LESSONS FROM THE YALU FIGHT.

COMMENTS ON COMMANDER McGIFFIN'S ARTICLE[1] BY THE AUTHOR OF "INFLUENCE OF SEA POWER UPON HISTORY."

COMMANDER McGIFFIN is to be congratulated upon being one of the first, if not the very first, of naval officers belonging to the nations of European civilization, not only to undergo the dangers and experiences of a naval action under modern conditions, but also to tell what he has seen and felt in a manner at once instructive and suggestive. The remarks that follow are an attempt to develop somewhat further, along the line of thought of one person, the inferences that may be drawn from his story.

1. It appears that although the Chinese government permitted the fleet to cruise freely to the westward of a line drawn from the Yalu River to Shantung lighthouse, they positively forbade the admiral to go to the eastward, thereby depriving him of the power to bring the Japanese to action if, from the information he might receive, a fair opportunity offered. Admiral Ting's views in this matter seem to have been contrary to those of his superior on shore. In the absence of full information a decisive judgment would be improper; but it seems likely that we have here one of the commonest and most deplorable experiences of war — the hands of a commander-in-chief, present on the scene of operations, tied by the positive instructions of a man, or set of men, at a distance. How often the Aulic Council ruined the Austrian armies, how much more often it neutralized their efficiency by the unavoidable slowness consequent upon having to refer continually to Vienna for instructions, is one of the commonplaces of military history. It is inevitable and necessary that the armies and navies should be subordinate to the general war policy of the civil government; but the latter should beware of too particular directions, and, above all, of absolute orders, fettering the discretion of the commander-in-chief. If the man *on the spot* cannot be trusted, he should be removed; but no one at a distance from the scene of operations can effectively direct them.

2. The experiences with the gun-shields on July 25, as well as in the Yalu fight of September 17, are extremely suggestive, and from my point of view should be taken in connection with another fact which has seemed to make the deepest impression on the professional mind, not only of naval officers, but of civilians who have made a special study of naval matters — namely, the great effect of rapid-fire guns. Speaking broadly, the gun-shield represents the defensive element, the rapid-fire gun the offensive. Both ideas, of course, are necessary, and in a sense complementary each of the other; but not only does the unvarying voice of military history assign superiority to the offensive, but Commander McGiffin gives reason to think that the gun-shield, unless of unusual thickness, — perhaps even then,— is a source rather of increased injury than of defense. The reason, as far as he goes in this, is simple enough: a single projectile that might clear everything and every one but for the shield, and that at the worst would probably strike only a single man, is by the shield converted into several projectiles which can scarcely miss all round, not to speak of the shock caused by the explosion to those who escape being hit. Most modern shells, it should be explained, do not burst unless they meet a fairly solid resistance.

Regarding the contrast of ideas expressed respectively by the gun-shield and the rapid-fire guns, I have long been inclined to think that Admiral Farragut's pregnant phrase, "The best defense against the enemy is a well-directed fire from our own guns," was almost a prophecy to our present times, though the rapid-fire gun now so called was not even dimly foreshadowed in his day: but in truth his words simply expressed tersely a great undying principle as applied to the situation then before him. Offense is better than defense. A war-ship is vulnerable in two chief respects — in her motive power and in her personnel. It is imaginable that one might be wholly neutralized without materially injuring the other. The question, not only of to-day, but of a century's standing, is, Which is it better to attack in order to subdue the ship? In olden days the British habitually attacked the personnel, the French the motive power, and each was consistent; for the aim of the former was to insure decisive results, and that of the latter to avoid them. Each has had its advocates, and consequently there is something to be said on each side; but upon the whole it is, I think, fair to say that experience replies, Attack the men. And the reason is

[1] See page 585.

much the same as a hundred years ago: not only is it impossible to have the men as well protected as the motive power, but the destruction of the men who handle the offensive powers of the ship makes the motive power practically useless. Now the weight which a ship of given size can carry is limited, and must be distributed among several objects, of which gun-power is one; and the question has to be met, How shall this gun-power be subdivided among the different classes of gun? If your aim is the motive power, you want heavy guns; for the motive power — the engines and boilers — are given the utmost possible protection, by position, by the thickest armor, by the coal stowage, the protective deck, and so on, to pierce which great force is required. But heavy guns mean few guns, and few guns mean few shots, and few shots mean fewer hits; while of those that hit, if they strike the protective system of the engines, etc., fewer still penetrate, a truth long foreseen, yet very generally dropped out of sight, and which the Yalu battle has singularly confirmed. On the other hand, the weight of armor required to protect the water-line adequately makes it impossible to extend by similar means adequate protection to the battery spaces, except only those occupied by the heavy guns; and even where these are adequately protected,— impervious, that is, to the missiles from those lighter guns technically called "rapid-fire,"— there can be no question that their accuracy of fire is singularly embarrassed. For that reason it is sought to aim and fire them from an exterior position — the conning-tower,[1] for instance — a plan of which it is enough here to say that, except for the heaviest guns, it is tending to fall into disuse. Considering the vast importance of securing the best practice from the heavy guns,— for I am not at all arguing against them, only against their excessive number,— it becomes necessary to beat down and keep down all the other fire of the enemy. If success in this is attained, a distinct and immense advantage is gained for the heavy guns over those of the enemy; for, if the rapid-fire guns which have established their ascendancy cannot penetrate the turrets, they can greatly annoy the men in them, and may enter the gun-ports. This superiority, if maintained, must result in victory. It has long seemed to me that the mutual relations of the heavy and rapid-fire guns of a ship have a strong analogy to a field battery of artillery and its infantry supports, the latter of which at once protect and secure the efficient service of the former. However that may be, the rapid-fire gun of moderate caliber has just now fairly established its position as the greatest offensive power in naval warfare.

3. Rapidity of fire for guns of all kinds is a question partly of the size and mechanism of the gun, but still more of supply. The ammunition storage of a ship is, for obvious reasons, buried as deep under water as possible, and it is both an important and intricate matter so to proportion supply to demand as to make no needless exposure of such dangerous material *in transitu* or on deck — not, in short, to be hoist with your own petard. It appears from Commander McGiffin's narrative that both Chinese and Japanese were led, by design or accident, to accumulate projectiles and ammunition on deck in advance of immediate demands — a practice greatly deprecated. But is the deprecation wholly sound? Offense is better than defense. Rapid fire with some risk is better than slower fire with no risk — risk, that is, from this particular source — because the slower fire yields to the enemy an advantage greater than the risk avoided. On board a foreign battle-ship, not long ago, the captain said to me that in providing for action they accumulated a certain number of rounds — ten, I think — near each rapid-fire gun. "Don't you consider that a great risk?" I asked. "Undoubtedly," he replied; "but not so great a risk as that the enemy should fire faster than we." I think he was right. Collingwood used to tell his crew that if they could fire three well-aimed broadsides in as many minutes, no enemy could resist them. Farragut noted with emphatic commendation, in 1839, when the French attacked the castle of San Juan de Ulua at Vera Cruz, that they habitually kept a great number of shot accumulated in racks on deck — a practice many naval officers still remember. The introduction of shells — explosive projectiles — gave pause to this habit, for direful experiences had taught that a shot, solid or hollow, striking one would explode many near by. Nevertheless, the difficulty of insuring rapid supply at any time, even the quietest, and the dreadful liability to severance of the chain of supply by the casualties of battle, suggest the imperative necessity of an accumulation. This should be so planned and so proportioned to the rate of fire possible to the gun as to insure the minimum of risk that must be taken if the full efficiency of the battery is to be maintained. Especially is this necessary for the beginning of an action — usually, at least as regards the single ship, the most pregnant of the final result.

4. The manner in which the battle was fought — the tactics, to use the correct technical word — presents some points of interest. It is to be regretted that we have not with more precision the ideas which underran the distri-

[1] "To con" is to direct the steering.

bution of the forces of either admiral; but the various accounts made public are so far in agreement as to show authoritatively, within certain limits, what was done, though not the reasons for doing it.

It will be observed, assuming Commander McGiffin's figures, that the possible speed of the Japanese fleet, according to the accepted maxim that the speed of a fleet is that of the slowest ship, was about three knots in excess of that which the Chinese could show. The figures would be, approximately, seventeen and fourteen. The Japanese *Akagi*, *Hiyei*, and *Fuso*, of twelve and thirteen knots, scarcely invalidate this statement, as they were weak ships, except the *Fuso*, and the first two dropped behind and were disabled. This superiority would encourage the Japanese admiral to attempt the manœuver — to me somewhat inexplicable — of steaming in column from left to right across the front of the Chinese line. He had the speed to do it; otherwise, to present the flank of his ships to the oncoming prows of the enemy would have been a reckless undertaking, as was exemplified by the mischance of the slow *Hiyei*, which failed to get across, its captain, to avoid consequent destruction, having turned and passed between the two Chinese ironclads — a deed, be it said in passing, that showed a promptness of decision and a daring which well deserve the praise bestowed by Commander McGiffin. But the same consideration — the danger of being rammed — forced the Japanese to pass a long way ahead of the Chinese, — three thousand yards (if I remember right; McGiffin does not say), — and to deliver their fire at that range, which I do not think naval professional opinion would generally approve. The first blow is half the battle, and should, if practicable, be more closely delivered.

The Chinese admiral, in reducing the speed of his fleet to six knots, its actual rate of steaming, had accepted the defensive rôle — awaited attack. In his disposition for defense (if the result of deliberation) he had to consider that there are three weak points of a line, the center and the two flanks. If the center is pierced, the force is divided; but the center can be more easily reinforced than either flank can be. Owing to the want of homogeneity in his ships, the problem was perplexing, but the natural solution was the one adopted; namely, to keep the two battle-ships together and to place them in the center. Having done this, however, I think that if it was intended to fight in the order assumed, the next strongest ships, the two armored cruisers, should have been placed on each flank; and immediately in rear of each of them should have followed one of the ships standing third in the order of strength, thus forming a flanking column of two. To file past the flank of a line of ships, as the Japanese did, is an old incident of naval warfare, sometimes accidental, as in Rodney's battle of 1782, sometimes intentional, as it always was when a line was intentionally broken by an enemy. If the line be single, the flank ship is alone, and receives, unsupported, the fire of all the enemy that pass by. If another ship be placed in her rear, they support each other; and if there be three or four, the enemy's attempt loses much of its danger. All of which goes to show that, upon the whole, a column of ships is a better defensive formation than a line, as the broadsides of the ships cover their flanks and they move up to each other's support.

Having passed the Chinese front, the Japanese filed by the right flank; and this is why, failing other light than I have, I find the manœuver of passing the front inexplicable. Considerable risk of casualty was thereby run merely to concentrate fire in the end on the right flank, when the left flank could, apparently, equally well have been attacked without the previous punishment, whatever that might amount to. Nor would the slow rear ships have been exposed to the mischance of the *Hiyei*. This comment, however, as well as that upon the Chinese dispositions, is confessedly made upon partial information, and may also be open to the proverbial retort that hindsight is always better than foresight.

After the first collision between the enemies, the Chinese order was soon lost, whereas the Japanese retained control of their own throughout. This advantage they seem to have utilized in a manner at once judicious, spirited, and skilful. Dividing their force, they separated the two hostile battle-ships from their consorts; and holding the latter in check with a light division, they concentrated upon the two their five heaviest ships, circling round them swiftly, and pouring in the fire of their numerous rapid-fire guns. Such an attack searched every open or weak point in the enemy's harness. The number of shots, and the consequent number of hits, told everywhere; and while the heavy guns failed utterly to get through the armor to the motive power, the personnel suffered grievously in efficiency, if not by wounds. Of this the proof is that only one 12-inch projectile from the Chinese fleet got in seriously upon the Japanese, while the terrible effect produced by that one showed how complete might have been the victory of the Chinese had their gunners been able to fire with full judgment and sight; having, as they had, five enemy's ships only partly protected, in close line, among which to choose. How the Japanese small projectiles found their way everywhere is also indicated by the fact cited by Commander McGiffin that the captain of one

of the 12-inch guns, which had the maximum of protection, was killed.

As regards systems, the result of this episode is a drawn battle, which may be summed up broadly as the successful resistance of two ships, armored, with a joint displacement of 15,000 tons, to five ships, partly protected, of 19,000 tons. This, as far as it goes, favors the view that a given amount of tonnage in one or in a few big ships possesses a decided advantage over the same, or even a greater amount, divided among several. This view is also in strict accord with the general teachings of warfare, that force concentrated under one command is more efficient than that disseminated among several. This conclusion must not, of course, be pressed to absurdity, but tempered, as all practical conclusions are, by moderation and discretion. A man may consider one 10,000-ton ship better than two of 6000 without wanting one of 20,000 tons at all, for sufficient reasons. Our forerunners found a 74-gun ship absolutely superior to two frigates,—for the latter to attack was considered folly,—yet the seventy-four was their norm for the battle-ship, and only exceptionally was exceeded in size.

On the other hand, this episode was a drawn fight because forty-five (more or less) quick-firing guns got the better of eight 12-inch guns unsupported by any quick-firing guns at all. They did so, I apprehend, because they destroyed the personnel of the ship, either directly or by shattering its power of efficient offense. Men, however brave, cannot stand up against fire of a certain intensity; and when such a condition is reached and sustained, they are as good as dead for the time being.

I make all these inferences broadly, neither ignoring nor wishing to ignore the existence of qualifying circumstances, which, however, only qualify, do not reverse, the conclusions reached. I have, for instance, not taken into account the Japanese heavy guns, of which there were three 13-inch, and twenty-seven of calibers varying from 5 to 9 inches. These certainly must have counted for something; but as, on the one hand, this increase of the Japanese power reinforces my argument that force in two big ships is better than if distributed in five, so, on the other hand, it goes to show that heavy guns, slowly manipulated, are inferior to rapid-fire guns in effect against personnel. Directed against the vitals of the ship herself, they failed to penetrate. They represent the attack on motive power, as the rapid-fire guns represent that on personnel.

In itself, and considered simply as a naval engagement, the Japanese victory of the Yalu appears to me inconclusive. The failure to press at once the advantage obtained may be accounted for in more ways than one, not in the least discreditable to the Japanese; but the comparative losses, and the insignificance of the Chinese vessels sunk, coupled with the fact that the engagement was not renewed, would indicate that their gallant and skilful admiral felt it was expedient to retire. The subsequent demoralization of the Chinese left to their enemies the control of the sea, which was decisive of the war, but which the Yalu fight alone would not have conferred.

In conclusion, the failure of the heavy projectiles to penetrate the Chinese armor which they struck, while it strengthens the argument of those who favor the battle-ship as the chief constituent of naval force, deserves the close attention of all persons, lay as well as naval, who are perplexed by the alternate crowing of both parties in the wearisome contest between guns and armor. The result shows, as most of us could have foreseen had we stopped to think, that armor is actually a far better protection than is indicated by the trials of the testing-ground, where, for purposes of extreme proof, all the off chances are given to the gun. On the trial ground the victory of the gun has, with occasional fluctuations of opinion, been generally taken as proved; in the Yalu fight the armor, thanks to the operation of causes carefully excluded in testing, came out ahead when it was struck.

In considering these various questions, I have tried, as far as possible, not to regard them merely as particular unrelated cases, but to treat them as illustrations of general principles, operative formerly as well as now, and which were exemplified by the history and practice of the past as really as they are by these modern instances.

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