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Naval Tactics.

NAVAL TACTICS.

TERMINOLOGY.

It is important in our studies of naval tactics and strategy that we should be careful in the use of terms. Each technical expression should have a special definition so that when used it will be known what is meant.

Some one has defined words as fossil poetry, others as fossil history. Words sometimes lock up truths which were once well known, but in the course of time have passed out of sight and have been forgotten. "There are cases", observes Trench, "in which more knowledge of more value may be conveyed by the history of a word, than by the history of a campaign".

It is true, also, that words may conceal error, and thereby convey false impressions. It is to guard against these that I desire to call attention to certain words and expressions gradually coming into common use which we would do well to avoid. Trifling in themselves, perhaps, they may lead to serious error.

Let us ask, by way of example, what is a "fighting engineer"? an expression that has recently come into vogue?

The term has, for us, a certain historical interest, as we shall see.

By the Act of July 4th, 1864, Congress authorized the Secretary of the Navy to provide for the educating of steam engineers at the Naval Academy. As a consequence Cadet Engineers were obliged to devote a portion of their time to military exercises, time which had formerly been given to the machine shop. This act was followed by the law of August 5th/1882, which abolished the distinction between Cadet Midshipmen and Cadet Engineers; and provided that all undergraduates should be classed as Naval Cadets; and that, thereafter, all vacancies in the lower grades of the Engineer Corps should be filled from the graduates of the Naval Academy. This was the first

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step in the scheme of amalgamation. It was virtually the amalgamation of the two corps which was finally consummated in the Personnel Act. As a logical sequence of these measures came the Personnel Act amalgamating the Engineer Corps with the line. Thus the Engineer Corps became extinct. As a corps it no longer exists.

The corps ceased to exist by merging it into the military branch. The members of the corps had been trained both as combatants and as Marine Engineers - the course of training prescribed for all undergraduates. Hence the term ~~of~~ "fighting engineer" is the equivalent of the term "naval officer".

In practice, however, we find that by a process of natural selection certain graduates elected to become steam engineers. It is the latter to whom the term "fighting engineer" properly applies, if to any one. Hence the expression "a fighting engineer" contains, in a condensed form, a very interesting chapter in our naval history. Examined critically we find that a "fighting engineer" is a cross between the military and the mechanical. He is a hybrid. The chief characteristic of hybridism is sterility. Sterility is opposed to reproduction or development. That is what the expression of "fighting engineer" stands for - sterility. He is unfruitful, unprofitable. He may do fairly well in either capacity, but he can never excel in the one or in the other. He is the "Jack of all trades but master of none". He represents mediocrity, the common place, the barely respectable. Now excellence in each department of the service is what modern education requires, and what war demands. The question for us to consider, therefore, is how far the hybrid is to meet the demands of war. It is to my mind a very serious question, and one demanding intelligent answer.

Of course, as law-abiding officers it is our duty to recognize the amalgamation clause of the Personnel Act as the law of the land, and do our best to uphold it and strive for

its successful operation. That goes without saying. On the other hand it is our bounden duty to contemplate the possibilities of war and carefully scrutinize our organization to see if there are any weak points in our system, Or if there are any parts susceptible of improvement.

The case may be summed up somewhat as follows: The tactics of the fleet is dependent upon the tactics of the ship. The tactics of the ship is dependent upon the motive power of the ship, the latter is dependent upon the engineer's force; and the latter, in turn, is dependent upon the officers who have immediate charge and are responsible for the efficiency of that force. Hence from a strictly military point of view, the proficiency of the engineer officer is a question of vital importance to the naval tactician. We cannot afford to have any but the very best the country can produce - the very best as to talent and skill in their own special calling.

The Naval Institute published not long since an article entitled "THE NAVY'S GREATEST NEED", which the author said was the supplying and training of the personnel.

To my mind one of the greatest, one of the most pressing needs of the navy today is an engineer corps. By that I mean a corps of real marine engineers - a corps made up of officers not ashamed of their business. My convictions on this very important question have been confirmed and strengthened by an article which appeared in the NORTH AMERICAN REVIEW of March, 1902, entitled "SOME NEGLECTED NAVAL LESSONS OF THE WAR". It is the strongest argument that has come to my notice, showing the military necessity to the Navy of a thoroughly trained engineer's force.

The OREGON's performance is cited on the one hand by way of example of what good marine engineering work can accomplish; and the Spanish ships on the other to show how poor engineering may easily result in the loss of a battle.

The writer well says: "the great lesson to be drawn from

the battle of Santiago, is the vital importance of engineering to the efficiency of the modern fleet" - a proposition we must all assent to.

The writer's plea for the corps is ably presented. He further strengthens his position by adducing an English authority of recognized ability. The Editor of the ^{London} ~~Long~~ ENGINEERING for November 15th, 1901, whom the author speaks of as a "clear-headed student of naval affairs, wholly competent to judge of them, but who has only friendly feelings for the United States", in speaking of "the disaster that has overcome our efforts towards improvement" says: "Engineering is not to be learned without practical object-lessons carried out by the student himself. No man can become a mechanical engineer without dirtying his hands, and also without devoting to the subject several years of hard study accompanied by practical work. It is a matter of long training, both in theory and practice. No country that cannot command a body of men willing to undergo the disagreeable features incidental to engineering training will be able to maintain its position as a first class naval power, under the stress of war, however many ships and guns it may possess. Neither Great Britain nor the United States lacks such men and it will be only the ruling power of either country that will prevent their employment. x x x The chief danger is that the warrant machinists will be accepted as efficient stopgaps, although we think there is too much engineering knowledge abroad in the United States for the foolishness of that course not to be seen. If, however, such a plan is accepted, the American navy will be thrown back at least a quarter of a century in its personnel. The old round will be trodden once more; the old fight fought again. In the meantime, the efficiency of the American Navy will suffer; and if it should be put to the ultimate use for which all navies are supposed to be built, a very unpleasant awakening may result."

These views are certainly sound. I, for one, subscribe to them and thank "A friend of the American Navy", (the writer of the article) for bringing them to our notice.

Accepting then the opinion of the Editor of London ~~EN-~~
GINEERING, which is the opinion of our own engineering author-
ity that to become a mechanical engineer, by which ~~he~~ meant a
marine engineer, one "must devote to the subject several years
of hard study, accompanied by practical work, and that "it is
a matter of long and special training both in theory and prac-
tice". And accepting, too, the opinions of the highest author-
ities that ^{to} acquire a knowledge of naval tactics and naval
strategy, and to become proficient in Marine International Law
requires much practice, for the first, and constant study and
reflection for all. Let us ask ourselves, in all sincerity,
if the average naval officer is capable of mastering both pro-
fessions? Or, admitting the capacity, has he the time? My
answer is, most emphatically, that he is not capable of master-
ing both professions, nor has he the time.

The naval officer of the present day must study steam-
engineering, both in theory and practice; and he must attain
a certain degree of proficiency in that branch of his profes-
sion; but it is a subsidiary branch. He must be first of all
a seaman. He is, moreover, a military man whose duties are
afloat, as distinct from the military man whose duties are on
shore. If he can master his own profession proper and find
time to master some other profession, in addition, he is an
exceptionally gifted man. There may be such. This discussion
is confined to the average naval officer, not to the excep-
tional one. The naval officer we want is the one who is so
engrossed by his own profession that he has neither the time
nor the taste for anything else.

The engineer officer we want is the one who, like those
who built up our steam navy, is so thoroughly engrossed by his
own profession as to have no time nor inclination for any other

profession. The combining of the two in one is manifestly impracticable for the simple reason that neither one wants to be anything else but what he is. Each is wedded to his own profession and will not be divorced from it.

Let me not be misunderstood. The naval officer of today can, and actually does, acquire sufficient practical knowledge to run the many steam and electrical appliances to be found on board ship. He has learned this in what Mr. Hollis calls the best engineering school in the world - the Naval Academy. But he is not a machinist. On the other hand it is the office of this College to teach us the highest and most important branches of our profession; to bring us to a realizing sense of the variety and extent of its requirements, and to assign each branch to its proper place on the Scale of Military Values. From this point of view, I assume that steam-engineering, highly as it must be valued, absolutely indispensable as it is, is not a primary branch, as some would have it, but a subsidiary branch.

NOTE:-- In this connection I may say Mr. Hollis convinced me of one thing. When he said he was surprised to find how readily some engineer officers had qualified as line officers, I was fully convinced that he utterly failed to comprehend all that was included in a well equipped naval officer! Carrying out the routine of a man-of-war is, indeed, a very small part of the business.

It is possible to find naval officers who have but little taste or aptitude for the military part of their profession; others who have a languid taste for it but who fail to realize how much there is in it to be learned. These may take up marine engineering and feel themselves fully competent to take charge of the engineer's department of a battleship, exercise an intelligent supervision over the entire department, direct the repairs that are constantly required and be equal to any emergency that may arise in the high speeding of the engines

and their dependencies. But they are not the kind of engineers that would be permitted for one moment inside the engine rooms of a trans-atlantic liner, or an Ocean Greyhound! In these great liners they want real engineers; marine engineers, engineers who know their business thoroughly and take pride in it. No others would be accepted there. That is the kind of engineer officers the navy wants.

In the great business concerns that control the trans-atlantic lines they put up with no nonsense, no pinchback, no shams. They demand the real thing. Masquerading cuts no ice with them. A "fighting engineer" would find no place there!

The battleship, the unit of the fleet, may be regarded as a movable fortification. The naval officer is supposed to know so well the military conditions of a given war problem, that he can place his ship at the right point and at the right time, with unerring certainty. The marine engineer sees to it that the motive power is equal to the occasion. The OREGON's part in the Spanish war is cited as a case in point by "A Friend of the American Navy", already quoted. The Captain knew where to take his ship and how to navigate her to the point she was needed, and the engineer officer saw that the motive power was equal to the demands made upon it. It is plain that in war the principal end is the placing of the ship where she is most needed. The motive power is a necessity to that end. It is equally plain that in war the navy can no more afford dil^ettant^eism in the engineer's department than can the mercantile marine during peace.

For years past specialization has been the rule in every profession. The wonderful advances made of late years in scientific research is due to the specialist. In the Army we have the infantry, cavalry, artillery, ordnance and engineers, and while an army officer is supposed to know something of the duties of each corps, yet the efficiency of each corps is wholly dependent upon the specialist. the officers of that particular corps. The infantry and engineer corps are not,

ordinarily, interchangeable; though there have been exceptions to the rule. General Geo. B. McClellan graduated from West Point in the Engineer Corps, served with distinction through ^{and subsequently commanded the Army of the Potomac} the Mexican war. He was a "fighting engineer" in truth. But he was a military, not a mechanical engineer.

In other branches the results of specialization is even more marked. The innermost recesses of the human corpus may now be exposed to view with impunity and diseased organs skillfully treated by the surgeon - operations not dreamed of a few years ago. The expert surgeon of today does not hesitate to open the skull or spinal column and thus reach diseased nerves at the source of the trouble. The triumphs of abdominal surgery, of dental and ophthalmic surgery, and all the rest of it, are among the wonders of the age. All due to specialization.

Specialization, be it observed, is only another form of Concentration. We have learned in this College that, both in military and naval operations, concentration is one of the soundest of military principles. The same principle, precisely applies to the battle of life. In every profession, in every calling, the men who have been successful are those who have concentrated ^{their} mental powers and their energies on one fixed purpose.

To this universal rule and most advanced professional practice, Congress has now made the navy an exception by combining two professions which have no affinity for each other.

We accept the decree in good faith. As good officers we must all join in the endeavor to make the law effective. Meanwhile the navy goes without an Engineer Corps. Let us pray that our next enemy at sea will kindly wait till the experiment is made to work, or is abandoned as impracticable.

The objection urged against the re-establishment of the Engineer Corps is that it would only result in revising the old "Line and Staff" fight, now so happily ended.

The answer to that objection is that experience has

taught us that the "Line and Staff" controversy was brought about mainly through the fatal mistake of thirty years ago in giving marine engineers a military training.

It we repeat that blunder the results would naturally be the same and we should have another "Line and Staff" fight, and another amalgamation act. There can be no two opinions upon that question.

But if, warned by past experience, we have the wisdom to educate Cadet Engineers at some great Engineering center, as for example at the New York Navy Yard, or at League Island, where real practical engineering work could go hand in hand with the theoretical studies, we should, in time, raise a class of marine engineers who would be in that corps through choice. Their tastes would have led them there, and would keep them there.

Under such conditions it is not likely that the "line and staff fight" would recur.

Would it not be well to "swap horses" before entering the stream? Or shall we await the disillusion that is sure to come with the next war?