

Folio File: Torpedo-planes.

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THE TORPEDO-PLANE

Lecture delivered

by

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DECLASSIFIED IN ACCORDANCE WITH EXECUTIVE ORDER 11652, 50
DECLASSIFICATION OF WWII RECORDS

Naval War College

Newport, R. I.

12 Sept. 1919.

C O N F I D E N T I A L

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Serial 196 (3)

TO BE ISSUED IN CONNECTION WITH

REAR ADMIRAL FISKE'S PAPER ON "TORPEDO PLANES".

(Lecture at War College Thursday, 11 September, 1919, 1:30 p.m.).

C O N F I D E N T I A L:

RADIO-DYNAMIC TORPEDO.

Mr. Hammond submits two types of radio controlled torpedoes. The larger, 80 feet long, is for harbor defense. The torpedo for Naval use has the following characteristics:

Length - - - - - 40 ft.
Diameter - - - - - 4 "
Weight - - - - - 9 tons.
Explosive charge - - - - - 1000 lbs TNT.
Speed for two hours - - - - - 30 kts.

Engine speed and direction controlled from a position on a ship or from airplane at height of 5000 feet and range of 5-7 miles.

Driven by gas engines, the air intake making a wake by which the torpedo is to be followed for control; colored distinguishing lights to be used at night.

Selective control allows wide variation of control tunes which prevents interference that is not within 80 meters of control tune. (In the British Grand Fleet it was possible to allot only 14 tunes for all types of air craft)

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A torpedo carrier of high speed is proposed with a capacity of 28 torpedoes. The special radio machinery required is so light that it may be installed in scout planes.

Specifications and blue prints of these torpedoes may be seen in room E-22.

On page 9 of the Monthly Information Bulletin issued by the Office of Naval Intelligence July 15, 1919, is the declaration, "A ship of the FURIOUS or ARGUS type with 12 to 15 torpedo-planes, should be a match for a whole Battleship Division." While regarding this as an exaggerated declaration, I believe the subject of the torpedo-plane to be nevertheless of sufficient importance to warrant my asking your attention as strategists to its possibilities, and to the desirability of not being too slow in studying the degree and direction of its correct employment.

Before starting on the subject of the Torpedo-plane, I wish to ask your attention to the fact that the whole art of war consists in directing the employment of weapons. Even when the only weapons of warfare were the fists of the human body, the art of war consisted in handling weapons; and now when the art of war consists in handling weapons and instruments and methods of the highest possible complexity and power, the art of war still consists in handling weapons. The more numerous and complicated and powerful the weapons, the more numerous and complicated and complete must be the plans which strategy must devise and carry into effect. The difficulties have become so great, and the plans have become so complicated, that some strategists seem to have lost sight of the fact that the art of

war is merely the art of fighting, and to concern themselves wholly with plans, with an apparent forgetfulness of the objects of the plans. They seem to devote their attention so much to the means to the end as to forget the end itself.

To such an extreme has this idea of strategy advanced, that one may often hear the declaration that strategy should not concern itself with the material appliances of war, but only with the plans by which the weapons and the ships and men carrying those weapons can be brought to the field of battle. Any army or navy is not restricted, of course, to adopting any conception of strategy that it may choose; but it may be pointed out that if two nations contend in war, and if one nation limits its view of strategy and the efforts of its strategists to the mere planning of how to use the appliances which it already possesses, while its enemy directs the efforts of its strategists first to obtaining the most effective weapons and second to using them, the second nation will enter war much better prepared than the other.

Let us not forget that weapons precede the methods formulated to employ them, and that therefore the first effort of strategy must be to get the best weapons, and the second effort must be to employ them skillfully. Writers on strategy are too prone, it seems to me, to belittle the value of the mechanician in war, and to exalt the man who employs the weapons that the mechanician furnishes.

It is not necessary to go into a detailed account of

the influence of weapons on war; for you doubtless remember that the success of Alexander in Asia, and still more of Caesar in Gaul, were due in great measure to the superiority of their weapons and appliances over the weapons and appliances of their antagonists. You remember, too, that the superiority of the English archers over the French armored knights at the Battle of Cressy in 1346, not only achieved a victory, but wholly obliterated the knight in armor from warfare, and put an end to the feudal system. You doubtless remember the effect of the needle-gun in the war between Prussia and Austria, and realize that supplying the Prussian army with that needle-gun was the most effective single part of all the Prussian strategic preparation. You also know that the building of the MONITOR and her subsequent victory over the MERRIMAC, was the real cause of the victory of the North over the South; that the most important cause of the Japanese victory over the Russians was the superiority of the Japanese gunnery appliances that were used at the Battle of Tsushima; and that the most important single factor in whatever measure of success the Germans achieved in the last Great War was the submarine. Instances might of course be multiplied; but enough instances have probably been mentioned to justify the declaration that strategy should concern itself with the weapons of war, as well as with the methods of using them.

Of course, this does not mean that strategy should concern itself with the details of the weapons or other material appliances. Those things, of course, come within the province of logistics, - which is an assistant of strategy.

Coming now to the subject of the Torpedo-plane, I beg leave to point out that the vessels which are used in the Navy, and which are sent hither and thither in your strategic and tactical games, are of no value in themselves for purposes of war, except in that they carry guns and torpedoes. Let us remember that the value of any vessel for the purposes of national defense or offense is proportional to the destructive power which she can exert at a point, and the speed with which she can get to that point. The ideal vessel of war would be one which could carry an infinite amount of destructive power with infinite speed. Such vessels are unobtainable; but this fact should not blind us to the further fact that our aim should be to come as close to them as practicable, and secure appliances which convey the most destructive weapons at the greatest speed. In military operations these appliances would seem to be bombing aeroplanes, and in naval operations - torpedo-planes. At the present time, the radius of action of the aeroplanes is so comparatively small, that, for distant operations, it is necessary to use seaplane ships to carry the aeroplanes till within a short distance of the enemy. I believe the first instance of doing this on an extensive scale in war was in the latter part

of December, 1914, when the British sent a seaplane ship to the vicinity of Cuxhaven, and there liberated aeroplanes that bombed the base there and its vicinity. This was nearly five years ago. The Monthly Information Bulletin states that the ARGUS of 15,750 tons displacement and 20 knots speed, is fitted to carry 20 torpedo-planes; that the EAGLE of 23,000 tons and 24 knots speed, is to carry 25 torpedo-planes; and that every endeavor has been made to get the ARGUS to the fleet as soon as possible.

Let me now ask your attention to the application of these ideas and facts to your studies here. Your problems here are divided into strategic and tactical problems, and in each of those problems both the offensive and the defensive are considered. Imagine that you are studying the problem of sending our fleet offensively to the coasts of some European country or Japan. The last war has shown you that our battleships cannot get very near those coasts, because of submarines, mines, torpedoes, forts, and aeroplanes. What would the fleet do there? Doubtless you answer, "blockade". Doubtless we could blockade; but it may be pointed out that the blockading would have to be done at a considerable distance from the shore, far away from a United States naval base or a drydock, and in constant danger from attack by torpedoes, launched from submarines and aeroplanes. If we sent, however, a large number of swift seaplane carriers, like the ARGUS and EAGLE, each carrying twenty torpedo-planes, and other seaplane carriers equipped with reconnaissance and bomb-

ing planes, they could avoid the enemy's battleships, and not only attack all surface craft, but also do very effective work against land defenses; not being deterred by such obstacles as shoals, mines, submarines and forts.

Please consider also the case of preventing a blockade of our own coast by a foreign fleet. That fleet could easily be located by our aeroplanes; but the task of attacking it would be one of great difficulty, unless we had a fleet considerably superior. If we had two or three hundred torpedo-planes, however, distributed along our coast, those torpedo-planes could be concentrated on the enemy fleet within a very few hours. If an enemy fleet, for instance, was sixty miles from Newport, any torpedo-planes here could attack that enemy fleet in an hour, and come back for more torpedoes.

In this connection, it is important to realize that the torpedo is a weapon that is rapidly improving. I was recently told in confidence at the Torpedo Station, and of course, I am justified in repeating it to you, that we have a torpedo which has gone 16,700 yards, and that a range of 20,000 yards will soon be easily attained. I was also told that they have been getting good results with the plan that you of course have heard of, by which a torpedo may be set to run a certain distance in a given direction, then turn to the right, then to the left, and so forth. This enable us to shoot into a harbor, and have the torpedo hunt around the harbor until it hits something, or exhausts its fuel. It also enables us to fire at a column of

battleships from either ahead or on the flank and have several chances of hitting, even if the ship first aimed at is missed. I was also told that a plan that I went to the Torpedo Station to suggest had been undergoing experimental work for nearly two years, and that success was now practically certain. This plan is to explode a torpedo under a ship, where it is the weakest, by utilizing the magnetic force of the ship itself. As you may know the Germans used this plan with some measure of success.

These improvements in the torpedo and the great things that we were about to do with novel appliances when the war closed, impel me to suggest that the War College endeavor to foresee and to forecast the use of novel appliances, so that when the next war breaks out, we shall have those appliances and the methods for employing them instantly available. To me the appliances that seem to promise the greatest usefulness are aeroplanes, because they can carry the most destructive instrumentalities at the greatest speed. It may be that the ARGUS and the EAGLE are the prototypes of the battleship of the future.

(BAF/JWD-15 Sep.'19)