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On: 16 March 2015, At: 12:09

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK

Royal United Services Institution. Journal

Publication details, including instructions for
authors and subscription information:

<http://www.tandfonline.com/loi/rusi19>

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Published online: 11 Sep 2009.

To cite this article: Vice-Admiral the Honourable Sir E. R. Fremantle K.C.B., C.M.G.
(1896) Naval Aspects of the China-Japan War, Royal United Services Institution.
Journal, 40:216, 119-134, DOI: [10.1080/03071849609416204](https://doi.org/10.1080/03071849609416204)

To link to this article: <http://dx.doi.org/10.1080/03071849609416204>

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OCCASIONAL PAPER.

NAVAL ASPECTS OF THE CHINA-JAPAN WAR.

*By Vice-Admiral the Honourable Sir E. R. FREMANTLE,
K.C.B., C.M.G.*

This article has already appeared in the American magazine *The Forum*, and is republished here by permission, with some additions, including a comparison of force at Yalu and plans of the action.

E. R. FREMANTLE.

IS there anything to be learned from the recent war between China and Japan? This is a question which I have frequently been asked since my return to England last July, and the matters on which I am most usually questioned are as to the relative value of ironclads, fast cruisers, Q.F. guns, torpedoes, and modern naval implements of warfare generally. Public attention is directed mainly to the technical points at issue, which it was naturally hoped would receive illustration from the action of well-equipped fleets representing the newest developments of naval warfare. In speaking of "well-equipped" fleets, I am only referring generally to the fact of the ships of both Powers being fairly up to date, though on the Chinese side there was much to be desired in points of detail. There was, however, no such broad distinction between the material of the fleets of China and Japan as to invalidate the lessons to be drawn from actual naval conflict; yet from this point of view the naval operations are singularly barren of results, and the reasons for this must be looked for elsewhere.

What, then, are the lessons of the war? The principal lesson is obviously a moral one, and it lies deep in the traditions and temperaments of the two nations. The warlike, go-ahead Japanese have won all along the line; while the peaceable, conservative Chinese have disastrously failed to make any respectable defence of their hearths and homes. I leave to others the task of developing this theme as fully as it deserves, my object in this article being rather to deal with facts than to dwell on the causes of the war or the characteristics of the two nations. But the differences to which I have alluded must be constantly borne in mind as the most important factor in the whole problem of how it was that the 400,000,000 Chinese could make no head against the 40,000,000 "Wojen" (dwarfs)—the term by which the Chinese insolently described their Japanese conquerors.

Though it is not my task to deal fully with the important point here raised, it needs more than a passing mention; and I cannot leave the subject without some further remarks. It is as true now as in former ages, that, if a nation is to attain to power or to retain it, it must not only

be as "the strong man armed," but it must inculcate in its citizens the manly virtues of patriotism, loyalty, and heroism. Though Bacon tells us that "no nation need expect to be great unless it makes the study of arms its principal honour and occupation," this axiom has not received general acceptance of recent years. In England, in the British Colonies, and to some extent in America, it became the fashion some years since to talk of wars as improbable, to eulogise the theoretical merits of arbitration, and to advocate the substitution of a cosmopolitan altruism for Old World patriotism. In England, the peace-at-any-price party and the Cobden school urged that energies should be directed to the arts of peace and money-making; and though recent events in America and Europe have shown that wars are still the last arguments not only of kings, but of peoples, the teachings of the free-trade league still remain with us as pious opinions to be accepted, at least in theory.

The Chinese, though they knew nothing of Cobden, have acted consistently on these principles, and have afforded us an object-lesson of the value of the theory. It is true that after the French War in 1883-84 they erected batteries on their coast-line, bought ships in Europe, and even built a few in their own dockyards, where their arsenals were improved so as to be equal to the supply of heavy guns and modern arms of precision; but these activities were mainly for show, to impress the foreigner; and the mandarins and *literati* who rule the country thought that nothing further was required. That any attention should be given to the adaptation of these war materials to war seemed to them unnecessary, and was not appreciated by the all-predominant civilian element. War, in the opinion of the ruling classes, was a most improbable event, and the war training of both officers and men was ignored, or was conducted in the most perfunctory manner. The examinations for officers in the army still, as from time immemorial, consisted in firing from a bow on horseback and in lifting heavy weights, while the greater number of their soldiers were still armed with bows and arrows, and with huge spears resembling pitchforks. Their main trust, even in the recent war, was in the heavy "gingall," a brass-piece held on the shoulders of two men, and firing a ball of about half-a-pound weight. That this should be possible while their arsenals at Kiangnan, Nanking, or Tientsin were capable of turning out 4.7-inch Q.F. guns, Maxims, improved Lee-Metford and other rifles in use in modern armies, shows clearly that no attempt had been made to grasp the meaning of modern warfare. "Villainous salt-petre" and other modern substitutes had to be acknowledged as necessary evils, but the mandarins shut their eyes to them as far as they could, and it would probably be enough, they thought, to show the hated foreigner that they could construct weapons as good as theirs—a sort of modern version of the "quaker guns" of the Bogue Forts in our first China War.

Nor was this view confined to civilians. I remember an intelligent Chinese naval officer saying to me in English "that it was a very foolish war." A very philosophical view, no doubt, and I agreed that all wars are "foolish"; but the sentiment is scarcely one that we should expect to hear from a naval officer, fostered in the warlike virtues of devotion to his

profession and country, and whose heart's desire ought to be that he should be afforded the opportunity which only war can give of showing that the honour of his country is safe in his hands.

I have spoken of the mandarin as being hopelessly ignorant of war, and I propose to illustrate this by two examples. In the middle of the war, when the Japanese had crossed the Yalu, defeating the Chinese General Sung in several engagements, with Port Arthur about to fall, and when even Shan-hai-kwan, only 120 miles from Peking, was threatened, it was evident, even to the mandarins composing the Tsung-li-Yamen, that "something must be done," and the first step was to find a capable general. In this emergency it would be supposed that they would have endeavoured to select a man in the prime of life, with at least some knowledge of war as conducted by foreigners, attaching to his staff men like General¹ von Hanneken, with other foreign officers; but this would have been common sense, and consequently it was not the Chinese view. Von Hanneken, an able military officer who had served in the German Army, had been indeed appointed as assistant to Admiral Ting, and he did yeoman's service in the "Ting Yuen" at the Yalu fight, though he was naturally ignorant of naval matters. Later, about a month before the fall of Wei-Hai-Wei, Ting had another assistant in the person of Admiral¹ McClure, a Scotch tug-captain; but throughout the war it seems to have been impossible for the Chinese mind to grasp the simple fact of the necessity for expert training so pithily expressed in the old adage of "the cobbler to his last." But this digression is interesting only as showing that even when the Chinese did condescend to employ foreigners they placed them in positions for which they were not fitted by previous training. In the case now under consideration, the man selected to be the saviour of his country must, they thought, be a Chinaman of high rank, and he was found in the Viceroy of Nanking, Liu-kun-yi, a mandarin of mandarins about seventy years of age, a confirmed opium-smoker, and so infirm that he was incapable of ascending a staircase. Conscious of his physical incapacity, and of his absolute ignorance of war, he attempted to decline the honour thrust upon him; but the appointment had been approved by the Emperor's "vermillion pencil," and the Viceroy had perforce to accept the responsibility, though he took care not to go within a hundred miles of the front. But my readers will say, "This is too absurd; surely the Tsung-li-Yamen must have had some reason for the appointment?" They are right, the reason is to be found in the fact that Liu-kun-yi was a Hunan man, and the Hunanese are universally credited in China with being a fighting race, though their reputation is founded rather on their turbulence, and on their invincible hostility to the "foreign devils," than on any proved courage in the field.

Let us look at another case. On the removal of Liu-kun-yi from Nanking his place was filled by Chang-Chi-Tung, the Viceroy of Hupei and Hunan, a man of quite a different stamp. Now Chang-Chi-Tung is

¹ I have in all cases given the nominal rank of foreign officers serving in the Chinese service.

a remarkable man, an accomplished Chinese scholar, and though bordering on sixty years of age, he is still full of energy. He has endeavoured at great expense to establish iron and steel works at Hanyang near Hankow, to turn out his own small arms, to make iron and steel rails, to work his own iron mines, coal mines, and cotton mills, and he aims at making a railroad between Hankow and Peking, for which he has obtained the Imperial sanction. One may reasonably doubt how far his far-reaching and ambitious plans are likely to succeed, but hater of foreigners as he is supposed to be, and though his aim is to do everything possible by Chinese for Chinese, yet he has recognised the necessity for having Europeans to assist him in his works, and if his money holds out he may yet do much. When added to this, he has the reputation so rare in China of scrupulous honesty, one might fairly suppose that here at least we should find a man who would take some reasonable steps to defend that part of the unwieldy Chinese Empire committed to his charge.

But what was the result of all his energy, his honesty, and his genuine love of country? He visited the Forts at Woosung, it is true, and he did take steps to get foreigners to report on some of those in the Yangtse; but his very guard were a rabble armed with all sorts of weapons, and his conception of the probable mode of the expected Japanese attack was shown by his directing the English captain of a tug in which he was embarked to go to a certain part of the Yangtsekiang, where his books told him that the Japanese had landed 600 years previously. This idea he adhered to, in spite of charts and modern information, till the nose of the tug was run into the mud, and it was clear that the bed of the river had so changed as to make landing there impracticable.

I have said enough, and more than enough, to prove the absolute ignorance of warfare shown by the Chinese. Of generals and admirals in the modern sense they had none, and the necessity for experts in war was deliberately ignored. I am inclined to think that the view of the accomplished Chinese mandarin is, that war is a dirty business, in which only the worst characters should take part, and that the most noted swashbuckler and rowdy is the general.

A remark has often been made to me that the Chinese defence against the Japanese was far feebler than that made against Great Britain and France in former wars. Various reasons can be given for this, one being that the greater complication of modern weapons necessitates a higher training in those using them; but it is also remarkable with reference to the warlike virtues, to point out that these were to some extent fostered by the universal piracy formerly prevailing on the coast of China, which was entirely put down some thirty years ago, and that the stubborn resistance shown to the French in Tongking, and more recently to the Japanese in South Formosa, has come from the piratical "Black Flags" of the Red River.

It is true that even in the Western States the professional soldier or sailor dates from comparatively recent times, but in the middle ages and up to the time of Queen Elizabeth, every able-bodied man was trained to

manly exercises and to the use of arms; but this forms no part of a Chinese mandarin's education, and would be looked upon as derogatory. Foreign instructors in Chinese naval colleges have told me that it was a far harder task to get their pupils to take part in gymnastic or calisthenic exercises than to attain proficiency in scientific knowledge.

This, then, being the Chinese view, how are we to account for the fact that undoubtedly the Chinese had made some progress in modern armament and equipment? Their army generally, as I have shown, was no doubt inefficient; there was no cohesion between the various branches of which it was composed; and it may be doubted whether the Chinese could ever be said to have had an army at all in the modern sense. Yet there was a drilled body supposed to consist of 30,000 men, though probably really numbering about 15,000, who were well armed with Krupp guns and magazine rifles; while in the Pei Yang or Northern Squadron, which had been trained by Captain Lang, a British naval officer, it was known that they had a naval force of modern ships, built in England or Germany, which cruised much at sea, visiting Japan and Singapore, and, so far as outward appearances went, formed an efficient fighting squadron. What became of the trained soldiers above alluded to was always a mystery. Some, at least, went down with the unfortunate "Kowshing" on the 25th of July, 1894, while many of the Krupp guns were captured at Ping Yang on the 16th of September; but either the number of trained soldiers was much exaggerated, or a large proportion were kept in reserve in the vicinity of the Viceroy's Yamen at Tientsin, which would be quite in accordance with the half-hearted way in which the Chinese are accustomed to conduct warlike operations.

In speaking of their navy, I have alluded to the Pei Yang Squadron as being apparently efficient, and here I must explain that there were other squadrons under various viceroys—the Nanyang or Nanking Squadron, the Foo-chow and Canton Squadrons; but the weakness of the central government was such that there was no cohesion between the forces paid for by the viceroys of the different provinces of the empire, and only an odd ship or two from any of the three squadrons referred to ever took part in the war. In fact they were never supposed to be more than show ships, *sans valeur sérieuse*, to adopt the expressive French phrase. This could not be said of the Pei Yang Squadron. It is true that Captain Lang had been got rid of by a cabal some three years previous to the outbreak of the war, and there were sinister rumours of a rapid deterioration in discipline¹ since his guiding hand had been withdrawn, while no one believed that the necessary stores and reserves were kept up. Still they were well navigated; they kept station fairly when in company; they fired well at a mark, both with guns and torpedoes; they exchanged semaphores with each other in

¹ A story, for the truth of which I cannot vouch, was current in the clubs at Hong-Kong and Shanghai, that, a short time after "Admiral" Lang's dismissal, an Englishman going on board the "Ting Yuen" unexpectedly, found the admiral playing "fan-tan" with the sentry over his cabin door.

English¹; and they were certainly not a "negligible quantity." That they were lacking in other ways admits of no question. Officers had allowances to enable them to supply various stores, and thus the canker of peculation and dishonesty had eaten deep into the vitals of the efficiency of the squadron. There was little zeal, no real *esprit de corps*, and the most successful captain was the man who could make most money. Of Admiral Ting,² who commanded the Pei Yang Squadron, I would speak with respectful sympathy. He was a gallant, patriotic man, but he had been a cavalry soldier, who had taken to sea service in middle age; and deficient as he was in technical knowledge, he was much in the hands of Commodore Lew-po-chin,² his flag-captain in the "Ting Yuen."

The credit for such efficiency as the Pei Yang Squadron and the foreign drilled troops possessed is entirely due to one man, the famous Viceroy of Chihli, Li Hung Chang, undoubtedly the foremost if not the only statesman in China. He has a world-wide reputation, and has been called the "Chinese Bismarck." I do not propose to describe him, but his manly presence and hearty shake of the hand show that he is no mere mandarin, while, in spite of his more than seventy years, he has still a fund of energy sufficient to enable him to make laborious inspections of his troops and ships, as he did in May, 1894, two months before the outbreak of war. This war has to some extent discredited him; he is probably not free from the vice to which old men are supposed to be especially liable; and it is certain that many deficiencies and failures in munitions of war were directly due to the determination to exact "squeezes" from those nearly related to him, while no doubt his military knowledge was small. But he had no delusions on the subject of China's military power; he knew the hollowness of all the seeming show; and I feel certain that he was always anxious for peace. In 1884 he arranged the treaty of peace with France; in 1885, when war was imminent with Japan, he sacrificed much in the interests of peace, though the treaty he then made with Count Ito proved to have in it the seeds of the recent war; and I am convinced that he would have given way at all points and have averted the war had he been entirely master of the situation. In the negotiations for peace, held between Li Hung Chang and Count Ito at Shimonoseki in April last, he is reported to have said to the latter: "What you have done for Japan I wanted to imitate in China. Had you been in my place, you would know the unspeakable difficulties met with in China." He was here alluding not only to war preparations, and everyone who knows the "unspeakable difficulties" of carrying out any reforms in China will sympathise with this "Grand old man," and

¹ During the attack on Wei-Hai-Wei, our signalmen used often to "take in" semaphores made from the signal station on Liu-kung tau Island. I remember, during one of the long-range bombardments of the Japanese against the Eastern Forts on the Island, a signal being reported to me, "Send ten Nos. 1 from Western batteries to relieve those in Eastern Fort. Officers coming off duty to report at the Admiral's Yamen."

² After making terms with Admiral Ito for the surrender of the remaining ships and the Island of Liu-kung-tau, both these officers committed suicide.

in view of the attacks which have been made upon him by foreigners, as well as by his own countrymen, he may fairly echo Anthony's well-known complaint of the forgetfulness of men's good actions and the remembrance of their supposed shortcomings.

I have dwelt long on China's corruption, on her unpreparedness for war, and the incapacity shown by her rulers to appreciate modern warfare, as it is the crux of the problem. Let us now turn to Japan, and the contrast is enormous. In China, as we have seen, peace and the arts of peace are held up as models, while war and the heroic virtues are habitually ignored. In Japan, on the contrary, while art is held in high esteem, and the industry and enterprise of people lead them to be active traders and producers, it is the warlike virtues of patriotism, and devotion to death for a cause, which alone are deemed worthy of public recognition. That everything should give way to this and domestic affection, nay, even ordinary morality—is the accepted creed, if we may judge by that popular Japanese legend of “the forty-seven Ronans,” whose graves may be seen in Tokyo to this day, decked with “votos” from fervent Japanese admirers. The story should be read to be appreciated. It relates the heroic conduct of the forty-seven “Ronans,” or retainers, in avenging the murder of their Daimio by a rival—the stratagems and deceits necessary to accomplish the object in view being represented as not only excusable, but commendable.

Japan has been so much written about, that I feel that it is unnecessary for me to say more about this quick-witted, courteous, and patriotic people. That they are as warlike as the Chinese are the reverse, I have endeavoured to show, and when once they had been coerced or persuaded to open their country to foreigners, they proceeded to organise their navy and army on European models, availing themselves of the best European instructors, and proving themselves to be apt pupils. Captain Ingles of the British Navy, who for many years was their naval adviser,¹ had expressed his opinion, long before the war, that the Japanese Navy was fully up to the European standard; and similar reports had been made by distinguished military officers concerning their army. Few can now doubt that for some three years before the war broke out they had been preparing for it in their usual silent, systematic manner, and when the Tonghak rebellion gave rise to the Corean imbroglio they were fully prepared for action.

Were they anxious to “flesh the spears” of their new navy and army *à la* Cetewayo?—or was the war mainly due to political exigencies of home politics?—or were they simply drawn into the war by the evident leaning of the Corean monarch and people toward China, to the exclusion of Japanese influence? All these may have had their effect, but to one who was in Japan at the time it was no secret that the Japanese to a man were as anxious for war as their opponents were to avert it; and though it might be a pious opinion, to be held by the Japanese, that on the 25th of July, 1894, the Chinese cruiser “Tsi Yuen” had the temerity to fire the first shot

¹ Captain Ingles only left Japan about a year before the war broke out.

against a very superior Japanese force, it is so contrary to nature that on this point at least we must be permitted to believe the Chinese version of the collision which practically began the war.

Well, the war broke out, as we have seen, with the engagement above referred to: the Chinese ships being the "Tsi Yuen"¹ and "Kwang Yih," a torpedo-cruiser of 1,600 tons; and the Japanese First Squadron consisting of the "Yoshino," flying the flag of Rear-Admiral Tsuboi, the "Akitsushima," "Naniwa," and "Takachiho." The Chinese ships had left Yasan that morning, and the Japanese ships were the advanced squadron of Admiral Ito's fleet making for Chemulpho. In this engagement the "Kwang Yih" was driven ashore and destroyed; the "Tsi Yuen," though inferior in speed and force to all the four Japanese ships, escaping to Wei-Hai-Wei much damaged. It was a few hours after this that the Chinese gun-boat "Tsao Kiang" was captured, and the British transport "Kowshing" with General von Hanneken and picked Chinese troops on board, was sunk by the "Naniwa," Captain (now Rear-Admiral) Togo, after what Admiral Ito, in a recent address delivered at Tokyo, terms "several hours of useless parleyings."

For obvious reasons I am precluded from touching on the legal aspect of the sinking of the "Kowshing," which has, it appears to me, only afforded a fresh instance of the want of cohesion in the bundle of sticks which goes by the name of "international law," of which it may be reasonable to say, in St. Paul's words, that, though all things may be lawful, all things may not be expedient. As regards the manner in which it was done I cannot forbear pointing out that though forty-four Chinese were taken off the masts of the sunken vessel by the French gun-boat "Lion" on the morning following her destruction, neither here, nor at Yasan, Yalu, or Wei-Hai-Wei was, so far as I heard, a single Chinese life saved by their Japanese opponents; so that, kindly and amiable as the latter are by nature, they have much to learn as regards common humanity in war. Contrast this with numerous instances of humanity in British naval history, notably on the occasion of the sinking of the "Vengeur" on the 1st of June, of the blowing-up of the "Orient" at Aboukir, or Nelson's prayer before Trafalgar, that "humanity after victory might be the predominant feature of the British fleet."

The war then began in earnest with the sinking of the "Kowshing," and the attack on the Chinese camp at Yasan which immediately followed. I must leave the military operations to others, but it will now be advisable to make a general comparison of the naval forces of the two Powers. They were not unequal. On paper, indeed, the Chinese were superior in number and tonnage; but this assumed that the Chinese auxiliary squadrons were available and efficient, which I have shown not to be the case; and for all practical purposes the Japanese were the more powerful and better able to command the sea. The Japanese knew that they would have to do with the Pei Yang Squadron, and they had gauged it at its

¹ For size and armament of "Tsi Yuen" and Japanese ships see list of ships engaged at Yalu.

true value. It is unnecessary to go into details showing the entire nominal force of the two Powers, which would, as I have shown, be misleading; and I give accordingly a statement of the ships present at the Yalu battle, which will afford a fairly satisfactory basis for comparison.

The list of ships engaged is given correctly in the *Century Magazine* for August last by Commander Philo McGiffin, who was on board the "Chen Yuen" during the action, and I repeat it here with a few alterations. Both sides had practically all their available force present, the Chinese auxiliary squadrons remained in their respective provinces, and the Japanese had numerous small vessels and corvettes of slow speed attending on their army and keeping up communications.

Let us now examine the material force of the two fleets,¹ and for the moment take no note of the *moral*. In tonnage, in number of men,² in Q.F. guns, and above all in speed, and the more modern type of their ships, the Japanese fleet under Vice-Admiral Ito was superior. It was also more homogeneous, as, omitting the "Akagi," the ships varied in size only from 2,200 to 4,200 tons, and were more modern. In all these respects the Chinese fleet was inferior, but it had one advantage in two second-class battle-ships, the "Ting Yuen" and "Chen Yuen," of 7,400 tons; but the next in size were the "King Yuen" and "Lai Yuen,"—weak ships, though nominally "armoured cruisers" of 2,900 tons; and when we come to the last three ships we find that they were mere sloops or torpedo-vessels of 1,300 tons. It might well have puzzled a more experienced sailor than Admiral Ting to manœuvre such an odd lot of ships together. But we are not now considering the Yalu battle, to which I shall again refer, though I have taken the ships engaged in it as sufficient for a comparison of the two fleets.

Clearly the Japanese considered that they could successfully command the sea, and in no war has the "influence of sea power," so admirably worked out in Captain Mahan's able volumes, been more distinctly shown. "*À quoi peut servir une marine*?" asks the French Admiral Jurien de la Gravière. His reply to his question is, "*À occuper les grandes voies maritimes*"; and, to quote Bacon again, "He who has command of the sea can take as much or as little of the war as he pleases." The Japanese, having determined to turn the Chinese out of Corea, required the command of the sea to enable their troops to be brought across from Japan, and to maintain them when there; but had they been defeated by land, they could then have re-embarked their troops and have taken "as little of the war as they pleased," assuming that they retained their naval superiority.

The sea was also the shortest route for the Chinese, as we have seen in the case of the "Kowshing"; but after the war broke out they were unwilling to risk their fleet, and, until the landing of troops at Takushan,

¹ See Tables at end of paper.

² I have been unable to ascertain the correct number of men in the Chinese ships; but many of them were short of their complement.

which brought on the Yalu fight on the 17th of September, they accepted the serious disadvantage of having to send their troops into Corea by the long land route.

Was the whole advantage of sea power, however, fully understood in either country? This seems doubtful, as in the early part of the war the Japanese fleet was mainly employed in convoying troops; while the Chinese, although cruising freely in the Gulf of Pechili, were said to be under orders not to cruise to the Eastward of a line drawn from the Shantung promontory to the Yalu. In both countries the naval force seems to have been used in subordination to the military requirements and for secondary purposes—a misapprehension of sea power which, as Captain Mahan shows, was too frequently the bane of the French navies in their wars with Great Britain. This is a question of strategy not entirely in the hands of the naval commander-in-chief, and one must hesitate to make Vice-Admiral Ito, who in other respects showed himself to be a most able commander, responsible for it; but in his lecture, to which I have before referred, he appears to accept the *rôle* as the natural one.

It is possible that the Japanese were aware of the orders given to the Chinese ships, and that they did not wish to force a naval action till they had secured their military bases; but the policy would have been a dangerous one in the face of an active enemy; and, well supplied as they were with fast cruisers—such as the “Yoshino,” “Naniwa,” “Takachiho,” “Chiyoda,” and others—the neglect to keep touch with the Chinese fleet argues a failure to appreciate sea power in its true aspects. As a matter of fact, the Chinese fleet, even after the Yalu battle, was so far left unwatched that Admiral Ting remained at Port Arthur a fortnight after the landing of the Japanese troops at Pitzewo on the 24th of October for the purpose of attacking the fortress, Admiral Ito being content to cruise for the protection of his transports, and allowing the Chinese squadron to proceed unmolested to Wei-Hai-Wei. It is clear that there was no attempt here at blockade, or even masking, though the two fleets were within seventy miles of each other for at least a fortnight, and it would have been easy to have sealed the Chinese ships up in Port Arthur, where they could have done little or nothing for the defence of the place, and where they must have been taken when the position fell.

On the 10th of August, again, at the beginning of the war, Admiral Ito appeared off Wei-Hai-Wei with a fleet of twenty-two ships in all, and exchanged a few shots with the batteries: but the Chinese squadron was not in the port, nor I believe at Port Arthur, so that it was naturally expected that the Japanese admiral would have endeavoured to find his opponents and bring them to action—Port Arthur and Wei-Hai-Wei being the only fortified harbours the Chinese had in the North; but he was content to proceed South the next day, leaving Admiral Ting free to cruise as he pleased, and Chinese transports to cross the Gulf of Pechili without risk of capture. Ting was, I believe, off the Yalu at the time to which I refer, and it would certainly have simplified matters for the Japanese had the naval action taken place, say on the 11th of August,

with similar results to that of the 17th of September, more than a month later.

I have now dealt with the naval strategy of the war, and I have endeavoured to show that the Japanese did not make full use of their naval predominance ; and I now turn to their tactics, which were admirable in all cases. The way in which Marshal Yamagata's force was convoyed to Chemulpho by Admiral Ito, with his look-out ships and advanced squadron covering the main body of the fleet, which was concentrated in readiness to repel any hostile attack, showed a full appreciation of the necessities of the case ; while at Pitzewo, before the attack on Port Arthur, and at Yung Ching Bay, when attacking Wei-Hai-Wei, the systematic cruising to prevent surprise, and in the latter case to keep touch with the enemy, which was done in great part by torpedo-boats, showed that the Japanese had little to learn from older navies. The torpedo-boat cruising off Wei-Hai-Wei in January and February, with the thermometer often little above zero, and with frequent gales, was first-rate ; the officers and men showing wonderful spirit as well as good seamanship in carrying out this most trying service. I doubt if any European navy could have done it as well. In other respects, too, the Japanese Navy showed how thoroughly the problems of modern naval requirements had been mastered. The ships kept wonderfully efficient, being attended by their colliers, hospital and ammunition ships, and "nurses" for the torpedo-boats ; the coaling being carried on almost continuously, when at anchor, by their own boats, which carried the coal in grass bags containing about half a hundred-weight each. The landing of the troops was carried on mainly by sampans, and by coolies admirably organised ; the navy remaining prepared for service, an inshore squadron only assisting with steamboats.

But now to return to the naval battle off the Yalu. The very accurate account of the battle given (in the *Century Magazine* for August, 1895), by Commander McGiffin, a former American naval officer, makes it unnecessary for me to give it in detail ; and Captain Mahan's remarks in the same magazine are so much to the point that I need only refer to a few circumstances, and to the matters on which I have been so frequently questioned, as set forth in the opening paragraph of this article.

Let us look at the tactics of the two admirals. The Chinese fleet, which had been at anchor when the Japanese were sighted, immediately weighed and attempted to adopt a fighting formation said to have been advocated by Captain Lang. It consisted in the ships acting in pairs in quarter line, the fleet thus forming a sort of indented line abreast ; but it would be more properly described technically as "sub-divisions (of two ships) in quarter-line in line abreast," the leaders of sub-divisions being only two cables apart. In arranging the pairs, sister-ships worked together : thus the "Ting Yuen" and "Chen Yuen" formed a pair ; the "Chao Yung" and "Yang Wei" formed another pair ; and so on. The arrangement has much to recommend it, but it essentially demands specially well-trained officers accustomed to manœuvre in this formation,

Under the circumstances it was a fatal error. As a matter of fact the formation was never completed, and if it was right to station the two big ships in the centre, it was certainly wrong to put the two weakest, the "Chao Yung" and the "Yang Wei," as wing ships. These latter were tailing astern, as were others, so that to the approaching Japanese the Chinese appeared to be formed in a wedge or V shape, as shown in the plan.

The Chinese formation being as above, the Japanese attack was delivered in line ahead, and Captain Mahan justly criticises both admirals—the Chinese for having placed his weakest ships on the wings, and the Japanese for moving diagonally across the front of the enemy to pass around his right wing. But though this might be dangerous against a well-drilled squadron of equal force, we must remember that to Ito the Chinese appeared to be formed in a sort of wedge, and he reasonably trusted to the better speed of his ships and to the unwieldy formation of his enemy to avert ill effects. Like Nelson's at Trafalgar, the formation might not be theoretically perfect, but it was sufficiently good to lead up to victory, and perhaps after all was practically the best under the circumstances. In the lecture before referred to, Admiral Ito says :—

"I ordered the First Squadron¹ to attack the right wing of the enemy, and then to come in upon his rear, utilising for this purpose the great speed of the First Squadron."

He then states how by this attack the "Chao Yung" was quickly disabled and set on fire, and that Admiral Ting "concentrated his chief attack upon my Principal Squadron. I managed to keep as far away from him as possible, with a view to attacking him from both sides—front and rear—when the First Squadron got astern of him."

This fully explains the intention of the Japanese admiral, who decided to take advantage of his better speed to give full effect to his strength in Q.F. guns.

I may here remark that though the nominal speed of the Japanese ships only averaged some 3 knots more than that of the Chinese squadron, owing to their being newer and better cared for, I have reason to believe that 5 knots would more fairly represent the real difference, the "Chao Yung" and "Yang Wei," for instance—nominally 16-knot ships—being incapable of steaming more than 7 knots. Practically, after the first collision, the Chinese lost all order, and contented themselves with a vain endeavour to keep bows on to their enemy—an impossible problem, which the advocates of bow-fire *quand même* should note. The Japanese, on the other hand, were always under control, and manœuvred effectually together in compliance with signal. Indeed, it was not till the two Chinese ironclads were left alone, that the latter seem to have recovered any initiative, and the only wonder is that the Japanese did not succeed in destroying the whole of the rest of the squadron.

¹ Consisting of the fast cruisers "Yoshino," "Naniwa," "Takachiho," and "Akitsushima."

Before leaving the Yalu battle, I should like to refer to some instances of special gallantry on both sides. On the Chinese side the captain of the "Chih Yuen" is stated to have fought his ship with great determination: she was pushed forward toward the Japanese fleet in an attempt to ram, and was sunk by a storm of shot, though she continued firing to the last. The "Lai Yuen," on fire so badly that the whole of her after part was literally burned out, was saved by the gallantry of her first lieutenant and brought to Port Arthur. It is stated that the captain proposed to run the ship ashore, but that the first lieutenant, who was down at the fire, persisted that it could be got under, and owing to his noble example this was eventually done.

In the Japanese squadron all seem to have behaved well. The "Hiyei" and little "Akagi," having been left behind owing to their slow speed, were practically cut off from the remainder of their fleet, and had to run the gauntlet through the whole of the Chinese fleet, narrowly escaping destruction. Both ships were so much damaged as to be put out of action, the "Akagi" having her captain killed and her foremast shot away. The most notable instance of heroism, however, is stated to have occurred in the "Matsushima." A shell from the "Chen Yuen" had exploded three of the heavy charges for the 13-inch gun, which had imprudently been allowed to accumulate in an exposed position, causing a loss of fifty killed and wounded, and there was imminent danger of the ship being blown up. It is stated that this would have happened but for the heroism of a petty officer stationed in the handing-room, who with great presence of mind instantly closed the door of the magazine, placing his back against it. It is satisfactory to hear that this man's life was saved, though he was badly burned.

I do not propose to follow the Yalu battle further. The Japanese only destroyed the four ships, "King Yuen," "Chih Yuen," "Chao Yung," and "Yang Wei,"—the "Kwan Chia" being wrecked the same night off Talienwhan Bay; and the two Chinese ironclads made such a good defence that toward nightfall Admiral Ito withdrew. But the victory was complete. It was like Flodden,

"When skilful Surrey's sage commands
Led back from strife his shattered bands.
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Then did their loss his foemen know,"

and from the 17th of September the Pei Yang fleet, as a fighting squadron capable of meeting the Japanese fleet on equal terms, had ceased to exist. It might still be a "fleet in being," but so crushed and humiliated, as well as reduced in numbers, as to be of little value.

The obvious lessons to be drawn from the fight are as follows :—

1. The necessity for keeping a fleet under command.
2. The advantage of the offensive.
3. The advantage of speed.
4. The advantage of Q.F. guns.

5. The necessity of special precautions against fire, and of removing all woodwork.
6. The uselessness (or worse) of thin screens or shields to guns.
7. The necessity for not having accumulations of heavy-gun charges in exposed positions.

On the two last points only is it necessary to make any remarks. As regards the sixth lesson, the conclusion is drawn rather from the action of the 25th of July, and from the attack on Wei-Hai-Wei, than from the Yalu battle. On the 25th of July the shield of the "Tsi Yuen's" starboard 8-inch gun was struck by a shot, causing some loss to the gun's crew, and sending a shower of splinters across the deck, which killed or wounded nearly the whole crew of the opposite gun of similar calibre. As the result of this experience the Chinese had landed all their gun-shields before the Yalu fight. The second instance is one drawn from Wei-Hai-Wei, when a shot from the Chinese batteries struck the shield of a machine-gun of the "Yoshino," causing a loss of two killed and seven wounded, none of whom would have been touched but for the protecting (?) shield.

With reference to the seventh lesson, the danger of the accumulation of powder is not a new one, and, as Captain Mahan argues, it is probably better to run some risk of explosion than for ammunition to be unavailable at a critical period; but there is no answer to the case of the "Matsushima," where, as I have mentioned, but for the heroism of a petty officer, the ship would probably have been blown up.

On the above points there can be little difference of opinion; but there are others more debatable, such as the relative value of belts *versus* deck-plating. On this point constructors may remark with satisfaction that, if we except the "Saikio Maru" transport, no ship in either fleet had her motive power or steering-gear injured. It is also clear that the forty-five Japanese Q.F. guns practically got the better of the eight protected heavy guns in the Chinese ironclads. On the other hand, it is claimed that the loss of life in the latter was comparatively small, and that their plating was never pierced by the Japanese projectiles, even though struck several times by the 13-inch guns of the "Matsushima" and her two sisters. It must be remembered, too, that the Japanese cruisers represented the most modern development of their class, whereas the Chinese ironclads were thirteen years old, and their guns were not of the newest pattern or supplied with a sufficient number of common shell,¹ so that the Yalu battle leaves the great question of armour protection and of cruisers *versus* ironclads much where it was.

What, then, of torpedoes? The Japanese certainly never fired any, and never intentionally closed to within fair torpedo range. The Chinese ships fired two or three, but, as I gathered, rather to get rid of them in

¹ I think it was Commander McGiffin who said, referring to the scarcity of common shell for the 12-inch guns of the "Chen Yuen," that when one came up from the shell-room during the action, "they nursed that shell, sir, like a hothouse plant."

view of the danger of their being struck by a shot than with any expectation of damaging the enemy. I think we may say, then, that the Yalu battle has proved that at least in a general action above-water torpedo discharges are useless.

I now leave the Yalu battle, and I have only space for a few lines on the lessons to be derived from the operations which ended in the capture of Wei-Hai-Wei. These are not numerous, and they convey nothing new to us. It is evident that a mere passive defence is useless, and generally the Chinese ships refrained from offensive action and became helpless as the net closed around them. It is probable that after the mainland batteries had fallen into the Japanese hands their fleet might have entered the harbour and taken the Chinese ships, demoralised as they were; but no doubt possible submarine mines acted as a deterrent, and Admiral Ito might well feel that his prey could not escape him.

As to the successful torpedo attacks made by the Japanese, by which the "Ting Yuen," "Lai Yuen," and "Wei Yuen" were destroyed, whilst appreciating fully the dash and gallantry of the Japanese officers, as well as their splendid devotion and seamanship to which I have already alluded, we must remember that one end of the boom defending the harbour was in Japanese hands, and that the Chinese ships were huddled together as close under the island of Liu-kung-tau as possible, to escape from the fire of the Japanese batteries, making no attempt to defend themselves by an inner boom or other obstructions. The boats accordingly had every advantage, and no doubt the Chinese, as usual, were "surprised" at the attack being delivered from the South-West when they knew that the Japanese torpedo-boats must enter the bay, in which they were lying, from the East. Still the first attack was a failure, the boats being spitted on the boom, and in the first successful attack one boat got a shot through her boiler, and one was wrecked, though subsequently got off again.

One episode of Wei-Hai-Wei deserves a passing notice. On the 31st of January the Japanese carried all the Eastern Chinese forts on the mainland, and as the attempts of the Chinese to blow up the batteries or to disable the guns had been only partially successful, the majority of the guns were serviceable, and, the forts being manned by seamen gunners from the fleet, the guns were quickly turned on the Chinese ships and the batteries on the island. Seeing this, the "Ting Yuen" got under weigh that afternoon, and, taking up a position so as partially to enfilade them, she attacked two of the forts armed with 21 and 24 centimetre Krupp guns. The attempt was gallantly made, and one gun at least had its muzzle shot off by the ironclad's gunners; but an inspection of the fort—a fine modern one built under von Hanneken's superintendence—showed the practical invulnerability of modern sea forts against naval attack, though possibly they might be temporarily silenced by a storm of projectiles from Q.F. and machine guns.

¹A lightly-armed training-ship.

In reviewing the naval operations one must constantly read between the lines, and differentiate between Japanese and Chinese; as, unless this is done, they can be made to prove anything. At Wei-Hai-Wei, for instance, we have seen the success of the Japanese torpedo-boats; but the Chinese had twelve torpedo-boats there, and they did nothing, making no attempt to harass the Japanese cruisers or to engage the fourteen Japanese boats. Their career was indeed inglorious. On the 8th of February, during a heavy bombardment of the island of Liu-kung-tau by the Japanese fleet, the twelve Chinese boats attempted to escape to the Westward, making for Chefoo. They were immediately chased by the "Yoshino" and other fast cruisers, and were all driven ashore, captured, or destroyed. With two exceptions they were old boats, which certainly could not steam 15 knots; probably 12 would be nearer the mark.

I began this article with the question as to whether there was anything to be learned from the war which I have been considering, and I have endeavoured to answer it; but, as I proceeded, I have become more and more impressed with what an old, old story it is. A nation imbued with courage, skill, and national spirit has triumphed over one which lacked those qualities, trusting to half measures and blind chance; each individual, with rare exceptions, being mainly intent only on saving his own life and his individual interests. Nevertheless, several instances, even in this war, have shown that the Chinese, when well led, are not wanting in courage, and with good organisation they may yet become formidable.

From the naval point of view one is struck with the fact of the eternity of general principles in strategy, and even in tactics, modern appliances notwithstanding; and only shallow observers will fail to see the lessons which can be learned from the campaigns of a Nelson, a Rodney, or a Suffren, if care is taken to adapt them to the circumstances of our own times.

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CHINESE SQUADRON AT YALU.

Classification.	Ships' Names	Date of Launch.	Displacement.	Armour (in inches).		Speed.	Guns.	Torpedo Discharges.
				On Belt.	On Turret, Barbette, or Battery.			
Battle-ships--2nd Class	Ting Yuen Chen Yeun	1881 1882	7430	14	12	14.5	Four 12-in., two 6-in., two 4-in. (Four 6-pdr., two 3-pdr.) Q.F. 8-M.	3
Armoured-cruisers	Lai Yuen King Yuen	1887	2850	9½	8	15	Two 8½-in., two 6-in., 8-M.	4
Cruisers-3rd Class, protected	Tsi Yuen	1883	2355	0	6	15	Two 8.4-in., one 6-in., 10-M.	4
	Chi Yuen Ching Yuen	1886	2300	0	0	18	Three 8.4-in., two 6-in., 16-M.	4
Do. Do. unprotected	Chao Yung Yang Wei	1881	1350	0	0	16	Two 10-in., four 40-pdr., 7-M.	0
	Kwan Chia	1887	1300	0	0	16.5	Three 4.7-in. Q.F., three 6-pdr. Q.F., 4-M.	0
Armoured-cruiser	*Ping Yuen	1888	2850	8	5	12	One 12 in., two 6-in., 8-M.	4
Torpedo-vessel	*Kwang Ping	1889	1030	0	Hull partly of wood.	16.5	Three 4.7-in. Q.F., two 6-pdr. Q.F., 4-M.	4
Gun-boats	*Epsilon	1879	440	0	0	10	One 11-in. M.L., 2-L., 4-M.	0
	*Kappa	1881						
Torpedo-boats--1st Class	*Foo Lung	1886	120	0	0	24	Two 3-pdr. Q.F.	2
	*Tyo Jih	1887	90	0	0	23	Two 3-pdr. Q.F.	3

* Ships that took little part, having been anchored in shore.

JAPANESE SQUADRON AT YALU.

Classification.	Ships' Names.	Date of Launch.	Displacement.	Armour (in inches).		Speed.	Guns.	Torpedo Discharges.
				On Belt.	On Turret, Barbette, or Battery.			
Cruisers--2nd Class, protected	Matsushima Itsukushima Hasidate	1890 1889 1891	4277	0	12	17.5	† One 13-in.; twelve 5-in. Q.F., fifteen 3-pdr. and 2½-pdr. Q.F.	4
Armoured-cruiser	Chiyoda	1890	2450	4½	0	19	Ten 5-in. Q.F., fourteen 3-pdr. Q.F., and 3-M.	3
Cruisers--2nd Class, protected	Yoshino	1892	4150	0	0	23	Four 6-in., eight 5-in., twenty-two 3-pdr., all Q.F.	5
	Naniwa	1885	3650	0	0	18.7	Two 10-in., six 6-in.; two 6-pdr. Q.F., and 12-M.	4
	Takachiho	1892	3150	0	0	19	Four 6-in., six 5-in., six 3-pdr., all Q.F.	4
Battle-ship--3rd Class	Fuso	1877	3718	7	9	13	Four 9½-in., two 7-in. 8-M.	0
Armoured-cruiser	Hi-Yei	1878	2200	4½	Hull Composite.	13	Three 7-in., six 6-in., 8-M.	0
Gun-vessel	Akagi	1889	615	0	0	12	One 9½-in., one 6-in.; six 3-pdr. Q.F.	0
Armoured-transport	*Sakio Maru	1888	2913	0	0	14	Four Q.F., probably 6-pdrs.	0

* Partially engaged after the main action.

† Aft in Matsushima; forward in her two sister-ships.