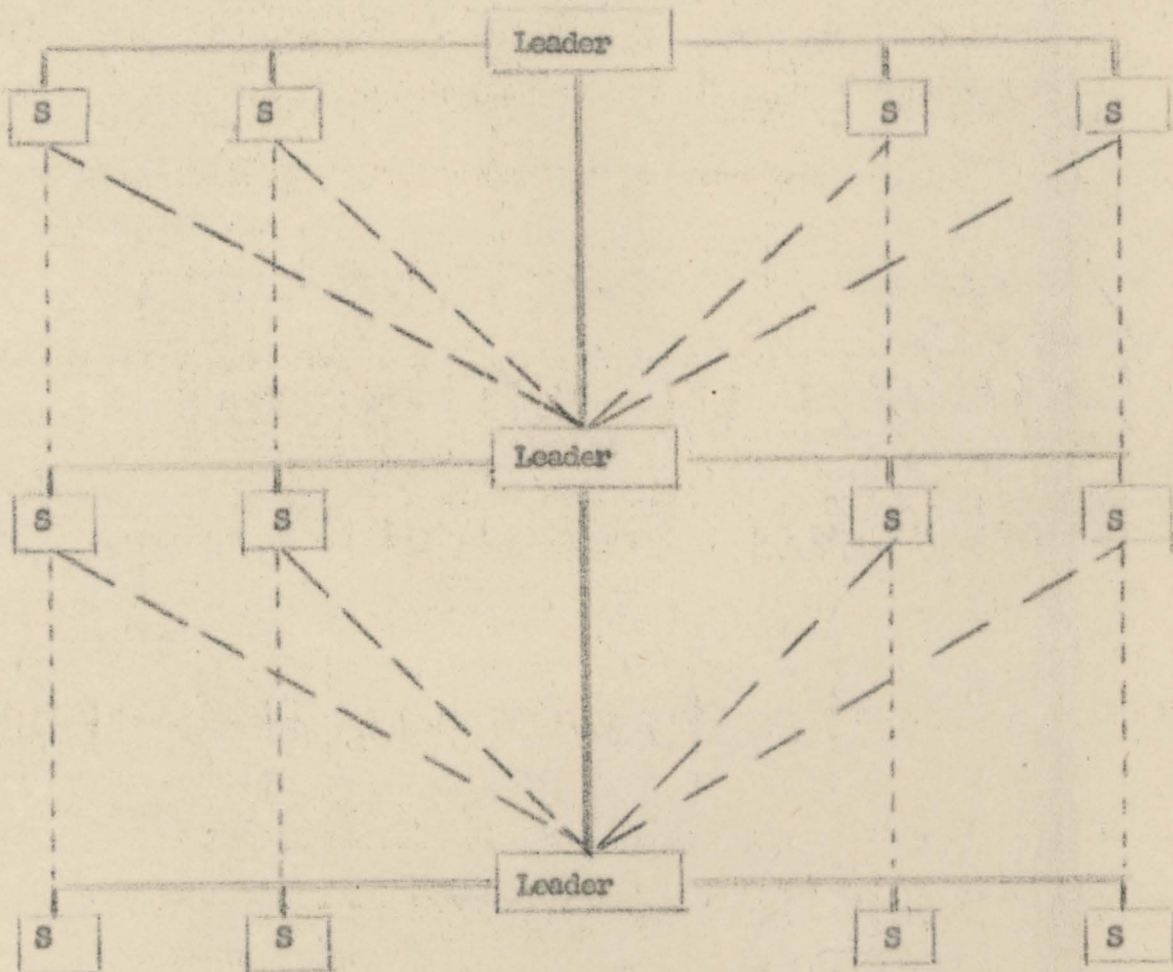
"S" indicates member of the staff of the leader

——————————Line of responsibility and authority

——— ——— ———Line of delegated authority

— — — — — —Line of information, technique, advice, background.

Note: Orders from a staff officer go to next subordinate leader

             Orders do not go to staff officers at next level

             The only exchange between staff officers "vertically" is
             information, technique, advice, background.

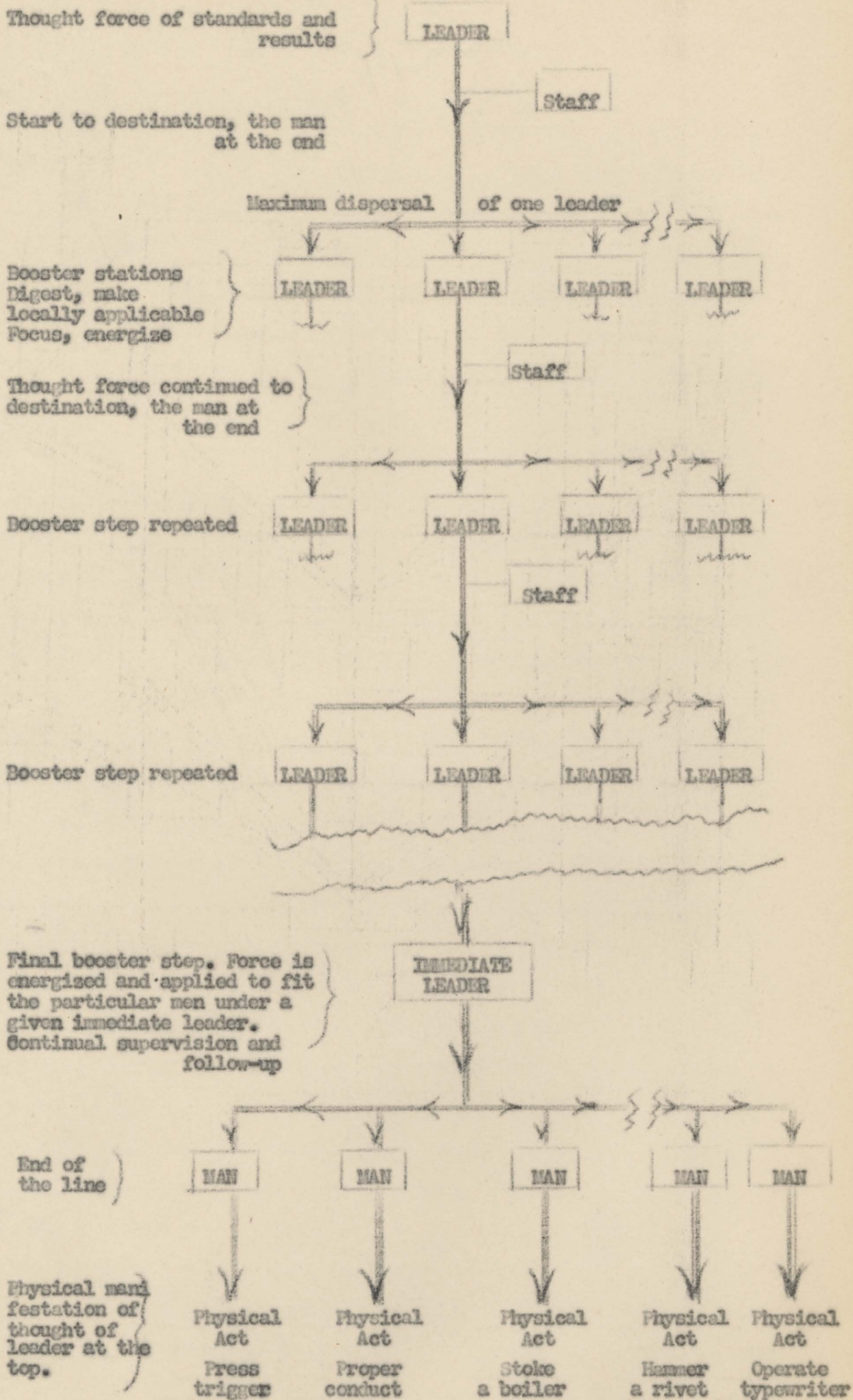   There are only two "lines" for a staff officer to use. He
             must be conscious at all times just which one he is using.

             The structure is stable with diagonal bracing.

             Focus is provided at each level which is in accord with
             the Principle of Unity.

We have stated that organisation is a state of mind, that the lines on an organisation chart represent the thought force which holds the structure together. The staff is tied to its leader in unity with a full loyalty, working together with mutual understanding, with no opportunity for the development of the dangerous opposing force of ego. The leaders see clearly their full loyalty and responsibility to their next leader and are not confused with false loyalties to staff officers who have a power self-assumed as a result of inflated ego.

The standards of the leader at the top are quickly reflected in in the acts of the men at the end. To achieve this result is the supreme test of organization. That the unit type organization makes this result possible is evident from a study of the diagrammatic representation on the next page of the flow of thought force from the leader through the organization to the man at the end.

Thought force of standards and results } **LEADER**

Staff

Start to destination, the man at the end

Maximum dispersal | of one leader

Booster stations
Digest, make
locally applicable
Focus, energize } **LEADER**   **LEADER**   **LEADER**   **LEADER**

Staff

Thought force continued to destination, the man at the end }

Booster step repeated   **LEADER**   **LEADER**   **LEADER**   **LEADER**

Staff

Booster step repeated   **LEADER**   **LEADER**   **LEADER**   **LEADER**

Final booster step. Force is energized and applied to fit the particular men under a given immediate leader. Continual supervision and follow-up }   **IMMEDIATE LEADER**

End of the line }   **MAN**   **MAN**   **MAN**   **MAN**   **MAN**

Physical mani-
festation of
thought of
leader at the
top. }   Physical Act   Physical Act   Physical Act   Physical Act   Physical Act

Press trigger   Proper conduct   Stoke a boiler   Hammer a rivet   Operate typewriter

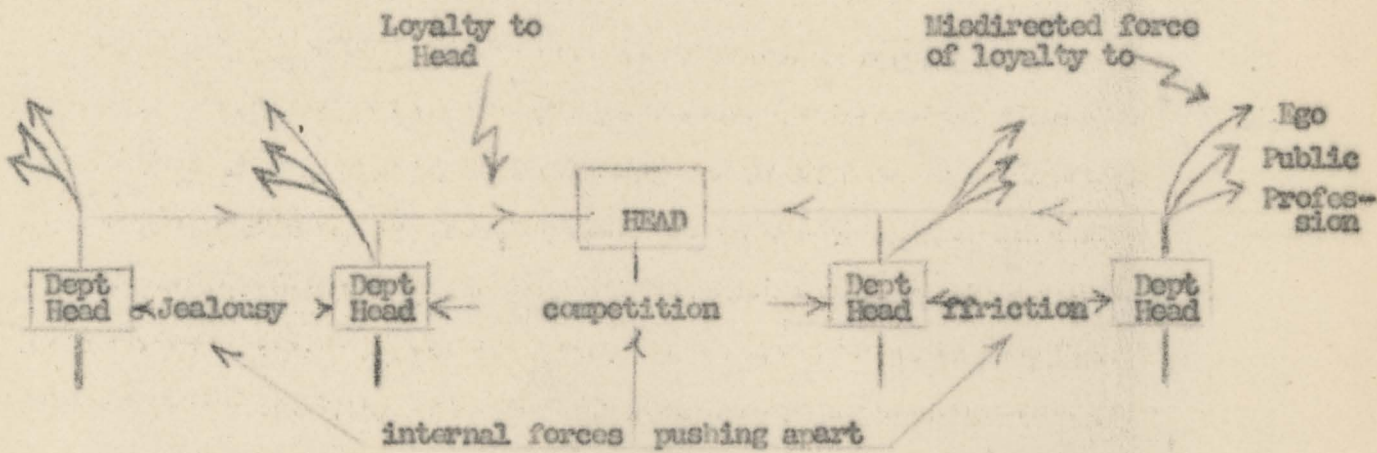## Chapter Three

THE DEPARTMENTAL TYPE OF ORGANIZATION

The departmental type of organization sometimes appears, super-ficially, to be similar to the unit type. It has a head, an executive or deputy head and heads of departments who appear to be staff officers. The next lower level also has head and corresponding department heads. However, the head is more apparent than real, the degree of apparency varying with the strength of departmental ego. Let us design, in the abstract, the departmental type of organization and look at the design factors as they come into being.

We start, as we did in the unit type, with a leader who has a job to do. When he finds that he must have assistance he classifies the functions he can pass on. Sometimes this classification is based on technique or specialist knowledge, sometimes on the volume of items pertaining to a given subject, other times on the relative importance of any grouping of allied matters, and quite frequently on a combination. The leader then appoints individuals to head the classifications he has developed. But when he appoints the head, he does so in a way that, in varying degrees, shifts the responsibility from him, the leader, to the department heads. He in effect says "You do this, I am holding you responsible" whereas in the unit type the staff officer is told by the leader: "Help me to exercise my leadership by looking after this part of my work for me. Follow my policies and use my general view point. You are one of a team with the rest of the staff and must work laterally with them because they also have a collateral interest in what you are doing. I retain full responsibility. You have none, except to me." The first approach, the departmental one of "you do this" at once sets up the force of ego, whereas the second approach, the unity type of "help me to do it" sets up loyalty which ties to-gether in unity.

Thus, by his first act, the leader has ceased to be such. He becomes a head, sharing his responsibility with other heads, commonly called department heads. The force of ego is pulling against the force of loyalty. This ego grows to take different forms, generating loyalty to self, catering to professional pride, seeking the good opinion of the public or contemporaries, and the feeding of ego with attendant self-

inflation in building up his own department in competition with others. The first step in the structure is illustrated in the following diagram.

Loyalty to Head

Misdirected force of loyalty to

Ego
Public
Profession

HEAD

Dept Head — Jealousy — Dept Head — competition — Dept Head — friction — Dept Head

internal forces pushing apart

It is evident that we have violated the principle of unity by trying to make unity divisible into separate parts called departments. By so doing we have released potentially destructive forces, which pull against the organisational structure. The groundwork for departmental jealousy has been laid which will reduce consideration of collateral interests in other departments. The head has "ducked" some of his responsibility by sharing it with others. We have designed a structure which can never be in equilibrium, except momentarily, because of the opposing forces which have been encouraged.

Since the purpose of this structure is to do something, each department reaches down to control and direct its interest in the "doing" level. This may, and frequently does occur simultaneously with the appoint/of department heads at that level. The structure now takes the form shown on the next page.
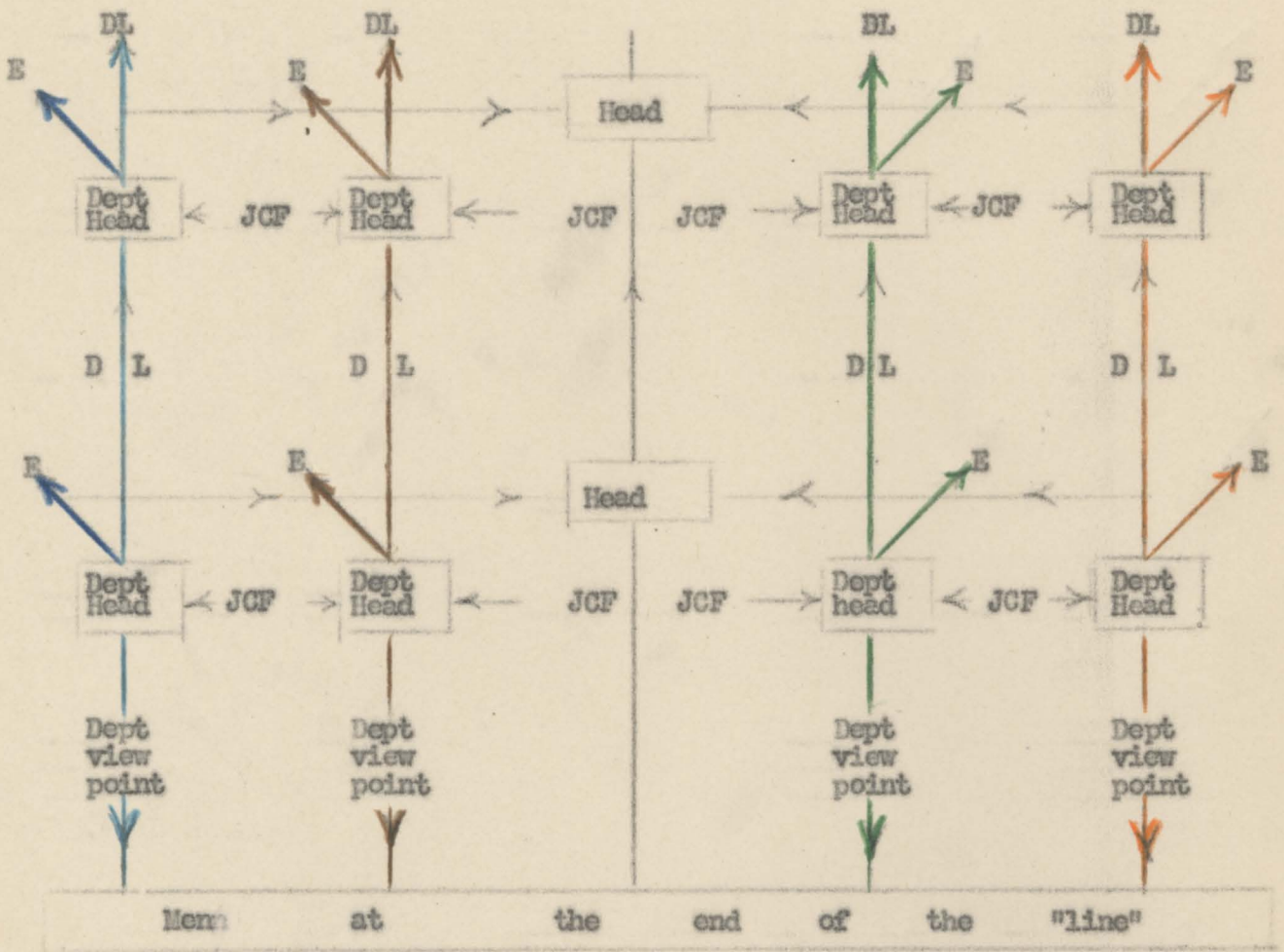
LEGEND: E   force of ego, including loyalty to self, public and
                                                     profession
          DL   departmental loyalty

          JCF   forces of jealousy, competition and friction

          Colors are used for each departmental line because each
                  line represents a different view point. Ideas from
                  a single source are usually"colored" differently by
                  each department.

DEPARTMENTAL STRUCTURE

DIAGRAM TO SHOW FORCES ACTING

And so we have the bottom of the organization frequently receiving instructions and information from as many sources as there are departments. Since they emanate from different sources, each will be different in their tone and viewpoint, sometimes conflicting. The loyalty of departmental personnel is to their department heads, not to the individual who started out to be their leader. The heads at lower levels can at best only try to coordinate several compartmented groups. Since instructions flow down the departmental line the head too often learns of them after the fact when it is too late.

At this point the following sentence is worthy of reflection:

"If banks had fallen into the fallacy of the industrial world, all bookkeepers would report to a head book-keeper in a distant city and all the janitors to an alleged expert chief janitor somewhere else."

(Modern Organization, Charles DeLano Hine, 1916)

The head of our departmental type structure at any given level will have to depend upon his department heads to advise him as staff officers and assist him in the supervision of execution. Since men do not "tell" on themselves, and since they cannot supervise themselves, the head is depending upon an illusion. Robert Burns wrote: "Oh wad power the giftie gie us, to see oursels as ithers see us!" When the leader designed departments and set up what was to be his staff as department heads with the "you do it" attitude he lost his staff then and there because consciousness of separation and of ego was introduced. A hybrid was created, neither staff nor leader (commander) trying to function in both capacities.

Because of the lack of unity, the departmental type organization must be slow to act. An effort is required to bring the departments together for unified effort against the opposite force of ego. The head is the only individual who can express unity but his capacity is limited. The departmental type then is not good for an organization which must move quickly in a changing situation.

But if the departmental type has so many disadvantages, why do we see it used so widely? Our government uses it as does the majority of commercial and industrial organizations. It works for them and certainly business would not use a type of organization which is not the best. The reason, "it works", is a half statement. It could well be that "it works" in spite of the organization, not because of it.

Given sufficient pressure, particularly the pressure of war, and a group of individuals will get the job done in spite of poor organization. Unfortunately there is no comparative standard by which to judge. "We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them. Their appreciation calls for an act of memory, an effort of the imagination." But then, why do we have the departmental type. Let us see if we can trace it to an origin.

The first important designed organization in the United States was undoubtedly that of our government, when a governmental organization of three departments was established; executive, judicial and legislative. The authority was vested in the people. A fear of one man control was in the minds of the people. The departmental type with its opposing forces of loyalty and ego would give the checks and balances desired. It was a compromise designed to meet a peculiar set of specifications.

Since the organization of the government was the only type of organization with which the public was familiar, it was only natural to organize early business and industry on the same pattern. While the unit type was developing for military organizations, it is conceivable that the public would shy from anything that was "militaristic", if any thought was given to it at all.

And so we have "copied" from one to the next, year after year, because "it worked". Few organizations are designed or selected. They usually just grow, molded by the existing pressure and guided by the background and experience of the individuals involved. When this background is political and governmental, or when the experience is in other departmental type organizations, the natural product of the pressure for organization is more of the same, - departmental.

Then too, organizational structures are not designed before occupancy. They just grow, like building a one room house sufficient for the purpose initially. Then a lean to is added. Then another, and another, until the structure becomes a rambling one without order, system or efficiency. But,—"it works".

There is another reason which could well cause many departmental type organizations during the process of "growing". There is an

human inertia which causes many individuals to be reluctant to accept more responsibility than is forced upon them or required. The departmental type organization is the natural result from "ducking" responsibility and passing it on to department heads. At the same time, the reluctance to delegate authority to the next lower level leaders prevents that delegation where it should be and keeps it at one's own level. A case of having one's cake and eating it too!

If our design specifications include inadequate supervision, fear of control in an individual, a stable unchanging situation, a need for checks and balances as a substitute for supervision, slow reaction and deliberate decisions, then we would probably design the departmental type and try to counter the inherent forces released by the separation of unity into parts. However, even the government found it necessary to alter the design in an emergency by granting the President special War Emergency Powers.

Chapter Five

COMPARISON OF TYPES

The two types of organization, unit and departmental, can best be compared by referring to the diagrams on the next page (unfold out) as comparison is made.

The framework of the unit type shows a stable structure. A strong center line of full and complete responsibility, the flanks tied strongly to the center at each level by the force of loyalty. The flanks vertically supported by mutual interest, and the whole structure diagonally braced with the strong lines of delegated authority. The flow of thought force is focussed at each level so that the man at the end who is to perform an act, which is the purpose of the organization, is the recipient of the full and complete focus from one source. The Principle of Unity is met throughout the structure and, in addition, is met by this successive focus into unity at each level. The end of it all is a unit,—the man at the bottom.

The framework of the departmental type shows an unstable structure. A continual adjustment of forces is required to keep it in equilibrium. A parallelogram without diagonals is not stable. The strength of the structure lies in the strong vertical members on the flanks. The vertical members of departmental loyalty are much stronger than the horizontal members which tie the flanks to the center. In fact, the pull of ego opposing the pull of loyalty to the center may sometimes be stronger. Then the structure loses it's equilibrium and starts to fall. The men at the end reflect the instability for they are the recipients of it. There is no focussing at each level. The head disperses his thought force at his own level where it is colored by departmental thinking and further dispersed in passing down the departmental lines until it reaches the confused man at the end. Dispersal of thought must result in a dispersal of effort. Consider the rays of the sun. Their dispersal when they reach us is such that we are not conscious of them. Focus the rays of the sun on us with a glass. The resultant burning will make us conscious!

UNIT TYPE

LEADER

LEADER

LEADER
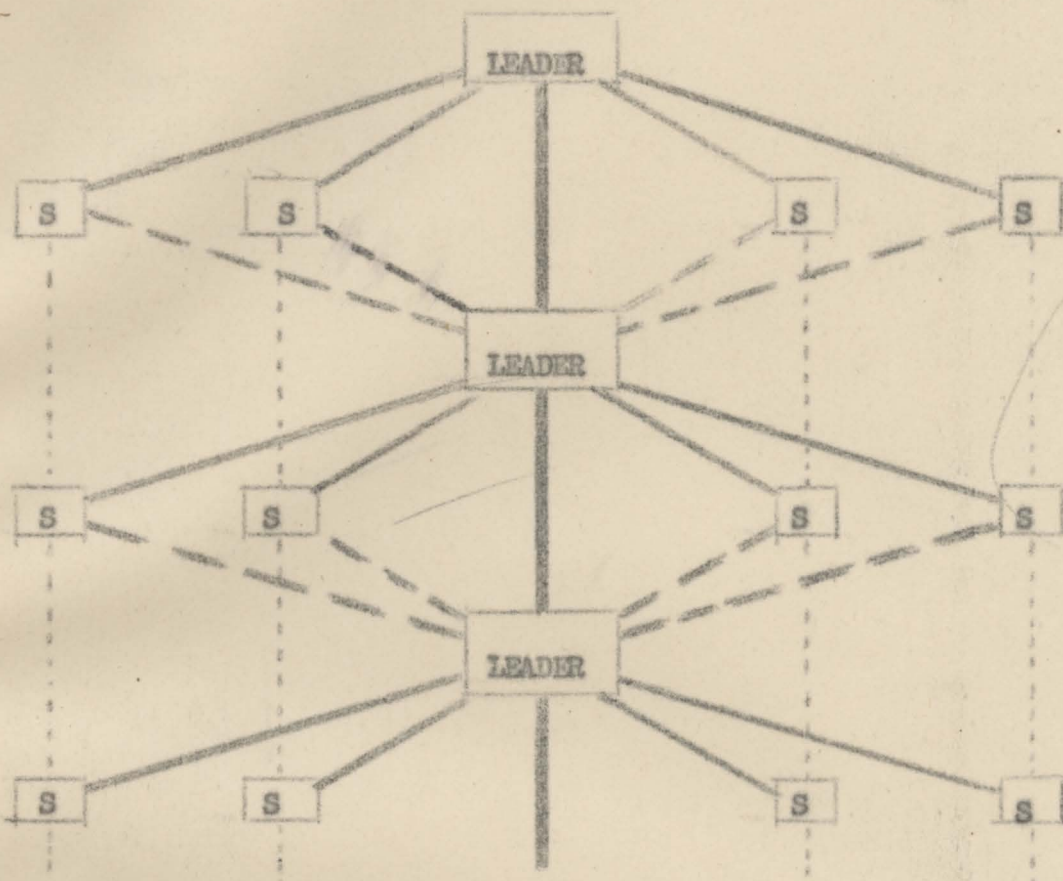
LEGEND: ————LINE of Responsibility

— — —Line of delegated authority

- - - - Line of information, advice, technique, background
S   Staff Officer

DEPARTMENTAL TYPE

Ego

Ego

Head

Head

Head

Dept Head

Dept Head

Dept Head

Dept Head
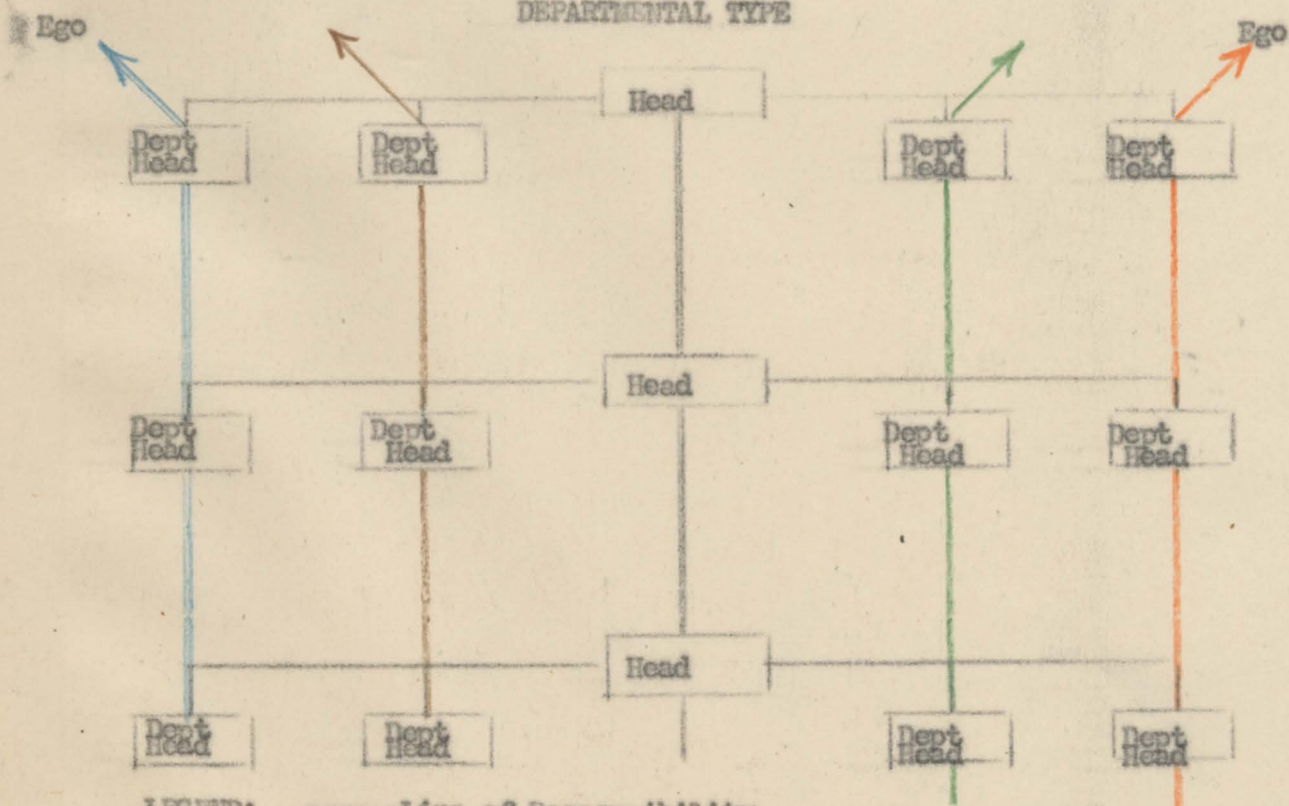
LEGEND: ————Line of Responsibility

Colored: Lines are departmental lines, each different.

Ego   Force of loyalty to self, public, profession.

Chapter Six

A TRIAL DESIGN

We have said that organizational structures are not generally designed, but are copied from or patterned after other organizations which may or may not have the same specifications. But a structure must be designed to fit requirements. Since it is the framework, the very life of the organization, surely it must be as important to design it as to design the hull and interior arrangement of a ship or a building. Let us briefly go through the mechanics of a trial design.

Suppose a Mr. Able has an idea for an article which the public needs. He believes that there is a market for it and has the capital to finance an organization. He states his mission: (task) to provide the public with the article, (purpose) in order to make a profit on his idea and investment.

Mr. Able makes an estimate of the situation and arrives at his general plan; to manufacture, distribute and sell the article in order to provide the public with the article. The implementation of the plan requires an organization. He decides to use the unit type organization because it is based on a sound principle, the Principle of Unity. The first step in the layout of the unit type is to determine the leaders necessary and their placement at the levels required. In order to determine the number and type of leaders required, as well as their levels, Mr. Able employs a technique developed by the author called "verbal geometry",—"verbal" because it uses verbs, "geometry" because it uses a geometrical theorem that the whole equals the sum of its parts. By this technique a verb of accomplishment is divided into all the included verbs of accomplishment. These latter verbs are then divided into their included verbs of accomplishment, and so on until we get to the "accomplishment" level desired or until we get to the verb which describes the act of the individual at the end. For convenience the verbs as they are developed may be labeled: verb, $verb_1$ $verb_2$, $verb_3$, and so forth. At any level the summation of the verbs equals the verbs or verb above. For example, the summation of $verbs_1$ equals the verb from which they were derived.

The first level verb in Mr. Able's case is "to provide".
He makes a trial layout of accomplishment by the technique of
"verbal geometry" as follows:

1st Level verb	2nd Level verb$_1$	3rd Level verb$_2$
		to procure material
	to manufacture	to build the parts
		to assemble
		to store at source
to provide	to distribute	to transport
		to store at destination
		to sell in Area #1
	to sell	to sell in Area #2
		to sell in Area #3

verb	equals	sum of verbs$_1$	equals	sum of verbs$_2$

Mr. Able decides to place himself as the leader at the first
level with the over-all "to provide" responsibility. He selects
three leaders for the next level, a Mr. Baker "to manufacture", a Mr.
Charlie "to distribute", and a Mr. Dog "to sell". These three each
select a leader to take the full responsibility for the accomplishments
indicated by the verbs at the third level. Mr. Able reserves the
right of approval of these latter selections. And so the design
continues until all the leaders are selected and placed. This is
the framework of the organization, this "molecule" of leaders.

Mr. Able will need a staff to assist him in the discharge of
his responsibility to the organization. He selects a Mr. Easy, who
has a "passion for anonymity" and will execute Mr. Able's policies
and ideas as Mr. Able himself would do had he the time.
Mr. Easy, the executive,/then needs assistance, so he first selects his
Assistant Executives. As a basis for this selection, he turns to
general classification developed on page 12 of this thesis.

This general classification is in terms of accomplishment and includes everything that has to be done:

Determine the obstacles (competition and sales resistance)

Procure and maintain personnel (as individuals)

Procure and maintain materiel

Operate the combination of personnel and materiel

The four assistants which the executive Mr. Easy selects will each handle matters of which they have the principal cognizance from the same point of view that the executive himself would do had he the time.   He gives his four assistants the following titles:

Assistant executive for Public Relations

Assistant executive for Personnel

Assistant executive for Materiel

Assistant executive for Operations.

The executive and his four assistants from the executive group of the organization.   They then set up the staff officers according to the specialist knowledge or technique required for the business. These staff officers will then form the staff which will develop technique, "know how", supervise in the name of Mr. Able, and work with the entire staff as a team with loyalty to a common leader, Mr. Able, for a common end, the success of the business.   For illustrative purposes, some of the staff officers selected might be:

Secretary	Receipt, opening, sorting, distributing, filing all incoming communications. Authenticate, publish and distribute written directives. Process outgoing communications.
Cost Engineer	Record and interpret cost data
Auditor	Check money accounts. Remove temptation.
Purchasing Agent	Purchase materiel.
Industrial Engineer	Industrial technique
Engineer	Construction and maintenance of facilities.
Research Engineer	Research for improved product.
Designing Engineer	Improvement in design of product.
Inspector	Inspect entire organization for Mr. Able
Labor Officer	Labor relations
Personnel Officer	Personnel routine
Sales Engineer	Sales technique

While the above is not intended to be a complete or accurate listing of the staff which might be required, it will serve the purpose of

illustrating the design process. As each of the staff positions is
filled the incumbent is caused to feel that he is a staff officer.
The next subordinate leaders will see to it that things get done.
In order for the staff officer to carry out a desire of accomplishment
from Mr.Able, he, the staff officer, must frame a mission for a next
subordinate leader to do it. The staff exists only for one purpose
and that is to assist Mr.Able in the discharge of his responsibility
in the same way Mr.Able would do himself had he the time. There
is no place for ego on this staff.

The staff is not complete yet. The assistant executives for
control and planning are selected. The "control" function in this
organization is a most vital factor,—it may mean the difference between
profit and loss, success and failure.

We are now ready for the organization chart. It is not believed
essential to the development to draw this chart here. If the reader
will turn back to page 17 he will find the chart. All that is
necessary is to place the names in the blocks and alter some of the
titles to fit this particular design. The chart on page 17 ends at
the second level of leaders, but the extension to include our organization
is merely a repetition of the basic structure illustrated.

Two types of organization have been developed and a trial design
made for one of the types. The third type of organization has not been
developed for the reason stated earlier that it was a variation of the
departmental type and not essential for this thesis. The unit type
is fluid, responsive, flexible, and successively unified or focussed
at each level on a single objective. It will transmit the standards
of the leader at the top quickly to the man at the bottom so that the
actual"doing" will be as the man at the top would do it if he could
disperse his efforts to that extent. The unit type has a fundamental
principle, the Principle of Unity.

The departmental type is slow by friction, inflexible by compart-
mentation, less responsive because of opposing forces of loyalty and ego,
and does not transmit the standards of the head at the top to the man
at the bottom. It is the result of a need for checks and balances
when the person or group of persons in whom the authority is vested
cannot effectively supervise or have reason to fear the abuse of dele-
gated authority. Then the choice of the lesser of two evils is made.

We have designed, illustratively, a unit type organization to accomplish a hypothetical mission. It is hoped that this design process, sketchy as it had to be, will clarify any obscure points which may have appeared in the development of the unit and departmental types of organization.

PART II THE ORGANIZATION OF THE NAVY

"Administration as an art is very old. Organization
as a science is very new. There are a hundred good
administrators for every good organizer. That which
often passes for good organization is high-class
administration, through splendid personal equations,
of what is in fact unscientific organization."

"One bar to progress is the fact that nearly every
man entrusted with authority over his fellows flatters
himself that he is a born organizer. Flattery is never
more deceptive than when applied to one's self."
(Modern Organization, Charles DeLano Hine, 1916)

Chapter Seven

PAST TO PRESENT

The organizational history of the Navy may be likened to
a pot of a mixture of organizational concepts, simmering by the
smouldering friction heat of conflicting ideas and boiling over
periodically from the burst into flame of the pent-up conflict.
The crisis of boiling over is met by the expediency of covering
the flame with more of the same conflicting ideas which causes
reversion to smouldering only to find that the added fuel adds
to the flame,—when it breaks out again, as again it must. Nowhere
is it evident that the flames of crisis are met by the application
of the truth of principle whose cool soothing waters reduce the
friction which is the cause of it all.

In the light of the principles developed in Part I, The Science
of Organization, let us examine these land-marks of periodic boiling
over. A study of the attendant discussion of the period should
isolate the forces acting at the time. Having isolated the forces,
counter forces can be designed and applied to eliminate, neutralize,
reduce intensity, or change point of application.

The beginning of the Navy/was in accordance with the Principle
of Unity in that the Secretary of the Navy was given a whole mission
with full responsibility and authority.

> "On April 3, 1798, a bill creating a Navy Department was signed
> by President Adams and became law. This law provided that "there
> shall be an executive department under the denomination of the
> Department of the Navy, the chief officer of which shall be
> called the Secretary of the Navy. The duty of this officer
> shall be to execute such orders as he shall receive from the
> President of the United States relative to the procurement of
> naval stores and materials, and the construction, armament,
> equipment, and employment of vessels of war as well as all other
> matters connected with the naval establishment of the United
> States'". (A Brief History of the Organization of the Navy
> Department, A. W. Johnston, Captain, USN, 1933)

But the leader tried to copy governmental, departmental organi-
zation. The establishment of a Board of Commissioners in 1815 marks
the first organizational error and set the course diverging from the
Principle of Unity. Once the course was set, the divergence could
only increase as a function of time. The Secretary had found that
he could not personally discharge the duties charged to him by the
basic law. He apparently did not consider the framing of missions
for subordinates. The solution was sought from the premise that

all his tasks must remain in his personal hands. He considered
the use of technical assistants as individuals and thereby almost
kept on course. However, the organizational thought of the period
coupled with fear of a professional Navy led to the establishment
of a Board of Commissioners by law of 7 February 1815 to be attached
to the office of the Secretary of the Navy, and charged with the
discharge of "all ministerial duties of said office". The Board
was to be composed of three "Post-Captains" of the Navy to satisfy
the need for professional assistance to a civilian Secretary.
Further, nothing in the law was to be construed "to take from the
Secretary of the Navy his control and direction of the naval forces
of the United States, as now by law possessed". The underlying
thinking seems to have been: "we must keep civilian control of the
naval forces, but we will let the professionals handle the 'ministerial'
duties, and further we will use 'Post-Captains' whose careers are
practically finished".

This step could not be sound. The fallacy of charging a board
with executive duties needs only the suggestion for acceptance. The
distinction between control of naval forces and ministerial duties
is an expression of a later naval regulation which distinguishes
between command and administration with its far reaching consequences.
The violation of the Principle of Unity by making a separate entity
of the Board planted the seed of ego and its attribute jealousy which
will rear its head later.

The first "boiling over" of the pot occurred when, "Shortly after
the Navy was organized a dispute arose between Secretary Crownin-
shield and the commissioners over their respective spheres of duty.
This related to the exercise of control over the movements of the Fleet
and the personnel of the Navy. The specific point was whether the
Secretary was obligated to communicate to the commissioners "the
destination of a squadron". This controversy was settled by President
Madison in a letter to the Secretary setting forth that the Secretary
of the Navy was the organ of the Executive and was responsible only
to the President. The Board was only responsible to the Secretary and
"all ministerial duties" heretofore transacted by the Secretary were
to be invested in the commissioners, however the actual powers of the
Board were determined by the interpretation that the Secretary of the

Navy gave to "ministerial duties". He decided that they referred to the material of the Navy; to the building, repairing and equipping of ships, and the superintending of Navy Yards, Naval Stations and drydocks. Respecting the personnel of the Navy, movement of vessels, and discipline of the Navy - they were to be decided by the Secretary. The commissioners were to advise the Secretary upon Naval matters." (A Brief History of the Organisation of the Navy Department, A. W. Johnston, Captain USN, 1933)

The error of 1815 in attempting the divisibility of unity is cropping out in the expected symptoms of ego and jealousy. It is understandable that the attempt was made. It appeared logical enough. It was an empirical solution to an organisational problem based on the characteristics of vessels at a time when the professional Navy was concerned only with taking vessels out to sea for operational purposes. The drudgery of "business", of repairing, fitting and provisioning of ships for sea duty seemed to be separate and distinct from sailing. That this was an illusion is evident later in the history of the Navy when much ado appears about "line" officers being necessary to provide the "line" viewpoint for this very "business".

So the settlement of the dispute was a treatment of a symptom, not the cause, by a reaffirmation of the violation of the Principle of Unity in attempting to divide the unit at the top into separate parts.

This attempt bore the only fruit it could when, in 1842, "it being evident that the Navy Department organisation was no longer able to cope adequately, with the everchanging developments of the Navy, a reorganization of the Department was inevitable." [1]

To what principles did we turn for this reorganisation? Did we design an organisation based on principle? No, we copied the only type of organisation which could furnish an example,—governmental or departmental organization, and applied it to an organization with drastically different design specifications. We did not think of framing continuing missions for next subordinate leaders. We did

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1 A Brief History of the Organisation of the Navy Department, by A. W. Johnston, Captain USN, 1933.

not understand that to divide the duties of the Secretary among
assistants would not relieve the Secretary at all,—that the relief
would be more apparent than real.   No, we did not see that under
the Principle of Unity for any organization a leader can decentralize
his load only to subordinate leaders by creating more units or
by framing missions to be placed on leaders of units already created.
We did not see that any duty retained by the Secretary in his own
level, regardless of assistants, has in reality never left him.

So an expediency was employed of covering the flame with more
ideas without basis in principle and the smoulder of the Bureau
System came into being in 1842.   We hopefully saw, through the
rose colored glasses of wishful thinking or ignorance, the hybrid
of departmentalism as a purebred charger.   But we overlooked the
truth inherent in the Principle of Unity that a unit cannot be divided.

Take for example the human body as a unit.   Because it is
carrying a load in excess of capacity resulting in malfunctioning,
we decide to relieve the situation by the method of departmentalizing.
So we separate from the body the legs (movement), the eyes (sight)
the nose (smell) and the hands (execution) and place them all separately
side by side.   Now having isolated these functions we hope that we
can strengthen the body by letting the separate parts function
separately where they can develop and become stronger.   But of what
avail is stronger movement without sight to guide it, faster execution
without hearing what is to be executed?

Treatment under the Principle of Unity would indicate a stronger
unit at the top or more units (bodies) subordinate at the next lower
level.   One body could concentrate for example on the function of
movement since it has the necessary sight, hearing, smell, and execution
in the degree required to support the body in movement.

Let us examine the Bureau System which was devised to correct an
unsatisfactory situation.   It provided for five Bureaus, each
headed by a Chief of Bureau who was to have an indefinite term in
office and be individually responsible to the Secretary of the Navy.
The organic act as quoted in the Navy Regulations gives the basis:
"The business of the Department of the Navy shall be distributed
among the Bureaus in such a manner as the Secretary of the Navy shall
judge to be expedient and proper."   "All the duties of said bureaus

shall be performed under the authority of the Secretary of the Navy, and their orders shall be considered as emanating from him, and shall have full force and effect as such."

The underlined words (author's) invite/the ideas inimical to the organization. "Indefinite term" establishes a status separate from the leader. The requirement to distribute (all) business among the Bureaus (agencies independent of each other) is impossible of exact execution. There will be quarreling among the Bureaus as to the manner of division and the evil force of jealousy is brought into play. The granting of "their orders" to the bureaus adds to their ego and the continuing act of issuing "their orders" steadily feeds that ego. While the act states how "their orders" shall be considered, the rank and file of the Navy do not read the act. They form their impressions from what is read currently. "Their orders" sets them up in the minds of all, including themselves, as agencies having power in themselves. A brake on ego and a contribution to the Navy Department would have been effected by adding to the act a requirement that all orders issued quote the authority of the Secretary of the Navy.

So, having hobbled the Navy with departmentalism, we placed it in training for a world's championship race with the highest of stakes, the security of our country. We can predict the handicap now. The organization will be torn by the opposite forces of departmental ego and loyalty, rasped by jealousy of other departments, and exhausted by the hopeless struggle to force the business of the Navy into five departments. One may as well try to make two and two equal five. The impetus given to the growth of the error of separation of command and administration will also have its effects. Error can breed only error!

The force of jealousy and false pride stemming from class consciousness made its appearance in about 1854 when the question of giving rank to the "staff" arose.

It was here that we first encounter the rivalry and petty jealousies which ran for many years between the staff and line, on the one hand, and naval officers and civilians on the other.

"To illustrate the almost fanatical zeal with which the line opposed the granting of rank to the staff corps the following remark is attributed to a respectable young line officer:

'I hold my rank dearer than life itself, and were any purser

of the Navy to sign an official report above me, I
would cleave him to the chin with my cutlass. I could
never suffer my rank to be outraged in this way; I
would rather die ! ." (A Brief History of the Organi-
zation of the Navy Department, A. W. Johnston, Captain
U. S. N., 1933)

This class consciousness stems from the error of separating
command and administration. The resultant thinking of:"the
elite command, the drones administrate" must continue to be the
proximate cause of envy and jealousy as long as the Regulations
make official the distinction between command and administration.
That this consciousness exists today was startlingly revealed to
me by the conversation of two naval officers (line) for whom I
have the greatest respect apropos of a certain "staff corps"
officer having made an impression of unusual ability. The two
line officers posed this question to each other concerning him:
"What is such a good officer doing in the 'staff'? Why isn't he
in the line?" Echoes of 1854 off the sounding board of a Naval
Regulation on command and administration!

The smouldering fire broke out again during the first months
of the Civil War when "the defects of the administrative system of
the Navy Department were apparent. It was slow in adapting itself
to new conditions and responding to the "executive touch". The
weakness of the Secretary's office as a directing and unifying force
was manifest. To aid the Secretary, Congress, by Act of July 31,
1861, created the office of Assistant Secretary of the Navy." [1]

How could a "unifying force" be expected when the Principle of
Unity was violated in designing the organizational structure in the
first instance? How could it be anything but "slow" when forces
of ego were built into the structure to pull against any force of
loyalty to a common leader? How could there be any response to
the "executive touch" when the structure was built to deny just such
a response? One may as well build a barn and then be surprised
when it will not function as a house.

Let us recall a prior statement made earlier in this thesis,
apropos of the initial adoption of the bureau system. "So,
having hobbled the Navy with unsound organization, we place it in
training, hobbles and all, for a championship race with the highest
of stakes, the security of our country". When the time for the
race came the weakening effect of the hobbles was evident.

1 A Brief History of the Navy Department, A.W.Johnston,Capt.USN,1933

Still, there was no realization of the cause of the trouble. There were no principles of organization brought forth to be checked against the design specifications. No, the cause was either ignored or not appreciated and the symptom treated by a stop gap of an Assistant Secretary. (Ego always calls for "assistance" for it cannot admit any error) The post was abolished after the war, self evidence of the "stop gap" nature of the treatment.

In 1862 the smouldering fires of conflict broke into flame again. And again no attention was paid to the cause. The symptom was treated by increasing the Bureaus from five to eight. We are still trying to overcome the effects of a violation of the Principle of Unity by continuing to violate the principle. Unity cannot be divided into separate parts. It is as futile as trying to make two and two equal five. Some idea of the friction existing can be gained by pausing to think on this question: "that if, at the instant of the 1862 change the business of the Navy was properly divisible into eight parts, what was the situation the day before when only five parts existed?"

Error can breed only error, and the force of ego which we planted in the several departments (bureaus) in 1842 has fed upon itself during the twenty year period until it was strong enough to force this provision in the Act of 1862

> "The several Bureaus shall retain the charge and custody of the books of records and accounts pertaining to their respective duties and all of the duties of the Bureaus shall be performed under the authority of the Secretary of the Navy and their orders shall be considered as emanating from him and shall have full force and effect as such."

Now we have not only independent duties but separate accounts and of course separate appropriations. What more perfect fuel could be added to the flames of jealousy and self inflation of ego to produce flames of even greater proportions?

The following additional provision in the Act of 1862 is even more illuminating

> "The Chiefs of the several Bureaus in the Department of the Navy shall be appointed by the President, by and with the advice of the Senate, * * *and shall hold their offices for the term of four years."

The force of ego which always pulls against the force of loyalty had finally broken the tie. The weak loyalty to the common superior

became diluted into three loyalties, to the President because he
appointed, to the Senate because it confirmed, and to the Secretary
because he presumably would have to propose or concur in the names
in the first instance.   Now ego was free to give full rein to
the inherent lust for self-inflation to the bursting point. And
burst it must to fall of its own emptiness. Error will eventually
destroy itself. But let us go on and see the symptoms further on.

A glimpse of a need to do something mades its appearance in
1882 when Rear Admiral Luce recommended a Board of Admiralty. However,
"little or no interest was evidence by the executive and legislative
branches of the government." [1]

Then in 1867, Secretary Welles wrote in his diary of 24 December:

"Senator Nye introduced a bill while I was sick, to establish
a Board of Survey; in other words a Board of Admiralty to be
composed of an Admiral or Vice Admiral and two Rear Admirals.
This board is to supervise and control the Bureaus, and (would)
virtually supersede the Secretary * * * *". (A Brief History of
the Organization of the Navy Department, A. W. Johnston, Captain
USN, 1933)

While the prescription was wrong, nevertheless the cause had
been diagnosed as a lack of unity.

Supporting data is not required to state that about this time the
force of ego and it's self inflation was found to have broken out into
the lower levels. (See diagram of departmental type page 28) In-
dependent departmental control was manifest in the navy yards. Even at
the risk of becoming too allegorical the author cannot resist the
comparison of a strong department to an enormous octopus reaching its
grasping tentacles down into the   vitals of an organization and
sucking the very spirit to itself in order to inflate itself. Then
visualize several such octopuses, each doing the same devitalizing
grasping at the heart of the lower elements, tearing apart morsels
of authority which fall into the simultaneous grasp of two or more
opposing tentacles.

That the "tentacles" are still grasping today was revealed when
a naval officer of my acquaintance casually related the circumstances
attendant upon the installation of a fire director on his ship while
it was in a Navy Yard during World War II. The Bureau of Ships had
issued certain instructions pertaining to the installation. The Yard
raised the question of Bureau of Ordnance concurrence. This offended
the ego of Bureau of Ships who replied rather testily that it's

1 A Brief History of the Navy Department, A. W. Johnston, Capt. USN, 1933

instructions always had Ordnance concurrence. Ordnance separately became aware of the incident and instructed the Yard to suspend installation. The question then left the Navy Yard for bickering between the two Bureaus. The combat ship had to sail for combat duty without the director! And so it will ever be as long as the Principle of Unity continues to be violated.

But let us go back to taking note of the "boiling over" times and see what smouldering fires were bursting into flame.

The period up to 1909 when the Aide System was established is a series of such burstings. The general treatment of the symptom was in the form of recommendations for that generally ineffective panacea,— boards. While the real reason in principle never appears, the "board" treatment was not accepted. Organizational light was dawning, perhaps, but too immaturely to be expressed.

The "general staff" method was proposed to meet the need, but no where in any of the hearings, discussions, reports, and recommendations does there appear a clear understanding of the general staff idea. Here is a clear case of trying to "copy" without design. The term "general staff" is a misnomer anyway and conveys an impression of something different from the true concept. As we have developed earlier in Part One, The Science of Organization, the so called general staff system is only an organizational device to classify the business of any unit in general and fewer parts than can be done on a specialist basis,—and at the same time employ the specialist classifications. As we rise to higher levels in the unit type organization the number of specialist classifications which can be handled by an executive (Chief of Staff) become greater and greater, until finally there are too many for one executive to effectively coordinate. Assistants to the executive whose cognizances correspond to general divisions of the entire business of the unit become necessary. The basis for this development is shown on page 12. But the assistant executives have the viewpoint, each for their particular cognizance, of the executive himself as he would had he the time. But, and here is the trick of it all, the relationship of each assistant executive to the staff must be with all the staff in the same way for each. The device fails when this is violated and staff sections are placed in groups according to the cognizance of the assistant

executives, and each of the groups placed under one of the assistant executives. This error is seen in many organization charts today. But to return to the period just before 1909, the proposal to copy the "general staff" system in the absence of principles on which to design was not accepted, and properly so.

It is evident that the designer of the Aide System was on the right track. The system was the most progressive step that the Navy had made in its history up to that time. It was however only partial and the designer lacked sufficient understanding of organizational principle. This in spite of the fact that President Theodore Roosevelt had specifically requested the Moody Board to submit "organizational principles". [1] That the board could not do so (as is evident from it's report) is not surprising when one realizes that there were no real principles contained in the contemporary paucity of writing on the subject of organization. And so a fatal error was made,— the Bureaus were grouped into divisions corresponding to the Aide classification and then placed under the respective aides. The logical result was the failure of the Aide System. However the cause of the failure was not traced to the error because it was not then and is not generally today recognized as an error. The fundamentals are two: first, that a man cannot serve two masters; and second, the indivisibility of unity.

Efforts were made at this time, without recognizing the principles involved but driven by a crying need to do something, to apply the Principle of Unity to the lower levels, specifically the Navy Yards. [2] This effort took expression in the form of a leader supposedly appointed with authority and responsibility for the whole activity of the Navy Yard. However, since the solution was empirical and not based on a recognized principle, it could not work. The strong ego developed by reason of the departmental system was too strong to be countered by such an empirical formula which did not express the force of principle.

1 A Brief History of the Organization of the Navy Department, A. W. Johnston, Captain, USN, 1933)

2 Ibid

The pressure incident to the approach of World War I agitated
the smouldering fire again into flames which were again smouldered
by the establishment of the Office of Chief of Naval Operations.
Here unfortunately, the progressive though incomplete step of the
Aide System was lost and the glimmer of light went out. The estab-
lishment of the office is deduced to be the result of three forces:
pressure of coming war; fear of inept direction of the Navy by a
civilian Secretary; and fear on the part of the Secretary of a
strong professional control of the Navy stemming from the antecedent
fear of the people. A solution ground out between opposing forces
could not be designed. It was an empirical solution again with
no basis in principle, a stop gap of the same pattern as the existing
organization, another treatment of symptom without finding the cause.

In retrospect, our persistence in the use of the same treatment
for all the "outbreaks" of symptoms is amazing. There was apparently
no awareness that the organizational difficulties were only symptoms
and that there must have been a cause. The advent of the Office of
Chief of Naval Operations was a step backward to exactly one hundred
years before, when, in 1815, it was decided to divide the top unit
of the navy into two parts: "ministerial" and operational. The
basic error, attempting the divisibility of unity, with its companion
a strong departmental type organization; had not only survived for
the entire one hundred years but had inflated itself.

The success of the "new" panacea can be inferred from the fact
that a long Congressional investigation of the management of the Navy
during World War I was found to be necessary after the war was over.

Incident to this investigation, Secretary Daniels had occasion
to discuss the general staff principle and point out why it could not
be applied to the Navy. It is more accurate to say that he had occasion
to discuss the Army General Staff System and point out why the Navy
should not copy it, for his testimony showed only that he did not
understand the principle. His pyramiding of bad effects is not sur-
prising and a logical result of copying versus application of principle.
Apparently his audience did not understand either.

And so we come to and through World War II without a fundamental
lasting change during a period of over one hundred and thirty years
in an organization whose original conception was in error.

We have repeatedly stated that Naval personnel, professional and civilian, do not appear to understand organization. This is a sweeping statement but what other conclusion can be drawn when naval writing and manuals talk of having the unit system and then describe the departmental? state that certain headquarters are based on a general staff organizational device and then describe a hybrid which conforms to no principle? carry on an impossible distinction between command and administration? insist on the divisibility of unity?

But why is this? How could such a condition exist? There are several reasons. The major organizational experience of the naval officer is aboard ship. A ship is organized on a departmental basis. It furnishes no example or practise in the unit type in which the art of employing subordinate leaders is required. On a ship the captain can control everything because everything is permanent, confined in a relatively small space with a fixed relationship. The unchanging character of the physical plant together with repetitive functions of personnel makes possible a very special type of organization which has a background of hundreds of years of slowly growing stability. Under these conditions it is possible to have a highly specialized team with only one leader who does not employ subordinate leaders. He has department and division heads whose relationships are compli- cated. A diagram of their relationship would be tied together with an unusual display of vertical, horizontal and cris-cross lines. The organization does not appear to be designed on principle but grew throughout the years. It is passed from person to person and requires much initiation.

Because of the years of training in this specialized type of organization officers naturally try to apply it to other activities where the design requirements are quite different from those of a ship. The unit type organization is required, but how can officers use something with which they are not familiar and in which they have had no training or experience?

The second reason for the organizational difficulties of the Navy Department is that civilians as a class do not understand organization. Civilian personnel who have made politics and government their career have a background of political and governmental organi- zation which is essentially departmental. It's very design incor-

porates features of checks and balances, deliberation, bargaining, and caters to and employs ego and its attributes. Yet the long records of congressional hearings and investigations show that the Congress, congressional committees, and the civilian personnel of the Navy Department exercise a great influence in the solution of organizational problems.

The impassé is that since political organization is essentially departmental and ship's organization is a specialized version of the departmental, neither the civilian nor the naval officer can contribute a basic difference in the concept of organization or in the solution of its problems.

Therefore, throughout the history of the Navy, each bursting into flame of the smouldering erroneous forces has been met by smothering the flame with more of the same. This is a very natural and logical process under the circumstances of the background, training and experience of the groups from which the ideas are drawn. The published information on the current so called "reorganization" of the Navy Department indicates no basic change. It appears to be an improvised answer to a definite need in the same manner as empirical solutions have been improvised to treat the symptoms as they became virulent too many times during the past hundred and thirty years.

Chapter Eight

THE PROPOSED REORGANIZATION

"It sometimes happens that human nature must be
hurried to its conclusions. The greatest and
present need is an antidote for the unwillingness
of men to profit by the previous experience of
others. * * * Ignorant of fundamental principles,
intolerant of outside suggestion, unable to detect
the analogy in other undertakings, they repeat the
expensive experiments of the past" (Modern Organi-
zation, Charles DeLano Hine, 1916)

Apparently "unable to detect the analogy in other undertakings"
the Executive Order of September 29, 1945 "repeats the expensive
experiments of the past" by attempting the same divisibility of
unity which made its first appearance in 1815. We see in the
following first paragraph of the Executive Order a repetition of
the 1815 "experiment" except that this time we attempt three divisions
instead of two.

"1. In order to provide for the more effective integration of
it's activities, the Navy Department shall hereafter be or-
ganized to take cognizance of the major groupings of military
matters; general and administrative matters; business and re-
lated industrial matters. The structure * * * to accomplish
this purpose shall be such as the Secretary of the Navy may
deem appropriate."

What is the purpose of the whole Naval effort but a military

matter? How can "general" be less than the whole? Is there not

"business" in every part of the whole?

There is no need to go any further with an analysis of the

proposed reorganization when the first paragraph, the basis of it

all is an antinomy that separation will produce integration. What

it really says is that in order to provide for more effective

"integration" the Navy Department shall hereafter attempt a greater

"separation", by trying once more to divide unity in spite of the

fact that we have been trying to do this very thing for the past one

hundred and thirty years. Derivations must reflect a contradict-

ory premise. And so they do.

We find in paragraph 6 (a) that

"there shall be an office charged with coordination * * of
bureaus and offices * * *"

and in paragraph 4 (c) that

the Chief of Naval Operations "shall be charged * * * with the
coordination * * *of the bureaus and offices * * ".

And again in paragraph 6 (b) we find that

"There shall be in the Navy Department (another) office charged with the coordination of naval research, experimental, test and development activities * * * ".

which must involve in some degree the "coordination" of the same bureaus and offices for which two different "coordinations" have already been provided.   Two and probably three different coordinating offices!

We find that the Chief of Naval Operations is trying to be an executive (Chief of Staff), which embraces the whole, with a title conveying the idea of less than the whole.   As such he is a staff officer, yet in paragraph 4 (b) we find that:

"The Chief of Naval Operations shall have command of the operating forces * * * ."

By this sentence the Secretary of the Navy lost his staff because a man cannot successfully be responsible to a superior as a commander and a staff officer at the same time.   It is not in the make-up of man to "tell" on himself.   His staff advice is unconsciously colored by the necessary egoism of the commander.   A man cannot supervise himself, and no amount of examples that the attempt has been made can detract from this statement.   Even if one superior person could partially succeed in keeping his "two hats" straight and always remember from which view point he should approach matters, it is impossible for subordinate personnel of his office to know which of the two invisible "hats" is being worn at a given moment. Again let us quote Robert Burns: " Oh wad power the giftie gie us to see oursels as ithers see us."   Seeing the impossibility of seeing ourselves (or of supervising ourselves) the poet is asking for that power from a higher than human source.   And yet we presume to grant that power by the simple act of bestowing a title!

Having started with an antinomy as a premise, the reorganization can only continue as such and "repeat the expensive experiments of the past".   How much time, beyond the one hundred and thirty years already consumed, is going to be given to us to continue the exhausting futility of attempting the indivisibility of unity?   How much time should we allot to a person in which to try making two and two equal five?

Is it not time to cease trying to build our organizational house of sea power on sand?   Let us rather use a foundation of rock, the Principle of Unity, as applied in the "Science of Organization" in this thesis before the structure grows further to fall of its own weight.

Chapter Nine

THE RESULTS OF ANALYSIS

It was stated at the beginning of this analysis that an isolation of forces was desired in order that they could be handled. The analysis has shown one force, misdirected ego, and its attributes of jealousy, envy, class consciousness, false pride and false loyalty.

There are "red herrings" or physical manifestations of erroneous organizational thinking in the following forms:

The issuance of orders by staff officers in their own name or by the partial "by direction" which has a connotation of half concession to a superior.

Overindulgence in the use of code names beyond regions of communication which makes command vague, indefinite, mysterious, and sometimes arouses a sense of futility.

Confusing use of the word "staff"

Distinction between "line" and "staff" officers.

Application of ship's organization to other activities.

Expressions of separation of command and administration

Using officers simultaneously in two capacities, as a staff officer (not staff corps sense) and as a commander.

Complicated organization charts which deal with the froth of functional inter-relationships and conceal the basic framework of the organizational structure.

Organization charts of headquarters which ignore subordinate commanders.

The following conditions are the causes of the loss of control of the force of ego, and the "red herrings" listed above

Attempting the divisibility of unity.

The resultant departmentalization.

The separation of command and administration.

The formative training of naval officers in a highly specialized variation of departmental organization found on board ship.

The use of ship organization in other activities and higher echelons.

The existence of "staff corps" as opposed to the "line". There must be "staff" (true sense) within the unit of line and staff combined as one.

The attempt to make unity divisible and the persistent separation of unity into parts, a violation of the principle of unity, is the underlying cause of all.

Chapter Ten

SUGGESTED STEPS

Now that we have isolated the forces, "red herrings" and
conditions which are inimical to the best interests of the Navy
Department, what shall we do about them? The ideal treatment
is to coldly and analytically design the organization on principle,
to determine major commanders, leaders, next subordinate to the
Secretary of the Navy and give them whole missions. At the same
time the bureaus and offices must become specialists in _only_ a
staff capacity. But it takes the pressure of war, emergency, or
near disaster to accomplish such a change. If the top will under-
stand the principle of unity and it's corollaries, keep them always
in mind, furnish the example and apply them gradually, the change
can be worked out. Let us take each of the items we have isolated
and see what we can do about them now.

First, take immediate steps to bring the force of ego under
control by deflation. Some of the more obvious of these steps are:

To require the bureaus and offices to quote the authority of
the Secretary of the Navy on all written issuances. The form is
not so important, although "by order of the Secretary of the Navy"
should be acceptable. There is a great deal of difference in the
state of mind of an issuing officer when he uses his own name and
when he quotes the authority of his superior.

To require officers to quote their rank and title when issuing
instructions. The use of the name only is a manifestation of ego
and really illegal. An officer has authority by virtue of his rank
or position or both, but not by virtue of his name alone.

To require the authority of the commander to be fully quoted
by all staff officers.

Second, strengthen and direct the force of loyalty in opposition
to ego by the following initial acts:

Have all issuances from the Headquarters of the Navy Department
appear to emanate from a single source, the Secretary of the Navy, who
is for the purposes of organization, the commander of the Navy Depart-
ment including theaters, fleets, districts, sea frontiers and bases.

After the example is set, require the single source emanation

practise by all leaders down through the entire chain.

Utilize the Headquarters of the Navy Department to frame missions for next subordinate commanders for everything that the Navy must do.

Hold the next subordinate commanders, and only them, responsible for everything that happens in the entire Navy, afloat and ashore.

Publish an organization chart to forcibly show the framework of the organization by emphasizing the next subordinate commanders and subordinating the staff.

Start a long range program of conversion of the Navy to the unit type of organization to include:

Training of naval officers in the Science of Organization.

Application of this training to land organizations and higher levels of command afloat.

Investigate the possibility of applying the principles underlying the unit type organization to ships. The result could well be a variation of the unit type instead of being a special version of the departmental type.

Rescind the Naval Regulation on command versus administration. Total war is quite different now than when ships put in to be serviced and then proceeded to sea for long periods of time in a state of only "command." To recognize command solely as a position of authority, whether it be over a district, yard, base, ship or ships will do much to reduce class consciousness and produce unity and loyalty. Authority has to be administered in any field and "administration" the act of administering has to be done in any and all commands.

Initiate a design of the Headquarters of the Secretary of the Navy based on the principles developed in Part I of this thesis. In this design cease trying to make unity divisible. Rather create subordinate units to accomplish missions, each unit embracing all the functions of command, leadership or authority to the extent required by their respective missions. To try to relieve the load by more divisions, offices, or departments is like trying to pull one's self up by one's own bootstraps. It cannot be done. The load must go to the next subordinate commanders or leaders as a unit.

Overcome the dual meaning of the word "staff"

Use "you help me do it" to staff including bureau chiefs, and "you do it" to next subordinate commanders.

Permit the use of code names only for the purpose for which they are designed, to facilitate communication. Require them to be trans-
lated

lated before dissemination. Personnel will then feel command
and will know commanders instead of vague offices, bureaus, groups
and names which inspire no loyalty.

PART III SUMMARY

Navy organization has evolved without design by trial and error, buffeted by the forces of the moment, shaped by expediency, twisted by ego, strained by jealousy and torn by false pride.   Errors of application constitute "red herrings" across the trail which cause further drifting.

The loyalty and integrity of naval personnel, their devotion to duty and earnest efforts to do their best for the Navy and for our Country,—the resultant force of all these qualities finds itself continually in an organizational framework which causes the force to be misdirected.   This good force cannot overcome the opposite forces which have been and are doing the Navy so much harm unless it is placed in opposition.

The resultant force of good in the Navy can be placed in opposition to and overcome the opposing destructive forces by the application of the Principle of Unity.   With this principle as a foundation, let us start at the top, set the example there, indoctrinate by progressive steps consistent with resistance, train naval officers in the application of the Principle of Unity to the unit type organization, eliminate those "red herrings" one at a time which are the physical manifestations of erroneous thought, require all organization charts to express the principles of unit type organization, and the foundation will be laid for rapid progress from trial and error to principle.

In this last war the economic power of the country was overwhelming.   In a next war the economic power of the opponents may be equal. Then the skillful application of that power by organization will be the deciding factor.   The half statement "it worked" (before) will be of little solace.   We must be certain of the complete statement that "it will work because of it and not in spite of it".

THE END

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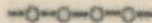
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