

Class of June, 1920

Thesis

TACTICS

Submitted by

Captain W. H. Standley, U.S.N. 1892

Naval War College
Newport, R. I.
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TACTICS.

TACTICAL THESIS:

CRITICAL ANALYSIS OF THE TACTICAL FEATURES OF THE BATTLE OF JUTLAND.

GENERAL SITUATION.

At the beginning of the war the British Fleet, alone, was greatly superior to the combined Fleets of the Central Powers. This superiority was greatly increased, in the beginning, by the French Fleet in the MEDITERRANIAN and soon afterwards by the Japanese Fleet in the PACIFIC and later by the Italian Fleet in the MEDITERRANIAN.

As a result of this superiority the Allied Fleets soon gained command of the sea, on the surface, except in the BALTIC, the BLACK SEA and the SEA OF MARMORA, and, excepting the submarines, the forces of the Central Powers had either been destroyed, interned or contained in the waters which they still controlled.

GERMANY was the only one of the Central Powers who had a fleet of any great strength but even it was too weak to hazard a major engagement with the British Grand Fleet, so it was forced to operate on the strategic defensive and accordingly at the beginning of the war, retired into its home ports bordering the NORTH SEA. These ports were so well guarded by mines and off shore batteries that it was impossible to maintain a close blockade of them. German submarines went out at will and operated continually, at first, against the English Fleet and movement of troops and supplies across the channel and later against Allied supplies and commerce upon the high seas. Entrance and egress was also easy for surface craft. Destroyers and cruisers made frequent raids into the NORTH SEA and even bombarded ENGLAND'S home coast. Surface and submarine layers were continually mining British and French ports. The High Seas Fleet even were able to make limited cruises into the NORTH SEA for purposes of morale and training, as well as to keep the surface command of the NORTH SEA in dispute.

At first these operations were carried out without any apparent, or at least, without any expressed plan or purpose other than to reduce the superiority of the British Fleet. This was probable due to the fact that the authority of the Commander-in-Chief was limited by orders from the Kaiser. At one time the instructions for any operations of the fleet had to be approved by the Kaiser before they could be executed.

When Admiral Scheer took command of the Fleet, 18 January 1916, he immediately drew up plans for its operation and on 23 February 1916, the Kaiser stated before an assembly of admirals and officers of the fleet that he had fully approved the program of activities drawn up by Admiral Scheer. "This announcement" says Scheer "was of great value to me, as thereby, in the presence of all the officers I was invested with authority which gave me liberty of action to an extent I, myself, had defined."

The object of these plans as stated was to make the enemy "Feel the gravity of the war" and the means for accomplishing this object were the following:-

1. U-Boat trade war.
2. Mines.
3. Trade war in the NORTH SEA and the OCEAN.
4. Aerial warfare.
5. Aggressive action of the High Seas Fleet in the NORTH SEA.

The ultimate aim of these plans was "to exert such pressure as to induce the enemy to take counter measures which would afford us an opportunity to engage part or all of his fleet in battle under conditions favorable to ourselves."- So ultimately the objective of the High Seas Fleet was, as it has always been, The Enemy's Fleet, and its "Grand Mission" was "To engage part or all of the enemy's fleet under conditions favorable to ourselves" which may be further simplified to "To destroy the Enemy Fleet."

So energetically did the Germans carry out their plans that not only was the surface and subsurface command of the sea generally constantly disputed but the general surface command held by the Allies was in constant jeopardy.

British naval operations cannot be considered apart from her military operations.

ENGLAND is an Island Power and, in any war which she wages, command of the sea is vital to its success, and the mission of her fleet is and must always be "To gain and maintain command of the sea," and her "Two Power" naval policy has this distinct object in view.

At the outbreak of the war ENGLAND, without waiting for but depending upon her fleet to gain command of the sea, immediately sent troops to FRANCE, and, it was vital to the allied cause, thereafter, to maintain a constant flow of troops and supplies across the channel, as well as a constant flow of supplies from other countries into FRANCE and ENGLAND. This could not be done unless the British Fleet accomplished its mission.

Britain's fleet did not fail her. It succeeded, almost immediately, in gaining surface command of the sea and its mission then became "To maintain this command of the sea."

The only threat to the command of the sea was the German Fleet which had been forced to retire into its home ports and this fleet at once became the objective of the Grand Fleet.

Close blockade of the German ports was impossible so it became necessary for the Grand Fleet to operate from more or less distant bases. Several of these were selected on the north coast of and in the islands to the north of SCOTLAND from which a constant vigil could be kept upon German naval activities and particularly upon the High Seas Fleet.

The largest of these was at SCAPE FLOW where the Grand Fleet was maintained in constant readiness. The NORTH SEA was patrolled constantly by the Grand Fleet in formation service of vessels of all types. The Grand Fleet would take the sea on the slightest indication of unusual enemy activities and in addition made periodic sweeps into the NORTH SEA for purposes of training, morale and target practice and in the hope of bringing the High Seas Fleet to action.

In spite of these activities, German raiders had persisted in their attacks on the English coast, getting away each time unpunished. On each occasion the English Fleet arrived too late. The failure of the Grand Fleet to ward off these attacks or to punish the raiders was having its affect on the English public. The raid on Lowestof, 25 April 1916, brought forth a statement from Mr Balfour, the First Lord of the Admiralty, to the effect that "should the German ships again show themselves off the British coast, measures had been taken to ensure their being punished."

Germany was, of course, aware of the effect of these raids, and of the public announcement of Mr Balfour and therefore of the risk she was taking in making another attempt.

This was the General Situation on 1 May, 1916.

SPECIAL SITUATION.

Early in May 1916 the German Commander-in-Chief had completed plans for the bombardment of the fortifications and works of the harbor of SUNDERLAND, about the middle of the east coast of ENGLAND, for the purpose of forcing a display of British fighting forces as promised by Mr Balfour, and on May 18 the following orders were issued:

"The bombardment of SUNDERLAND by our cruisers is intended to compel the enemy to send out forces against us. For the attack on the advancing enemy the High Seas Fleet forces to be south of the DOGGER BANK and the U-Boats to be stationed for attack off the east coast of ENGLAND. The enemy ports of sortie will be closed by mines. The Naval Corps will support the undertaking with their U-Boats. If time and circumstances will permit, trade war will be carried on during proceedings."

Thus do we see reiterated in orders the Mission of the High Seas Fleet i.e. "To destroy the enemy fleet."

Extensive aerial reconnoissance was an imperative necessity for an advance on SUNDERLAND. Unfavorable weather prevented such reconnoissance and delayed the movements from day to day until 30 May when the time for the submarines to be in their station approached its end, so on that day Admiral Scheer changed his plans and decided to embark on a campaign against cruisers and merchantmen outside and in the SKAGERRAK, with the expectation that the news of the appearance of the German cruisers in those waters would be made known to the enemy.

The reconnoissance force, Vice Admiral Hipper consisting of Scouting Division I and Division II plus light cruiser Rosenberd, flagship of the second leader of torpedo boats and Flotillas II, VI and IX, was ordered to leave JADE BASIN 31 May, 4 a.m., to advance towards the SKAGERRAK out of sight of HORNS REEF and the DANISH coast and to show himself off the NORWEGIAN coast before dark: To cruise in the SKAGERRAK during the night and at noon 1 June to join up with the Main Fleet.

The Main Fleet, Admiral Scheer consisting of Battle Squadrons I, II and III, Scouting Division IV, Rostok, flagship of First leader of torpedo boats and Flotillas I, II, V and VII, were to sail at 4.30 to cover the reconnoissance forces during the enterprise and take action on 1 June.

Submarines were in position, some facing SCAPA FLOW, 1 boat off Moray Firth, a large number off the FIRTH OF FORTH, several off the HUMBER and the remainder north of TERSCHELLING BANK.

On 30 May the British Admiralty received information indicating early activity on the part of the High Seas Fleet and so informed Admiral Jellicoe in a message which also embodied orders as follows: "You should concentrate eastward of Long Forties ready for eventualities."

As a result of these orders Admiral Jellicoe directed that the Grand Fleet put to sea on 30 May and rendezvous to the eastward of Long Forties 31 May, 2 p.m., Main Fleet, Admiral Jellicoe, including the SCAPA FLOW force and the INVERGORDON force in position Lat. 57°- 45' N., Long. 4°- 15' E.; the ROSYTH force, Admiral Beatty, in position approximately Lat. 56°- 40' N., Long. 5°- 0' S.

If no news was received by 2 p.m., 31 May, the ROSYTH force was to gain visual touch with the Main Fleet, which at that hour would set course for HORN REEF.

The forces sailed in obedience to the foregoing orders and the Battle of Jutland was the result.

THE MISSION.

In an analytical study of the Battle of Jutland we must be careful not to confuse what we think should have been "The Mission" with what was actually "The Mission" which actuated each Commander-in-Chief.

Missions usually flow from orders so we must carefully analyze the foregoing orders and consider them in connection with "The Mission" under which the forces were operating at the time the orders were received before we can reach a conclusion as to "The Missions" on 31 June.

In the case of the German High Seas Fleet there is little chance for confusion. Admiral von Scheer clearly stated what "The Mission" of the fleet was to be in his original plans and the mission was reiterated in the fore mentioned orders under which the fleet sailed on 31 May, and which in the last analysis may be stated as follows: "To destroy the Enemy Fleet."

In his original estimate Admiral Scheer made in general two decisions as to how the mission was to be accomplished as follows:

- First - In effect to conduct operations which will make the enemy feel the gravity of the war and compel him to send his forces out against us.
- Second- "To engage part or all of the enemy forces under conditions favorable to ourselves."

The latter, the time honored strategical and tactical principle of the concentration of forces, had a material effect on the action of the German forces on 31 May when contact was made with the British Battle Cruisers and during the engagement later-- It had been so thoroughly discussed and was so well understood by all the German officers that it may be considered as "Doctrine" for the Fleet.

With the foregoing in mind, then, we can visualize the Estimate of the Situation made by Admiral von Scheer on 30 May, and which can be summarized as follows:

The Mission: To destroy the enemy fleet.

Decision: To embark on a campaign against cruisers and merchantmen outside and in the

SKAGERRAK, to compel the enemy to send his forces out against us.

- Minor Decisions: (1) To send a reconnoissance force to advance toward the SKAGERRAK out of sight of HORNS REEF and the DANISH coast, to show himself off the NORWEGIAN course before dark. To cruise in the SKAGERRAK during the night and at noon the next day.
- (2) The Main Fleet to covering force during the enterprise and take action on June 1.

Doctrine: To engage part or all of enemy fleet under conditions favorable to ourselves.

These decisions were embodied in orders previously noted and under which the German Fleet sailed and from which we deduce the following as existing when contact was made 31 June, 2.28 p. m.:

The Mission of the High Seas Fleet to the accomplishment of which all decisions and operations must be contributory, and and to which all decisions must be referred was:

"To destroy the Enemy Fleet."

The Mission of the reconnoissance force was:

"To make reconnoissance in the SKAGERRAK to entice the enemy to send his forces out against us."

The Mission of the Main Fleet:

"To cover the reconnoissance force and to take action on June 1."

It is noted that the missions of the separate forces were contributory to the accomplishment of "The Mission" of the High Seas Fleet, their object was to compel the British to send his forces out, so when contact was made with capital ships by the reconnoissance force at 2.28 p.m., 31 May, von Hipper realized that his mission as a separate force was accomplished and he then became a part of the High Seas Fleet and his mission became "To destroy the Enemy Fleet."

The same may be said of von Scheer with the Main Fleet. As soon as contact with the capital ships was made, and von Hipper's mission was accomplished, the Main Fleet abandoned its separate mission and as part of the High Seas Fleet began operations under the mission "To destroy the enemy's fleet."

As the enemy Battle Cruiser Force was inferior to the German force, it was a situation when the Germans could attack under conditions favorable to themselves and their doctrine applied. This situation continued until contact was made with the Battleship Force of the Grand Fleet and when this occurred the doctrine again applied and the mission from then on for von Scheer became "To extricate the German Fleet from an unfavorable situation." The mission of the German Fleet was essentially offensive from the beginning.

The British situation as far as the missions are concerned is less clear than in the case of the Germans, for, in no place do we find expression of the purpose of the Grand Fleet either in operations prior to 30 May or in the instructions on that date, except that orders issued by the Admiralty at the outset of the war in the case of the Mediterranean Fleet were calculated to preserve the British Fleet - In other words it tended toward the defensive rather than the offensive.

Early in the war, as we have noted, the mission of the British Navy was "to retain control of the sea" and this then, per force, became the mission of the Grand Fleet. At this time the German High Seas Fleet had retired into its own ports behind fortifications and could not be reached and Admiral Jellicoe's probable estimate of the Situation at that time may be summarized as follows:

The Mission: To retain command of the sea.

Decision: To contain German naval forces, failing this to destroy them.

Admiral Jellicoe probably made many estimates of the situation up to 30 May, 1916, but there is no reason to believe that any of these would differ materially from the foregoing summary.

On 30 May information was received by the Admiralty to the effect that the German High Seas Fleet would leave port on 31 May; and the action of the Admiralty upon the receipt of this information, is a clear indication of pernicious interference with the Commander-in-Chief, lack of confidence in his ability, and a curtailment of his initiative. Instead of giving Admiral Jellicoe the information and leaving him to make the estimate of the situation and resulting decisions the Admiralty made the estimate and indicated their decision to Admiral Jellicoe in the following orders: "You should concentrate east of long forties ready for eventualities."

Upon receipt of these orders, it is assumed, Admiral Jellicoe made an estimate of the situation which may be summarized as follows:

The Mission: To concentrate east of long forties ready for eventualities.

Decision: (1) Main Fleet, including SCAPA FLOW force and INVERGORDON force, rendezvous position Lat. 57°- 45'N., Long. 4°- 15'E. by 2 p. m., 31 May - Then set course for Horns Reef.

(2) The ROSYTH force, Admiral Beatty, including Battle Cruisers and 5th Battleship Squadron, rendezvous approximate position Lat. 56°- 40'N., Long. 5°- 00'E. by 2 p.m., May 31. Then gain visual touch with Main Fleet.

If the Admiralty had refrained from interfering and had given Admiral Jellicoe the information only, he would have made an estimate summarized as follows:

The Mission: To retain command of the sea.

Decision: To concentrate east of Long Forties ready for eventualities.

Minor Decisions: (1) Above decision (1).
(2) Above decision (2).

The effect of the Admiralty's orders to Jellicoe was this- Upon sailing and until concentrated was complete his mission was "To concentrate". After concentration his mission changed and became:- "To retain command of the sea". To change a mission is not sound practice but was inevitable as long as the Admiralty insisted on telling Admiral Jellicoe how to do it. If Admiral Jellicoe had made his own estimate he would have sailed and concentrated with the same mission under which he had previously been operating and under which he would again operate after the forces were joined sometime after 31 May, 2 p.m.

From the foregoing then we see that prior to contact the mission of the Main Fleet was: "To rendezvous position Lat. 57°-45'N., Long. 4°-15'E. by 31 May, 2 p.m., then set course for Horns Reef." And of the Battle Cruisers: "To rendezvous position Lat. 56°-40'N., Long. 5°-00'E. by 31 May, 2 p.m., then gain visual contact with Main Fleet."

When the Battle Cruisers made contact at 2.28 p.m., 31 May, Admiral Beatty had not accomplished his "Mission" and he was forced to make a quick decision as to whether he would carry out his mission which his supposedly superior speed would permit him to do or to cut off, and destroy, an inferior force. In reaching a decision he must necessarily be guided by "The Mission" of the Grand Fleet in the war and what should have been its mission when it sailed on 30 May i.e. "to retain command of the sea" and under this mission only one decision was possible upon contact with this inferior force, and that was "To attack at once on southerly courses."

Upon making contact with the High Seas Fleet Battleships however, Admiral Beatty had to make another quick decision based upon his original mission and the presence of a superior force and in furtherance of this mission he decided to turn to the northward and drew the enemy towards the Grand Fleet.

Thus we see that both contacts forced an apparent change in the mission of the British forces but in reality "The Mission" of the Grand Fleet was not altered by either contact. It was only the decisions which changed.

It will be convenient at this point to compare the strength of the forces involved and as an aid in the analysis of the various situations and phases this comparison will be segregated into the following groups i.e. British Main Fleet, British Battle Cruiser (Beatty's) Force, German Main Fleet, Reconnaissance Force and is shown in the accompanying tables:

TABLE I
BATTLESHIP FORCE

<u>BRITISH</u>					<u>GERMAN</u>			
Class	Disp.	Speed	No.	Type	No.	Speed	Disp.	Class.
Revenge (25700)	51,400	23 -	2 -	BB	4	23	106,300	Konig (26575)
Iron Duke (25000)	75,000	21	3	BB	4	21	97,240	Kaiser (24310)
King George (23000)	69,000	21	3	BB	4	20.5	90,000	Helgoland (22500)
Orion (22500)	90,000	21	4	BB	4	20.7	74,400	Nassau (18600)
Canada (28000)	28,000	22-3/4	1	BB				
Erin (23000)	23,000	21	1	BB				
Agincourt (27500)	27,500	22	1	BB				
Hercules (20000)	60,000	21	3					
St Vincent (19200)	57,750	21	3					
Bellephron (18600)	55,800	21	3					
				OBB	5	18.5	65,200	Deutschland (13040)
				OBB	1	18	12,997	Hessen (12997)
Inflexible (17250)	51,750	25	3	CC				
Black Prince (13500)	54,000	23 +	4	CA				
Defense (14600)	43,800	23 +	3	CA				
Hampshire (10850)	10,850	23 +	1	CA				
Calliope (3750)	22,500	29	6	CL	1	27	4,820	Rostok
Active (3112 Av.)	12,450	25-26	4	CL	1	25.17	3,494	Stettin
Royalist (3500)	3,500	30	1	CL	2	23 +	6,400	Muenchen (3200)
Chester (5250)	5,250	26.5	1	CL	1	21	2,657	Fruenlob ()
				CL	1	23.7	3,400	Stuttgart
Various (Av. 990)	52,473	Av. 29	51	DD	44	28 +	30,800	Various (Av. 200)

BATTLE CRUISER FORCES

<u>BRITISH (Beatty)</u>				<u>GERMAN (Hipper)</u>				
Barham (27500)	110,000	25	4	BB				
Tiger	28,500	29	1	CC	2	28	52,360	Derflinger (26180)
Lion (26350)	79,050	28	3	CC	1	26.75	24,610	Seydlitz
New Zealand (18800)	37,600	26	2	CC	1	27.25	22,640	Moltke
				CC	1	26	19,100	Von der Tann
South Hampton (5400)	21,600	25.5	4	CL	2	27.5	8,640	Pillau (4320)
Falmouth (5250)	15,750	25 +	3	CL	1	28	5,120	Frankfurt

TABLE I CONTINUED

Class	Disp.	Speed	No.	Type	No.	Speed	Disp.	Class
Inconstant (3500)	10,500	30	3	CL	1	27.5	4,850	Regensburg
Gloucester	4,800	26.29	1	CL	1	28.5	4,200	Weisbaden
Cordelia (3750)	7,500	29	2	CL				
Fearless	3,440	25.5	1	CL				
Engadine			1	OCV				
Various (Av. 990)	24,750	Av. 29	27	DD	33	28 +	29,500	Various (11-1282) (22-700)

TABLE II

SUMMARY OF FORCES

British Disp.	No.	Type	German No.	Disp.	Proportion
647,450	28	BB	16	367,940	
		OBB	6	78,197	
196,900	9	CC	5	118,710	1.74 to 1
108,650	8	CA			1.69 to 1
107,290	26	CL	11	43,581	2.46 to 1
		OCV			
77,200	78	DD	77	60,300	1.28 to 1

BATTLE CRUISER FORCES

British (Beatty)		German (Hipper)	
110,000	4 BB		2.15 to 1
145,150	6 CC	5	1.22 to 1
63,590	14 CL	5	2.35 to 1
	OCV		
24,750	25 DD	33	29,500 1 to 1.20

TABLE III

The comparative fighting strength of these forces as shown by the hits tables would be as follows:

At 12,000 yards giving the British 10 concentrations.

BRITISH:-	BB - 28 x 3.42 = 95.76	28 x 20 = 560	
	CC - 9 x 2.28 = 20.50	9 x 11 = 99	
	116.26	x	659 = 76615 : 1.
GERMAN:	BB 11 x 3.42 = 37.62	16 x 20 = 320	
	BB 5 x 3.42 x 2/3 = 11.40		
	OBB 6 x .93 = 5.58	11 x 11 = 121	
	CC 5 x 2.28 x 2/3 = 7.60		
	62.20	x	441 = 27430 -.358

That is, the total British fighting strength is to the total German fighting strength as 1000 is to 358, or in other words the British force was 2.79 times as strong as the German force.

The comparative fighting strength of Beatty's force and Hipper's Reconnaissance force, as shown by the hit tables would be

as follows: At 12,000 yards.

BRITISH: CC	6 x 2.28 =	13.68	6 x 11 =	66		
		<u>13.68</u>	x	<u>66</u>	=	903
BB	4 x 3.42 =	13.68	4 x 20 =	80		
		<u>27.36</u>	x	<u>146</u>	=	3995
GERMAN: CC	4 x 2.28 =	9.12	5 x 11 =	55		
	1 x 2.28x2/3 =	1.52				
		<u>10.64</u>	x	<u>55</u>	=	585
CC-5	x 2.28x2/3 =	7.60	x 55 =			418
						.648
						.105

That is the fighting strength of Beatty's Battle Cruisers alone as compared with Hipper's Battle Cruisers was as 1000 is to 648 or Beatty was 1.54 times as strong in Battle Cruisers alone.

If we consider the total forces with resulting concentrations, Beatty's fighting strength as compared to Hipper's was as 1000 is to 105.2. Beatty was 9.6 times as strong as Hipper.

In the above comparison we have assumed that vessels of the same type are indetical but this is not the case for from a critical comparison of the forces we find that vessels of the same type and of practically the same date of construction differ widely in their offensive and defensive power.- The British running to heavier guns and the Germans to heavier armor. Some idea of the difference may be gathered from the following tables:

TABLE V.

	BRITISH (Iron Duke)	GERMAN (Konig)
Armor:-----		
Belt	12"	14"
Up.Belt	9"& 8"	10"
Bow	4"	6"
Stern	4"	6"
Turret	11"	14"
Boat Deck	1-1/2"to 2-1/2"	2-1/2" to 3"
Guns: -----		
10 -	13.5"	10 - 12"
12 -	6"	14 - 5.9"

TABLE VI

	<u>NO OF MAIN BATTERY GUNS OF BAT-</u> <u>TLE FLEET.</u>						
	15"	14"	13.5"	13"	12"	11"	Total
BRITISH:	48	10	142		144		344
GERMAN:					144	96	240

This superiority in gun power gave the British a superiority in weight of broadside, as stated by Sir Eustace D'Eyncourt in a paper entitled "Naval Construction During the War", of 175% or as 2.75 is to 1 and this is in accord with the results obtained by the Hit Tables and shown in table II.

Admiral Jellicoe in his official report pointed out the erroneous conclusions arrived at by a comparison of fighting strength of the British and German Fleets on a basis of gun power alone and stated that the only logical basis of comparison was displacement of ships of the various classes and his opinion has been concurred in by most of the military writers who have attempted such a comparison. Admiral Jellicoe also gave his reasons for this opinion, which are revealed by an

examination of complete tables giving the particulars of armament, protection and displacement of the capital and other ships engaged in the Battle of Jutland and which are as follows:

Battleships.

"The German ships of any particular period were of considerably greater displacement as compared with contemporary British ships."

"The German ships carried much greater weight of armor than their British contemporaries."

"All German dreadnaughts were provided with side armor to the upper deck, whilst nine of the earliest British dreadnaughts were provided with armor protection to the main deck only: Thus rendering them far more open to artillery attack."

"The main belt and upper belt armor of the German ships was in nearly all cases thicker than in their British contemporaries, while the protection at the bow and stern was in all cases considerably greater in the German ships."

"The deck protection in the German ships was usually greater than in the British vessels and the watertight subdivisions more complete."

"The German ships carried a greater number of submerged torpedo tubes than the British vessels."

Battle Cruisers.

"The earlier German Battle Cruisers were of greater displacement than their British contemporaries."

"The German ships carried greater weight of armor than their British contemporaries."

"Five out of nine British Battle Cruisers were without protection above the main deck, while all of the German ships were provided with protection to the upper deck."

"The German vessels possessed thicker armor in all positions, including deck protection, as well as more complete watertight subdivisions."

"The German ships carried a greater number of submerged torpedo tubes than the British ships."

"As against the additional protection of German ships, the British ships of contemporary design were provided in all cases with heavier turret guns, while the German ships carried heavier secondary armament."

"The Germans had a delay action fuse which, combined with a highly efficient armor piercing projectile, ensured the bursting of the shell taking place inside the armor of the British ships instead of outside, or whilst passing through the armor, which was the case with British shells of that date fired against the thick German armor."

"On account of their limited radius of operations the Germans had reduced the amount of coal carried and thereby acquired a corresponding advantage in increased speed."

"In vulnerability to underwater attack the Germans possessed a very real advantage which stood them in good stead throughout."

It arose from two causes:-

1. The greater extent of the protective armor inside the ship, and in many cases its greater thickness.
2. The greater distance of the armor from the outer skin of the ship, and the consequent additional protection to underwater attack afforded thereby."

"In regard to the first point, the greater majority of British ships only carried partial internal protection, that is protection over a portion of the length of the ship. This protection was usually limited to the regions of the magazines and shell rooms. In the German ships it ran throughout the length of the vessel."

"As to the second point it was possible to place the protective bulkhead further inboard in the German ships without cramping machinery and magazine spaces because the ships themselves were of much greater beam. Consequently the explosion of a mine or torpedo against the hull of the ship was far less likely to injure the protective bulkhead and so to admit water into the vitals of the ship than was the case with a British vessel. The result was that, although it is known that many German capital ships were mined and torpedoed during the war, including several at the Jutland Battle, the Germans have not so far admitted that any were sunk, except the predreadnaught battleship Pomeran, and the battle cruiser Lutzow whose injuries from shell fire were also very extensive."

"On the other hand, British capital ships, mined or torpedoed, rarely survived. The Invincible (mined in the DARDANELLES) and the Marlborough (torpedoed at Jutland) are exceptions, though in the latter case although the torpedo struck at about the most favorable spot for the ship, she had some difficulty in reaching port."

Accepting then the displacement as the proper basis of strength comparison and omitting the British armored cruisers and the German predreadnaughts which did except to swell the losses of their own side, we find by reference to Table II that the comparative fighting strength was as follows:

The Whole Force.

Battleships and Battle Cruisers:	British to German is as 1.74 to 1,
Light Cruisers:	British to German is as 2.46 to 1,
Destroyers:	British to German is as 1.28 to 1,
or a total British superiority of 1.80 to 1, or 9 to 5.	

Beatty's and Hipper's Forces.

Battle Cruisers:	British to German 1.22 to 1,
Light Cruisers:	British to German 2.35 to 1,
Destroyers:	British to German 1 to 1.20,
or a total British superiority of 1.52 to 1.06 or as 3 to 2 approximately.	

If we consider the 4 Barhams then the British superiority is as 7 is to 4.

The various forces had sailed in obedience to the previously quoted orders and on 31 May, 2 p.m., their disposition, course

NOTE ONE DESTROYER ACCOMPANIES
EACH ARMORED CRUISER

2 PM 31ST MAY, 1916

FORCES

BREADBAUGH BATTLESHIPS-24
BATTLE CRUISERS-----3
LIGHT CRUISERS-----12
ARMORED CRUISERS-----8
DESTROYERS-----51

SKETCH I

SKETCH II

SKETCH V

SKETCH III

BATTLE
SQUADRON
III



König
Großherzog
Markgraf
Kronprinz
Kaiser
Prinz Regent
Kaiserin

FORCES
BB-16
OBB-6
CU-7
DD-44

FLEET FLAG

BATTLE
SQUADRON
I

Friedrich der Grosse
Ostpreussen
Thüringen
Heldoland
Oldenburg
Pussen
Rheinland
Hassau
Westfalen

COURSE 0
Speed 14

BATTLE
SQUADRON
II

Deutschland
Pommern
Schlesien
Schleswig-Holstein
Hannover
Hessen

Note: - Position
of CU + DDs Not
Known - probably
Screening Force

DISTANCE BETWEEN SQUADRONS 700 METERS
INTERVAL BETWEEN SQUADRONS 350 METERS.

SKETCH IV

FORCES

CCs-5
CU-5
DD-33

Flotilla

Frankfurt
11th Half Flotilla
Kiel
11th Half Flotilla

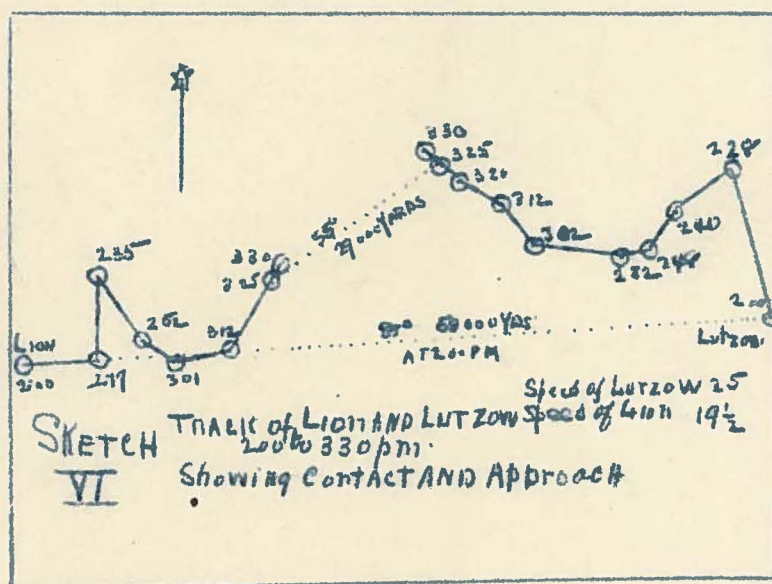
Regensburg
G-101
G-102
G-103
G-104

Elbing
G-101
G-102
G-103

Lützow
Derfflinger
Seydlitz
Moltke

Flotilla 10 with Battle
Cruisers.

Scouting Force 2 PM 31 MAY
COURSE 337° speed 25



and speed were as follows:

British Main Fleet (Admiral Jellicoe) in position Lat.57° 57' N., Long.30° 45' E., course 130° and zigzagging, speed of advance 14, the formation being as shown in Sketch I.

British Battle Cruiser Force (Admiral Beatty) in position Lat.56° 46' N., Long.40° 40' E., course 85°, speed 19-1/2, the formation being as shown in Sketch II.

The German Battle Fleet (Vice Admiral Scheer) was about 50 miles off the coast of DENMARK and about 120 miles distant from HELIGOLAND, on course approximately 0°, speed 14, the formation being as shown in Sketch III.

The Reconnaissance Force (Vice Admiral Hipper) were 50 miles to the northward and westward of Scheer, course 337°, speed 25, the formation being as shown in Sketch IV.

The relative position of these four forces on 31 May at 2 p.m. is shown in Sketch V.

FIRST PHASE OF OPERATIONS FROM 2 P.M. to 6.16 P.M.(SIGNAL FOR DEPLOYMENT OF BRITISH MAIN FLEET).

The Forces continued from 2 p.m. on same course and speed until 2.17 p.m. when Beatty's Force changed course to 0° in pursuance of his mission "To make visual contact with Jellicoe".- The other forces continuing as before and this was the situation when the first contacts were made as follows:

CHRONOLOGICAL TABLE

EVENTS FROM 2 P.M., 31 MAY, UNTIL 5 A.M., 1 JUNE.

Phase I.- 2 p.m. to 6.16 p.m., 31 May.

Contact and Development of Enemy Forces 2 p.m. to 3.30 p.m.

Time	BRITISH	Time	GERMAN
2.10	Galatea reported two funnel ships bearing 98° distant 8 miles.	2.20	Elbing having been sent to examine steamer to westward sighted Galatea.
2.17	B.C.F. changed course to 0°.	2.28	Hipper and Scheer received report from B-109 that 8 British Light Cruisers were in sight.
2.20	Galatea reported two cruisers probably hostile bearing 98°, course unknown.		Hipper went ships left to course 225°.
2.30	Galatea reported two cruisers stopped.		Admiral Bodecker assembled Light Cruisers(Scouting Division II), and headed for enemy cruisers.
2.34	Galatea reported giving chase to two destroyers and contact with one cruiser bearing about 85°, steering 144°.	2.40	Hipper changed course to 215°.
		2.48	Hipper changed course to 258°.
2.35	B.C.F. changed course to 144° for HORN REEF to get between enemy and his base.Speed 22 knots. 1st and 3rd Light Cruisers spread east and formed screen ahead of CC's engaged enemy Lt.cruisers at long range.	2.52	Hipper changed course to 276°.
		3.00	Elbing engaged British Light cruisers at long range.
		3.02	Hipper formed column on course 320°
		3.12	Hipper went col.left to 300°.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
Contact and Development of Enemy Force (CONTINUED) 2 p.m. to 3.30 p.m.

Time	BRITISH	Time	GERMAN
	2nd ^{LT} Cruron headed for position ahead of Lion.	3.20	Hipper sighted two columns of British Battle Cruisers which were soon forming column of 6 ships - 5th Batron was not sighted at this time.
2.39	Galatea reported smoke as "from a fleet" bearing 54°.		
2.45	Galatea reported that these vessels were heading north. Beatty directed plane carrier Engadine to send out plane and search in direction 8°.		
2.52	B.C.F. changed course to southeastward, then eastward and finally steadied on 31° heading for smoke.		
3.08	Engadine plane was off the water.		
3.12	B.C.F. increased speed to 23.		
3.20	B.C.F. increased speed to 24.		
3.25	Enemy CC's in sight on starboard bow of Lion.	3.25	British CC's bore 235° from Lutzow distant 29,000 yards.
3.27	Ships ordered to assume readiness in every respect. Plane came under fire of 4 Lt. Cruisers and reported their position. 2nd Lt. Cruron came in at high speed and took position ahead of Lion on course 98°.	3.30	Hipper recalled Scouting Division II. The range of enemy CC's was 26,000 yards and rapidly decreasing.
3.30	9th and 13th Flotillas formed ahead of B.C.F. and in rear of Lt cruisers, 1st and 3rd Cruron engaging enemy Lt. Cruisers at long range retired before enemy CC's which continued on northwesterly course.		
3.30	5th B.S. had conformed to movements of B.C.F. and bore N.N.W. distant 10,000 yards.		

ACTION OF MAIN FLEETS ON REPORTS OF CONTACT

2.10	Jellicoe had intercepted all of Galatea reports.	2.28	Scheer received contact report from B-109 - but apparently received no information of heavy forces until 3.35 p.m.
2.15	Ordered cruisers to raise steam for full speed stopped zigzagging.		
2.35	Ordered force to raise steam for full speed.		
2.43	Increased speed to 17 knots.		
3.00	Changed course to approximately 160°, speed 18 - cleared ships for action.		

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
Action of Main Fleets on Reports of Contact (CONTINUED).

TIME	BRITISH	TIME	GERMAN
3.25	Increased speed to 19. Jellicoe says he ordered the 3rd B.C.S. to cut off enemy retreat through the SKAGERRAK but there is no record of such signal.		

COMMENTS.

At the time of contact and during the development the weather was clear, with high visibility. There is a disagreement as to the direction of the wind.- von Scheer says, "Visibility was good with a light north westerly wind and there was no sea."

Jellicoe says, "The weather was favorable, the sun behind behind our ships, the wind southeast and the visibility good."

The official plans agree with von Scheer and from the fact that Beatty had to maneuver to avoid smoke, while Hipper did not, is a verification of the fact that the wind was from N.W.

The information service was efficiently handled and both forces received quickly full information of the developments as a result of contacts.

It appears to me that Beatty failed to follow The Strategic Principle of Concentration of Forces, which the high speed of the "Barhams" would have permitted, and also that, while he acted at first in accordance with the tactical principle of getting between the enemy and his base he did not adhere to the course and at 3.12 headed for the big smoke.

These, in my opinion, errors of decision by Beatty, gave the enemy a clear course for his Main Fleet and put the Barhams out of range. When the action began. They did not come within range until 4.19 - almost an hour after action was joined and then only at maximum range. If Beatty, instead of heading for the enemy smoke at 3.12, had persisted in his decision to get between the enemy and his base and had held his course east, he would have had a tactical concentration of his forces when action was joined and would have prevented junction of Hipper and Scheer.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.

THE DEPLOYMENT AND APPROACH
(3.30 to 3.48 pm)

Time	BRITISH	Time	GERMAN
3.30	B.C.F. in column on course 310°, speed 24, 5th B.S. on same course bearing 352°, distant 5 miles, speed probably 24. Destroyers screening B.C.F. CL's on approximately N. & S line east of heavy forces, bearing of enemy 55°, distant 26,000 yds. and rapidly decreasing.	3.30	Scout.Div.I ^{cc} on course 3:00 speed 25. Destroyers probably ahead of CC's. CL (Scout. Div. II) returning after having chased British CL's to N.W. Bearing of enemy 235°, distance 26000 yds and rapidly decreasing.
3.31	Beatty identified German battle cruisers and noted their turn away - he immediately increased speed to 25 and changed course to right to 98°, formed line of bearing.	3.30	Lutzow countermarched to right and steadied on course 128°. Scout Div.II continued towards Lutzow and Flotilla IX took station in the van.
3.45	Changed course to 1220, 5th B.S. conformed to movements of B.C.F. and maintained position 10,000 yds. distant and bearing 352° from B.C.F. 2nd Lt. Cruron and 9th and 13th Flotillas were ahead of B.C.F.	3.45	Scouting Division I went ships right, steadying on course about 165° in line of bearing.
3.48	B.C.F. in line of bearing, course 1220, speed 25. Weather clear and light, sea smooth, wind NW, courses converging at an angle of 43°, range 17,000 decreasing rapidly, other forces continued as before.	3.48	Scouting Division I on line of bearing course 165°, speed 25.

ACTION OF MAIN FLEET DURING DEPLOYMENT AND APPROACH

3.40	Jellicoe received report of contact with heavy forces - changed course to 132° and increased speed as rapidly as possible.	3.35	Scheer received word of contact with enemy heavy forces. He reduced distance to 500 meters and interval between squadrons to 1000 meters - ordered ships cleared for action.
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COMMENTS.

Having made decisions, previously discussed, "to engage at once", the forces were handled in accordance with tactical principles with the exception previously noted when Beatty's Forces, as far as the 5th Battle Squadron was concerned, was not tactically concentrated.

The German Scouting Division II was not in proper attack position but this was due to their movements before contact of heavy forces and was being remedied as fast as their speed would permit.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.

THE BATTLE CRUISER ACTION (3.48 to 4.08 p.m.)

Time	BRITISH	Time	GERMAN
3.48	B.C.F. opened fire simultaneously, range 17,000 yds. Fire distribution not stated but there must have been one concentration on one enemy ship. B.C.F. went ships right to column, course 150°.	3.48	Lutzow fired a salvo - hoisted signal "commence firing", range 17000, turned towards enemy to close range. Fire distribution from left, thus leaving the Indefatigable not under fire.
3.51	Lion hit by two shells.	3.51	Lutzow scored first hit on Lion.
4.00	Lion received several more hits which blew off the roof of a turret. The Tiger and Princess Royal had also been hit several times. Range had decreased to 16000 yds. and enemy fire was extremely accurate.	3.52	Firing salvos from main battery every 20 seconds and between each two of these salvos 2-7inch gun salvos of the secondary battery were fired. Thus there was a salvo at intervals of about 7 seconds.
4.00	Altered course to 168° to confuse German fire.	3.55	Secondary salvo splashes with smoke interfered with spots and were discontinued.
4.06	Indefatigable was hit by several shells of a salvo and she fell out of line when another salvo struck her she turned over and sank.	3.52	Moltke made her first hit on Tiger.
4.08	Landrail (DD) on port beam of Lion trying to gain position sighted periscope, Nottingham of 2nd Cruron also sighted periscope.	3.53	Range had decreased to 13500 yds when Scouting Div. I went ships left to 120°.
4.08	B.C.F. in column, course approx. 158° - Force maneuvering to right or left to confuse enemy fire - speed about 26. 5th B.S., Destroyers, and 2nd Cruron continuing as before. 1st and 3rd Crurons having concentrated took position astern of 5th B.S.	4.00	Changed course to 135° on line of bearing. Scouting Div. II turned together to 550 to escape from 5th B.S. - so was unable to take position ahead of Scouting Division I.
		4.05	Range was 18,000 yards.
		4.06	Derflinger ceased fire as guns had reached extreme elevation 19,700 yards.

Range 20,200, Courses diverging.

ACTION OF MAIN FLEET DURING BATTLE CRUISER ACTION.

4.00	3rd Bat. Cruron ordered to reinforce Beatty, speed of Battle Fleet 20.	4.05	Scheer increased speed to 15 and took N.W. course to hasten to support of Scouting Div. I.
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COMMENTS.

The British Battle Cruiser Force adapted their formation in accordance with tactical principles to avoid smoke. They also varied the range to confuse the German fire. The loss of the Indefatigable reduced their fire to a ship to ship concentration.

The Germans failed to keep all ships under fire, apparently having no means of dividing the fire. They also tried to use the secondary with their main battery guns and discovered what we have long known, that the two calibres renders spotting

impracticable. The destruction of the Indefatigable was evidently due to lack of or faulty protection to magazines.

The German fire was more effective than the English and they had succeeded in getting the range and hitting first, a recognized advantage. Up to this time no other forces had entered the action or affected it in any way.

CHRONOLOGICAL TABLE - PHASE I (CONTINUED) 2 p.m. to 6.16 p.m.
THE CONTINUATION OF THE ACTION - 4.08 p.m. to 4.30 p.m.

Time	BRITISH	Time	GERMAN
4.08	B.C.F. in column on course approx. 168°, range 20200, speed 26. 5th B.S. was still to the N.N.W. but had been closing on the B.C.F. 2nd Lt.Cruron and 9th, 10th and 13th Flotillas were in position ahead of B.C.F. 1st and 3rd Lt.Crurons were in rear of the 5th BS.	4.08	Scout.Div.I in line of bearing, course 135° - range 20200, speed 26. Regensburg and IX Flotilla, and 3rd H. Flotilla ahead of Scouting Div. I. Scout. Div.II to the N. of E. of Scout.Div.I having been forced off by the 1st and 3rd Lt. Crurons of the British.
4.08	The 5th B.S. opened fire, range 19500 yds. Only two German CC's were visible partially due to decreasing visibility and to smoke.	4.08	Scout.Div.I under fire from 5th B.S. as well as B.C.F.
4.12	Range 21000, fire had practically ceased. B.C.F. CC to 130° to close range. Torpedoes probably from submarine passed through the line.	4.10	Scout.Div.I cc to 175°.
4.15	13th, 10th and 9th Flotillas moved out to attack.	4.12	Range 21000 yds - decreasing rapidly with courses converging 45° - fire had practically ceased.
4.30	Destroyers met between the lines and engaged at close range.	4.20	Fire of 5th B.S. becoming more effective, range had decreased to 17000 yards.
4.18	Range between CC's about 17000 yds., and between German Scout.Div.I and 5th B.S. about 19000 yards. Fire of both German and English ships extremely effective.	4.15	IX and III H. Flotillas and Regensburg moved out to attack.
4.18	Seydlitz noted on fire.	4.30	Destroyer Forces met between the lines and engaged at close range.
4.20	B.C.F. cc to 147° to open range.	4.20	S.D.II which at 4.12 had formed column on course 110° changed course to 165°
4.23	Barham received her first hit.	4.17	S.D.I reopened fire. Derflinger on Queen Mary, Lutzow on Lion or Princess Royal, Seydlitz on Tiger, Moltke on New Zealand, Vonder Tann on Barham
4.26	Queen Mary destroyed by salvo abreast Q turret. New Zealand received her first and only hit.	4.20	Range between CC's about 15000 yds. - between Vonder Tann and Barham about 17,000 yards.
		4.20	S.D.I cc to 162° into column to open range which was about 15,000 yards.
		4.22	Seydlitz shifted fire to Queen Mary, who was thus concentrated upon by heavy fire from 2 ships. No difficulty in spotting.
4.30	B.C.F. on course 147° in column, range 12,700 yds, speed 26, 5th B.S. range 17,300.	4.30	S.D.I on course 162°, six columns, speed 26, range 12700, range to Barham 17,300.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6:16 p.m.
THE CONTINUATION OF THE ACTION - 4:08 to 4:30 p.m. (CONTINUED)
ACTION OF MAIN FLEETS DURING THIS PERIOD

Time	BRITISH	Time	GERMAN
4:30	3rd Bat. Cruron heading S.S.E., speed 25, other forces continuing. Course 132°, speed maximum, each ship keeping clear of wake ahead.	4:20	Scheer headed West to head off and place B.C.F. between his battleships and S.Div. I.
		4:21	Received dispatch of contact with 5th B.S., so decided to assist Hipper at earliest possible moment so changed course back to 0°.
		4:30	Sighted S.D. I.

COMMENTS.

During this period the advantage was on the side of the Germans. At 4:22 the Seydlitz shifted her fire to the Queen Mary who was then firing well bunched eight gun salvos at the Derfflinger who was only hit by two shells. The Derfflinger's fire was extremely accurate. Her last six salvos had hit the Queen Mary; on one occasion all four shots of the salvo hit. The fire of the other German ships were not so accurate.

The destroyer attack developed during this period. The German destroyers were supported by the only light cruiser (Regensburg) available. The British destroyers were not supported, though the 2nd Light Cruron was available and in position. This looks like a lack of appreciation of the tactical function of these forces.

In spite of the engagement at short range, both destroyer forces fired torpedoes but none were effective, probably on account of the engagement.

The British attack would have been much more effective had it been supported by the superior force of light cruisers.

The loss of the Queen Mary is another evidence of the inferior material of the British ships.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6:16 p.m.
CONTINUATION OF THE ACTION - 4:30 to 4:45 p.m.

Time	BRITISH	Time	GERMAN
4:30	B.C.F. in col., course 147°, speed 26, range 12, 700 yds. 5th B.S. in col. course 147°, speed 25, range 17300. 1st and 3rd Lt. Crurons still in rear 5th B.S. 2nd Lt. Cruron on starboard bow of B.C.F. Destroyers engaged in desperate battle between the lines with German destroyers and Lt. Cr. Regensburg. Petard sunk German DD by torpedo. Destroyers in much more favorable position for attack than Germans so Germans fired at 5th B.S. 5th B.S. turned away. Destroyer attack was broken up by German counter attack 3 Destroyers attack from beam.	4:30	Scout Div. I in column, course 162°, speed 26, range to B.C.F. 12700, to Barham 17300. Scout Div. II in col. on course 167° chasing S.D. I IX and 3rd H. Flotillas and Regensburg engaged in desperate battle between the lines with British destroyers. S.D. I CC to 120° in line of bearing formation to open range or avoid torpedoes threat.
		4:30	Scout Div. I CC to left. Range to B.C.F. 17600. Range to Barham 20,500. Derfflinger which since sinking of Queen Mary had been firing on Princess Royal now ceased fire. Scout Div. I CC towards B.C.F.
		4:40	Scout Div. I changed course to 192° on 2 point line of bearing.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF THE ACTION - 4.30 p.m. to 4.45 p.m. (CONTINUED).

Time	BRITISH	Time	GERMAN
	Scout.Div.I turned away, British destroyers continued and made attacks in groups of two and three, firing at ranges 6000 to 7000 yards.Only five torpedoes were fired; probably only hit made on Seydlitz.	4.30 to 4.45	British destroyers were in favorable position for attack. 15 German destroyers advanced to meet them supported by Regensburg. German destroyers were smaller and lighter. V27-V29 were sunk. IX and 13 Half Flotillas fired 12 torpedoes at B.C.F., range 9000 to 11000 yards, then retired.
4.37	B.C.F. cc to 127° to close range.		German CC firing secondary battery at British destroyers. CC's received many hits from destroyer 4" guns.
4.38	2nd Lt.Cruron ahead of B.C.F.sighted German battleships.		
4.42	Recalled destroyers and B.C.F.counter-marched to stbd. was not under fire during turn.		
4.45	Turn completed, range from Lutzow 18800 yards. New Zealand 19500 yards from Konig.		
4.45	2nd Lt.Cruron continuing on southeasterly course at full speed came under fire of German III and I Battle Squadrons, range 16500 yards.	4.45	11 Half Flotilla advanced to attack.

ACTION OF MAIN FLEETS DURING THIS PERIOD.

4.30	Continuing as before.	4.30	Hipper continued on course to 0° at 15 knots speed.
4.45	Received report of contact with High Seas Fleet and B.C.F turned to northward.	4.45	

COMMENTS.

During this period the visibility was decreasing due to weather and smoke of destroyers and other vessels.

The British destroyer attack was pushed home from a favorable position with determination but only one possible hit was made due to the few torpedoes fired, the German counter attack and the lack of light cruiser support.

The German counter attack was made from a less favorable position. It was supported by light cruisers and succeeded in breaking up the British attack but failed to get home any torpedoes.

The 5th B.S. and Souting Div.I were maneuvered in accordance with sound tactical principles to avoid torpedoes.

The torpedo attacks and resulting maneuvers resulted naturally in lessening the efficiency of fire of capital ships.

The 2nd Lt.Cruron was handled with determination and in accordance with sound tactical principles as to the use of these vessels. As a result Beatty was able to turn away before coming under fire of enemy battleships.

Beatty's decision to turn upon sighting enemy battleships ahead was tactically sound. He found himself threatened by a superior force and having his "Mission" in mind he decided to

retire and draw the enemy after him towards his own battleship force. His turn to starboard so as not to blanket fire of 5 B.S. was tactically sound.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF THE ACTION - 4.45 p.m. to 5.55 p.m.

Time	BRITISH	Time	GERMAN
4.45	B.C.F. on course 307°, speed 25, range 18800 yds. 5 B.S. course about 130°, range 17000 yds, speed 25. 1st & 3rd Lt.Crurons to Northward of 5 B.S., course 130°, speed 25, scattered destroyers having been recalled.	4.45	Scout.Div.I in 2 point line of bearing, course 192°, range from B.C.F. 18800 yds, from Barham 17000 yds. 11th half Flotilla delivering an attack on B.C.F. 3 Half Flotilla and Regensburg in van of disengaged side.
4.45	2nd Lt.Cruron on course 135°- maximum speed.		IX Half Flotilla in rear disengaged side.
4.45	2nd Lt.Cruron under heavy fire from Batron III turned to north and continued sending reports of German Forces to Beatty and Jellicoe, was not hit by German battleships.		S.Div.II closing S.Div.I from north.
4.57	5 B.S. per signal from Beatty countermarched to right into column, course 310° was under fire from High Seas Fleet but was not hit.		S.Div.IV on course approximately 350° to south and east of S.Div.I.
	Destroyers Nerissa and Moorsom fired six torpedoes at S.Div.I		Batrons III, I, II approaching from southward in column course 0°, speed of newer ships probably 20 - Range from B.C.F. to leading ship 19500, to center of line 20500, from leading ship to 2nd Lt. Cruron 16500.
4.57	Nottingham (Lt.Cr.) fired one torpedo at range 16, 500. 1st and 3rd Lt.Cruron and Fearless with 1st Flotilla, which had just been concentrated, took station ahead B.C.F.	4.49	11 Half Flotilla delivered attack and retired
4.57	Champion and 13th Flotilla took position in rear and on disengaged side of 5 B.S.	4.50	S.Div.I formed column, countermarched to starboard and steadied on course 343°.
5.00	B.C.F. cc to 325° to increase range. Range to S.Div.I 20000. 5 B.S. followed B.C.F., range to B.S.III 18700, to S.Div.I 17000.		S.Div.II took position ahead of S.Div.I.
5.10	2nd Lt.Cruron continued to N.W.Lion fired 2 torpedoes at S.Div.I. until out of range then changed course to 0°.		Scheer took command of all forces.
5.12	B.C.F. lost sight of S. Div.I and ceased fire, range 14000 yards.	5.00	S.Div.I cc to 325°- leading ship firing at B.C.F., range 20000, rear ship firing at 5 B.S., range 1700.
5.15	Nestor and Nomad were sunk by B.S. III, I, II - Crews rescued.		B.S. III, I, II in line of Division, course 325°, speed 20, B.S.III making at least 24 knots to reduce range drew ahead.
5.30	B.C.F. cc to 15°.		After 5 p.m. only B.S.Div.V (Konig class) were able to fire on 5 B.S., range 19000.
5.35	Range BCF to S.D.I 17000	5.21	B.S.Div.6 and Batron II & I were firing on 2nd Lt.Cruron.
	" 5BS to " 14000		Hipper was ordered to chase B.C.F. disappearing to northward.
	" " to Konig 19000		S.Div.I shifted fire to 5 B.S. made few hits, visibility poor. Wind had shifted from N.W. to S.W - only at intervals. could Scheer see his Scouting Division I ahead.
	" 2nd Lt.Cruron to Konig 19000		

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF THE ACTION - 4.45 p.m. to 5.55 p.m.(CONTINUED).

Time	BRITISH	Time	GERMAN
5.40	B.C.F. reopened fire to range 14000, Lion firing 15 salvos.	5.30	Range Hipper to Beatty 17000 " " " 5 B.S. 14000
5.52	5 B.S. firing at S.Div. I, range 14,000, was well out of range of High Seas Fleet.	"	Konig " 5 B.S. 19000 " " to 2nd Lt Cruron 19,000.
5.40	B.C.F. followed by 5 B.S. had gradually turned to eastward to course 45°, range from B.C.F. to S.Div. I 19500 yards.	5.36	S.Div.II sighted British Lt. cruiser to N.E.- Short engagement followed.
5.55		5.40	S.Div.I cc to northeasterly course to avoid torpedo attack. There is no record of a British torpedo attack at this time.
		5.42	S.Div.I again came under fire of B.C.F.
		5.50	S.Div.I cc to north engaging to 5 B.S., range 15000 yards.
		5.55	
		5.45	III, I, II B.S. cc to 352°, speed 15 to allow divisions to regain positions.

ACTION OF OTHER FORCES DURING THIS PERIOD

5.00	3 Bat.Cruron on course 184°, speed 25 - 4 DD's as screen ahead. Lt. Cr. Canterbury 5 miles ahead, Lt Cr. Chester bearing 276°, distant 5 miles.	5.36	S.Div.II opened fire on Chester which made off to NE.
5.30	Chester heard gunfire to S.W.- headed for it.	5.50	S.Div.II fired on by Defense but did not know it, range 16500 yards.
5.36	Chester sighted 3 stack enemy light cruiser on her starboard bow. Chester changed course to west to close; later headed north to avoid destroyers - opened fire, range 6000 yds - soon 2 or 3 additional light cruisers were sighted astern of first, all opened fire on Chester, which seriously hit turned towards 3rd B. Cruron.	5.55	S.Div.II came under fire of 3 Bat.Cruron, range 10000
5.40	3rd B.Cruron saw gunfire and headed for it to N.W.	5.55	Admiral Bodicker reported contact with 3 B.Cruron coming up from S.E., which led Scheer to assume British Battle Fleet was to N.E. instead of N.W. Scouting Division IV had taken position ahead of Scouting Div. I on the disengaged side.
5.55	3rd B.Cruron on course 325° opened fire on Lt. cruisers, range 11000 yds - 4 DD's standing in to make attack on Lt. Cruisers.		
5.40	1st and 2nd Crurons heard firing ahead - soon after ships were seen emerging from mist. 2nd Cruron concentrated on right ship "Minataur". Engagement was ordered when ships		

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF ACTION - 4.45 to 5.55 p.m. - ACTION OF OTHER
FORCES DURING THIS PERIOD - CONTINUED.

Time	British	Time	German
	were recognized as 3rd Bat. Cruron.		
5.47	Defense of 1st Cruron, sight- ed 4 enemy Lt. Cruisers bearing 177° - two of them being engaged with 3 B. Cruron. Defense changed course to port. Both she and Warrior fired 3 sal- vos.		
5.55	Defense followed by War- rior headed directly for enemy light cruisers Scouting Division II		
4.45	Battle Fleet on course to 132°, speed 20.		
5.55			
5.40	Black Prince reported CC's in sight bearing 166° distant 5 miles.		
5.45	Comus of 4th Lt. Cruron three miles ahead of fleet reported heavy gunfire bearing 166° and 188°.		
5.50	1st Cruron reported ships bearing 188° and 310.		
5.55	Jellicoe asked Burney on Marlborough what he could see.		

COMMENTS.

Visibility decreased considerably during this period. The sun to the west threw the British ships into relief giving the Germans the light advantage. The wind shifted to the S.W. which was to the advantage of the British the more they turned to the eastward.

Beatty's tactics in drawing away when he realized he was in contact with the High Seas Fleet was sound. If he had pressed the attack on the head of the enemy column he would have forced a turning movement too soon and by keeping away he led the Germans directly into the British battleships. His turning operations were masterfully timed. The action of the 2nd Light Cruron in standing on until necessary information had been obtained showed a proper conception of these forces.

Jellicoe was advised of every movement and contact quickly and accurately and should have had a clear visual picture of the situation long before he came in visual contact with enemy force.

Even with errors in original reckoning the situation should have been perfectly clear when sight contact was made at 5.45 with B.C.F.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF ACTION - 5.55 p.m. to 6.10 p.m.

Time	BRITISH	TIME	GERMAN
5.55	B.C.F. in column on course 450, speed 25, range to S.D.I 17,500. 5 B.S. in column on course 150 speed 25, range to S.D.I 15000, to Konig 20500. 1st and 3rd Lt. Crurons ahead of B.C.F. gradually hauling to eastward. 1st Flotilla in rear 1st Light Cruron. 13th Flotilla in rear 5 B.S. 2nd Lt. Cruron in rear 13th Flotilla. 9th Flotilla probably not yet reassembled. Main Fleet on course 1320, speed 20. 3rd B. Cruron engaging enemy light cruisers, range 11000 yds on course 3250. Defense and Warrior engaging S.D.II, range 16500. Other forces accompanying Main Fleet in same relative position course 1320, speed 20.	5.55	B.S.III, I and II in column, course 3520, speed 20, range to 5th B.S. 20500, range to 2nd Lt. Cruron 21500. S.Div.I in line of bearing, course 0, speed 25, range to B.C.F. 17500, to 5 B.S. 15000. S.D.IV ahead of S.D.I. S.D.II to N.E. S.D.I under heavy fire from 3 B.C.S. and from Defense and Warrior. IX and 12 Half Flotillas in rear S.D.II. Rostok Flotilla III, I Half Flotilla, Flotilla V and Flotilla VII on disengaged side Battle Fleet. S.D.II continued until range to 3d B. Cruron ^{was} 8000 yds, then fired torpedoes and went ships right and formed column in a southeasterly course. Later after Weisbaden and Pillau had been severely damaged by fire from the Defense and Warrior S.D.II cc in succession to S.W. to gain support of S.D.I.
5.56	Beatty sighted Marlborough bearing 3460 distant 5 miles.	5.55	S.D.I cc to 450 to right twice steady on 900.
5.57	B.C.F. changed course to 760, speed utmost, in order to clear and gain position ahead of Battle Fleet. This decreased range to S.D.I to 12000 yds. B.C.F. was only lightly engaged at this time. 5 B.S. and 3rd Lt. Cruron conformed to movements of B.C.F. and was heavily engaged with S.D.I, range 13,000 yards. 1st Lt. Cruron continued to northward in rear of Battle Fleet.	6.00	S.D.I changed course ships right to 1800 probably to avoid British torpedoes from Onslow which had pushed home a splendid torpedo attack. Having crippled the Onslow and avoided its attack S.D.I continued the turn.
6.00	The Main Fleet was still in line of Divisions on course 1320, speed 20. 4th Lt. Cruron and 4th, 11th and 12th Flotillas were still in position ahead.	6.00	Konig changed course to N.E., other battleship divisions followed. As S.Divs. I and II withdrew IX and 12 Half Flotillas advanced to cover their retirement; reaching a favorable position 6500 yds. from 3 B. Cruron they fired their torpedoes and withdrew chased by 4 destroyers from the 3 B. Cruron.
6.01	Marlborough signalled that at 5.56 strange vessels were sighted bearing 1440 steering east.	6.10	3 Divisions of III Squadron had completed change of course starboard at 6.00.
		6.10	Weisbaden had been put out of action by the Defence and Warrior.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF THE ACTION - 5.55 p.m. to 6.10 p.m.

Time	BRITISH	Time	GERMAN
6.02	Battle Fleet changed course to 165° and reduced speed to 18 knots to allow ships to close up. Strange vessels sighted from Iron Duke bearing 121° distant 5 miles.	6.10	IX and 12 Half Flotillas reported along line of British battleships on southeasterly course. Mist, smoke from funnels and artificial smoke still prevented Scheer from seeing the British Battle Fleet.
6.04	Distant vessels recognized as B.C.F.		
6.06	Beatty reported to Jellicoe that S.D.I bore 121°.		
6.07	Marlborough reported 5 B.S. in sight bearing S.W.		
6.08	Battle Fleet changed course to 121°. Destroyers were ordered to take position 1 for battle indicating deployment on the left flank division.		
6.05	Onslow from position on to bow of Lion observed		
6.10	Weisbaden in position for attack on B.C.F. and stood in and engaged her with gunfire, range 3000, then observing German battleship closed to attack her with torpedoes. British forces had effected heavy concentration on S.D.I, S.D.II and S.D.IV at head of German line being simultaneously attacked by the following forces: 5 B.S., B.C.F., 3rd Bat.Cruron, Defence and Warrior, Chester, Canterbury, 3rd Lt.Cruron, Shark and three other destroyers, Onslow. In this melee all advantage rested with the British. The Rostok was torpedoed, the Weisbaden crippled, and the only loss to the British was the Shark and heavy casualties on the Chester. S.D.I, S.D.II and IV, IX and 12 H. Flotillas all had been forced to retire, S.D.I making a complete turn.		
6.10	Nine torpedoes were seen approaching the 3 B.Cruron. The Invincible and Indomitable turned to starboard. The Inflexible turned to port. No hits were made but each vessel had a narrow escape.		

Both British and German destroyer attacks were delivered with determination and in accordance with sound tactical principles but no hits were made. Visibility conditions were very poor, due to weather, smoke screens and funnel smoke.

From time 3 B.Cruron was sighted until 6.10 when the Battle Fleet was reported, Scheer thought the British Battle Fleet was approaching from the southeast.

It is pertinent to note at this point that neither force had conformed to the tactical principle of having their lines normal to the bearing of the center of the enemy lines. There is less excuse for Jellicoe than for Scheer. The latter had no information upon which to base an estimate of the probable bearing of the British Battleships, or that they were even in the vicinity.

Jellicoe also complains of lack of accurate information and of erroneous information, but a careful reading of the official signals shows this not to be the case. He had intercepted all the earlier contact messages. He was quickly and accurately informed of Beatty's movements, of the engagement to the south, of the turn to the north and Beatty's subsequent movements. He also knew of the contacts of the 3rd Bat. Cruron and of the 1st Cruron with S.D.II. He had received one report which gave the position of the German battleships to the N.E. of S.D.I but in the face of the overwhelming information to the contrary and as he states himself, the improbability of the battleships having passed S.D.I, he should have thrown this information out. Especially should this have been the case when he made contact at 6.00 and identified his Battle Cruiser Force, but he states that "at this time there was still great uncertainty as to the position of the enemy's battle fleet." I can see no excuse for his not having formed his line early in the afternoon normal to the reported bearing of the enemy, and if he had done so he would not have been placed in the embarrassing position which he found himself at 6.16 p.m. when he was forced to deploy on the left flank and away from the enemy.

At the same time that he complains of lack of information Jellicoe had already made the signal for destroyers to take battle position indicating a deployment on the left flank - in other words Jellicoe had made up his mind to deploy on the left and it seems to me that he was not receptive to information which indicated any other action might be desirable or better.

I fail also to see why Scheer sent his S.D.I to chase 6 (as he thought) battle cruisers and 4 battleships all with such speed that they were able to draw away from his own battleships. It did not tend to the concentration of his forces and looks as if he were offering his battle cruisers as practically a gift to the enemy. I can't help but feel that Hipper's turn of 360° between 6.00 and 6.10 was concluded if not actually started under the same trend of thought.

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
CONTINUATION OF THE ACTION - 6.10 p.m. to 6.16 p.m.

Time	BRITISH	Time	GERMAN
6.10	Battle Fleet on course 120 ⁰ , speed 18, range from Konig 15000 yards. B.C.F. on course 110 ⁰ , speed maximum to clear Battle Fleet, range from enemy main fleet 12000 yds. 5th B.S. on course 76 ⁰ , conforming to movements of B. C.F., range from B.S.III 13,000 yds. 3 B.C.F. heading north. Defence and Warrior chasing enemy Lt. Cruisers to westward.	6.10	B.S.'s III, I and II changing course to N.E. 3 divisions had completed the turn. S.D.I by a turn of 360 ⁰ was now just ahead Konig. S.D.II retiring westward chased by Defence and Warrior. Other light forces and destroyers on disengaged side.
	3rd Lt. Cruron ahead B.C.F. 2nd Lt. Cruron to S. and W. of 5th B.S. 1st Lt. Cruiser Force in rear Battle Fleet. Battle Fleet destroyers taking position I, other light forces as before.	6.12	S.D.I had completed turn into column in N.E. course. B.S.'s III, I and II went ships left two points with B.S.'s III and I probably to save Weisbaden, but coming under heavy fire he went back to column.
6.10 to 6.15	B.C.F. continued at utmost speed, course 105 ⁰ to gain position which would place it ahead of Battle Fleet after it had deployed.	6.15	S.D.I came under heavy gun fire probably from 1st B. S. and changed course to 80 ⁰ , followed by other divisions.
6.10	3rd B. Cruron were maneuvering to avoid torpedoes fired by S.D.'s I and II and IX and 12 Half Flotillas.	6.15	S.D.I was again attacked by Onslow which fired two torpedoes.
6.10 to 6.16	Defence and Warrior standing in to destroy Weisbaden came under fire of S.D.I but continued their course and at 6.15 passed ahead of Lion. At 6.16 Defence was hit by two salvos from German battle cruiser and blew up. The Warrior badly damaged passed out of action to the westward passing astern 5 B.S.	6.10 to 6.15	In addition the four destroyers which had accompanied 3rd Bat. Cruron now attacked. The Shark was badly crippled. The Acasta, after having fired a torpedo at the Lut-zow at 4500 yards range, retired badly damaged. The Weisbaden fired all her torpedoes and continued to fire her few remaining guns.
6.11 to 6.16	Invincible sighted Lion to bearing 265 ⁰ and headed for her. Inflexible and Indomitable regaining their position at 6.16.		
6.10 to 6.16	Duke of Edinburgh was heading to join Defense when B.C.F. appeared ahead she was compelled to change course to N.E. and later joined 2nd Cruron. Black Prince turned at same time as Edinburgh. It is believed she passed to rear of Battle Fleet and was sunk during the night.		
6.15	Barham reported enemy Battle Fleet in sight bearing S.S.E., distance not given, 5th B.S. had been reported by Marlborough as being in sight at 6.07 bearing S.W.		

Chronological Table - Phase I (CONTINUED) 2 p.m. to 6.16 p.m.
 CONTINUATION OF THE ACTION - 6.10 p.m. to 6.16 p.m. (CONTINUED).

Time	BRITISH	Time	GERMAN
6.16	Jellicoe signalled, "Form line of battle on Port Wing Column, on course S. E. (It being assumed that the course of enemy was approximately the same as B.C.F.)"		

COMMENTS.

Admiral Jellicoe has gone to considerable length to justify his deployment on the left wing - previously I have commented upon his complaints as to lack of and of inaccurate information. To recapitulate: Jellicoe had either intercepted or received direct reports of all the movements from contact up to 6 p.m. He was kept informed of the progress of the action, the turn and the run north, and he must have known the relative positions of the B.C.F., the 5th B.S. and the German Battleships and S.D. I. Visual contact had been made with the B.C.F. at 6.04. At 6.06 Beatty reported that S.D.I bore 121°. At 6.14 Beatty reported "Have sighted the Enemy's Battle Fleet bearing S.S.W."

5th B.S. had been sighted and position given at 6.07 and at 6.15 Burney in the 5th B.S. signalled "Enemy's Battle Fleet in sight bearing S.S.E." Jellicoe states that "The distance was not reported in either case but in view of the low visibility I concluded it could not be more than some five miles." If Jellicoe had been keeping any kind of a plot he surely must have realized that Beatty was ahead engaging Scouting Div.I, that the 5 B.S. was to the rear engaging the German Battle Fleet - and that he, Jellicoe, with 28 battleships was to the northward and approximately midway between the 5 B.S. and the Battle Cruiser Force, and that these forces were much closer to the enemy menace than Jellicoe was.

I can appreciate Jellicoe's apprehension as to the knuckle, the cap and the torpedo menace and the handicap of low visibility etc.- but I still cannot understand how he could have considered this menace to his own fleet and not have considered the same menace to the valiant commanders of the 5th Battle Squadron and the Battle Cruiser Force who were much closer to the enemy than would have been the knuckle if he had deployed on the right flank - nor can I believe that a maneuver is tactically sound that permits a force of 24 battleships to deliberately turn away from a menace which 8 of his ships are accepting and at much closer range. It certainly is not in accordance with the principle of Tactical Concentration. Even if the risks were all that Jellicoe states they were, I still cannot understand the mental attitude of one who will deliberately (as he must have thought) sacrifice 2 units of 4 and 6 ships respectively to avoid a risk to the others.- The mental attitude which, seeing a weaker comrade in arms being licked, fails to come to his support at whatever risks.

Truly Jellicoe was pursuing his mission to retain command of the sea, but I fail to see that he was carrying out the doctrine of preserving his force- He was helping the Germans to defeat it in detail.

Jellicoe's own statements shows the movement was practicable and if he had deployed on the right flank, the Battle Cruiser Force, which did do so, and the 5th Battle Squadron would have formed as they should have ahead of the Grand Fleet.

By his deployment to port after being sighted by the Germans, Jellicoe surrendered his advantage of surprise. Baudry says.- "Minutes of indecision + seconds of reflection on the appropriate counter maneuver + minutes in transmission of orders + = dead time retardation of our parade." Again, "The maneuver, the lunge will surprise if one is rapidly conceived and the other delivered at the right moment" and lastly "Surprise is the more effective in proportion as the lunge is delivered closer to the enemy." In this case the conception was automatic, the "lunge" was underway - The Marlborough was head at the Germans and close in; all Jellicoe had to do was follow the Marlborough - Delays of indecision, reflection, transmission of orders only furthered the effect of the "lunge." All the elements of surprise were there and the results were nullified by the deployment to the left.

Jellicoe also fails to note that the menace he feared was only possible in case the Germans were heading north or approximately in which case the cap would have been forced upon the Germans unless they turned away in which case they would also have a knuckle.

CHRONOLOGICAL TABLE - PHASE II - 6.16 p.m. to 8.38 p.m.
CONTINUATION OF THE ACTION - 6.16 p.m. to 6.30 p.m.

Time	BRITISH	Time	GERMAN
6.19	Evan-Thomas in 5th B.S. up- on sighting Marlborough at 6.06 and the remainder of the division a little later concluded the Marlborough was leading the whole line and decided to take station ahead of it, but on sighting other battleships at 6.19 he realized that the fleet was deploying to port and it would be necessary to take station to the westward of it. He accordingly went ships left 90°, then ships right 90° taking station in rear of the 6th B.S. The 5th B.S. had to turn under fire from leading enemy battleships. The damage was slight owing to poor gunnery on the part of the Germans. During the turn the Warspite's helm jammed and she continued to turn through 16 points heading directly for the German battleships from which she came under heavy fire and received some 30 hits from heavy shells as a result of which she was out of the action and had to return to port. The Warspite diverted attention from the Warrior	6.16	S.D.I cc to 800 followed by B.S. III, I, II probably due to heavy fire on S.D. I by B.C.F. Scheer writes "It was quite obvious that we were confronted by a large portion of the English Fleet and a few minutes later their presence was notified on the horizon directly ahead of us by rounds of firing from guns of heavy calibre. The entire arc stretching from north to east was a sea of fire. The flash from the muzzles of the guns was distinctly seen through the mist and smoke on the horizon though the ships themselves were not distinguishable." Until 6.30 thus showing the great advantage to the B. C.F. at least as to visibility conditions at this time.
		6.16	S.D.I. gradually turned to southward to course E.
		6.30	Engaged 3rd B. Cruron concentrating particularly on the Invincible. S.D. II & IV which were again leading followed S.D.I. to southward. German destroyers, 3rd Flotilla, fired torpedoes at long range at B.C.F.

CHRONOLOGICAL TABLE - PHASE II (CONTINUED) 6.16 to 8.38 p.m.
CONTINUATION OF THE ACTION - 6.16 p.m. to 6.30 p.m.

Time	BRITISH	Time	GERMAN
	enabling her to get clear as previously noted.	6.16	Battle Fleet firing on to enemy.
6.20	3rd B.Cruron on course 265° sighted S.D.I range 8600 yds.	6.30	6th Div.B.C.F. opened on the 5th Div. about 6.18; at 6.20 concentrated heavy fire on Warspite at range of 8000 yards.
6.20	Beatty sighted 3rd Battle Cruron and directed it to take station ahead of B.C.F.		
6.22	3rd B.Cruron countermarched to left and steadied on course 98° opening fire on S.D.I at range of 8,000 yds.	6.30	Sixteen German battleships were firing. The predreadnaughts apparently did not take part in the action. Visibility had decreased but decidedly favored the British according to both Beatty and Jellicoe which explains the small damages resulting from the fire of the German Battleships.
6.25	B.C.F. cc to 98° forming column <i>asterisk</i> eastern of Hood. Invincible was being concentrated upon but suffered no serious damage.		
6.16	In obedience to signal 1st to B.S.Div. cc 119° to east-		
6.30	ward from course 121° to course 110°. The leaders of the other 5 divisions cc simultaneously from 121° to 43° following the 1st Div. on course 110°. At 6.16 speed reduced to 14 to enable B.C.F. to take position ahead of 1st Div. At 6.14 shells fell near ships of 6th Div. At 6.17 Marlborough on course 43° opened fire on 2nd Div. of German Battle Fleet, range 13000 yards, bearing 20° abaft starboard beam 159°. Twelve German battleships were in sight. Other ships of 6th Div. opened fire on completion of the turn. At 6.18 salvos began to straddle the 5th Div. At 6.20 2nd and 4th B.S. fired salvos at the Weisbaden.		
6.30	3rd light cruron from position on engaged bow of Lion launched torpedo attack on S.D.I. Falmouth and Yarmouth fired fired torpedoes at range of 7,000 yards and then opened fire on German Battleships.		

COMMENTS.

The movements during this period, in my opinion, justifies my contention that Jellicoe made a grave tactical error in deploying on the left flank. Evan-Thomas decision to take position ahead of the Marlborough was certainly possible of execution and had the deployment been to the right he would have placed the 5th B.S. behind the Battle Cruiser Force and ahead of the Battleships and where they belonged - in which case their fire would not have been interrupted. On recognizing that the development was to port, Evan-Thomas was forced to make two 90° turns

one to the left and one to the right. His fire was interrupted and the range opened at a time when the light was most favorable to the English -furthermore this fast division was thus placed in the rear where its speed could not be used as it could have been had this division been in the van - furthermore in the turn the Warspite's helm jammed and as a result she was put out of action for the rest of the battle.

Jellicoe's line during this time had an elbow in it and there was a difference of 3000 yards in range between that of his nearest and his most distant ships - another violation of the tactical principle of concentration. This difference in range would have lasted a much shorter time had he deployed on the right flank.

The use of the fast wing of battle cruisers to turn the Head of the German Column was a sound tactical use of these vessels as was also the destroyer attack, as a result of which S.D I was forced to turn to the southward. How much greater this advantage would have been had Jellicoe been in the position he would have been had he deployed to the right.

Frost in his "Description of the Battle of Jutland" relative to this period states: "At 6:10 the British had had a great superiority in the number of ships engaged, and the results obtained were in their favor. In the next 20 minutes, however, only four additional British Battleships had entered the action, while 16 German Battleships had become engaged. At 6:30, therefore, the superiority lay with the Germans and the results were highly favorable to them." Jellicoe in his account states "... an interval of at least 4 minutes would elapse between each division coming into line ahead of the 6th Division.

If then, Jellicoe had at 6:16 deployed on the 6th Division which was already in action as was the 5th B.S. and the Battle Cruiser Force, he would, at 6:28, have had engaged 7 battle cruisers and 5th B.S., 1st B.S., 4th B.S. or 7 B.C. and 20 Battleships as compared with the German's 5 battle Cruisers and 16 Battleships which is another argument overlooked by Jellicoe as to why it would have been better had he deployed on the right flank. In addition at no time would the ships already engaged have been out of action as was actually the case.

Chronological Table - Phase II (CONTINUED) 6:16 p.m. to 8:38 p.m.
CONTINUATION OF THE ACTION - 6:30 p.m. to 6:55 p.m.

Time	BRITISH	Time	GERMAN
6:30	The first 3 divisions of the Battle Fleet were on course 110° - having completed the turn the others were still on course 43°.	6:30	The German situation was critical - and Scheer considered the situation more critical than it really was for he still thought the British Battle Fleet had entered the action from the S. E. and that it was more to the right than it really was: so he made a quick decision and ordered what has been termed a remarkable movement, that is, "Ships right about". At the time this signal was made the German Battle Fleet was in a most unfavorable position for such a difficult maneuver under the heaviest of gunfire. The leading division was
6:30	Fifth Division opened fire.		
6:31	Iron Duke opened fire, range 12,000 -		
	3rd and 4th Divs. opened fire.		
6:33	Speed was increased to 17 knots.		
6:35	1st Battle Squadron opened fire giving Jellicoe 27 battleships in action.		
6:38	Last ship cc to 110° and the deployment was completed.		
6:40	King George V, leader of Battle Fleet, cc to 121° without orders to close the range.		

Chronological Table - Phase II (CONTINUED) 6.16 p.m. to 8.38 pm.
CONTINUATION OF THE ACTION - 6.30 p.m. to 6.55 p.m.

Time	BRITISH	Time	GERMAN	
6.50	King George V changed course to 166°.	6.30	heading to the southward. The next three divisions were heading about east. The last two divisions were on course about N.E. The line thus had an angle of 90° and another of 45° and the turn would tend to throw the ships into a shorter line than they occupied originally. Due to the practice of such a maneuver during peace times and covered by a smoke screen, it was executed in "excellent style."	
6.51	By orders from C.in C. all division leaders cc course simultaneously to 166°.			
6.55	All vessels on course 166°.			
6.33	At 6.33 Invincible destroyed to by magazine explosion due to shell fire. Inflexible then took the lead. 6.38 Three torpedoes fired by German destroyers passed a-stern of Tiger. At 6.40 one torpedo passed under the Princess Royal. As early as 6.40 the St. Vincent sighted torpedo which stopped short of Battle line. At 6.45 Marlborough changed course to avoid one and at 6.54 was hit by one.	6.30	Derflinger opened fire on Invincible range 8500 sinking her at 6.33. Derflinger received two hits which put two 6" guns out of action. Derflinger at this time under heavy fire. S.D. I and II followed B.F. to westward. Lutzow fell out of formation as result of torpedo hit at 6.30.- she had at least 15 heavy shells and 60 hits of all calibers. She was accompanied by 1st Half Flotilla, and a few other boats. Seydlitz was hit by a torpedo. These hits were made by torpedoes fired from the Onslow, Acasta and 3rd Lt. Cruron.	
6.55	the rear battle cruiser had cleared the leading ship of the Battle Fleet. Speed was reduced to 18 and course changed to 2.100.. Inflexible and Indomitable ordered to take station in rear of Battle Cruiser Force. Onslow, Acasta and 3rd Lt. Cruron pushed up to about 7000 yards range and opened fire with guns and torpedoes. Shark was sunk.		6.35	Flotilla III advanced inside the lines and laid smoke screen to cover Battle Fleet. It was then recalled, but G-88, V-73 and S-32 advanced to range of 7000 yards from British formation and fired six torpedoes, one probably hit the Marlborough at 6.45. V-48 was sunk as was also the British destroyer Shark.
6:55	2nd Cruron, with Duke of Edinburgh and Chester, and 4th Lt. Cruron, took station on unengaged beam of King George.		6.55	German forces continuing to westward were practically out of range. The Weisbaden again came under fire from practically the entire British Fleet but was not sunk.
		6.50	Von Hipper left the Lutzow and boarded a destroyer to shift his flag. The Derflinger and Seydlitz	

Chronological Table - Phase II (CONTINUED) 6.16 to 8.38 p.m.
CONTINUATION OF THE ACTION - 6.30 to 6.55 p.m. (CONTINUED).

Time	BRITISH	Time	GERMAN
			had their radio destroyed and could not be used as flagship so Hipper was forced to remain on the destroyer until 9.00 p.m. Hartog of the Derflinger commanded the division during Hipper's absence and until he boarded the Moltke at 9.00 p.m.

COMMENTS.

Sketch No. VII page 33¹/₂ shows the position of all the British forces at 6.48 p.m. after deployment. This disposition leaves nothing to be desired except the position of the 5 B.S., still the position of this fast wing on one flank is after all tactically sound although in this action it would have been better to have the Battle Squadron ahead with the B.C.F.

As having a bearing on the mental attitude of the Commander-in-Chief it is to be noted that the King George indicated the desirability of closing the range by a change of course toward the enemy at 6.40 and a further change at 6.50, and it was not until 6.51 that Admiral Jellicoe directed this movement for the whole force.

In the torpedo attacks the British supported their destroyers while the Germans did not, just the reverse of the proceedings at 4.20 - 4.30 p.m.

The Germans made a reversal of course under fire which is tactically unsound and to be avoided. Further the movement was made with the 22 ships in a line with a 45° and a 90° turn in it and the turn was made towards the curve. This is unsound tactics and is so realized by the Germans, but they also appreciated that such a move might be required and had previously drilled the squadron in the movement. The result showed the advantage of anticipating difficulties and learning to overcome them.

The use of the smoke screen to cover the maneuver was a sound tactical use of destroyers and probably saved the German Fleet from serious damage. The movement entirely accomplished its purpose and extricated the German Fleet from a perilous situation.

The sinking of the Invincible by the Derflinger after only three minutes fire evidenced as has previously been found the quickness with which this vessel was able to get on the target and the accuracy of fire when on. This appears not to have been the case with all the German ships and especially with the battle ships.

The great number of hits - 15 heavy and a total of 60 hits and one torpedo, sustained by the Lutzow before she was forced to leave the line is a further evidence as to the superior protection of the German ships.

The destroyer attacks were again pushed home with courage and determination.

The Weisbaden sustained the fire of the entire British

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Diagram illustrating the structure of a nucleosome, showing DNA wrapped around a histone core (labeled "nucleosome") with associated histone tails (labeled "histone tails").

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Approximate Position of Ships of The
Grand Fleet at 6-45 P.M. on

31 May 1916.

Fleet at close range and still remained afloat, probably an evidence of the poor gunnery of the British.

The visibility conditions were then all in favor of the British.

As stated by Scheer neither Jellicoe or Beatty grasped the situation. If they had, they certainly would have turned towards and held the enemy at all hazards - as it was the action was broken off just as it was intended to be and the Germans gained liberty of movement and time to plan and execute a further disconcerting and surprising move, which they could not have done had they been held under fire.

Chronological Table - Phase II (CONTINUED) 6.16 to 8.38 p.m.
CONTINUATION OF THE ACTION - 6.55 p.m. to 7.15 p.m.

Time	BRITISH	Time	GERMAN
6.55	Battle Fleet divisions in column, Division columns in line of bearing, course 166°, speed 17. B.C.F. on course in column, course 210, speed 18.	6.55	High Seas Fleet standing to westward and disengaged from the British Grand Fleet. Von Scheer had two courses i.e. To continue retirement or to reopen the action. He decided to reopen the action for the following reasons: To boost morale; to disorganize British forces and compel destroyers to use up torpedoes during daylight; to save his disabled vessels; to take advantage of surprise.
7.00	Jellicoe signalled 2 B.S. to form column ahead of Iron Duke, and for 1st B.S. to form column astern, desire being to form force in single column.		
7.00	Marlborough turned away to avoid torpedoes.		
7.03	Marlborough again opened fire.		
7.05	Div. leaders cc to 199° to close enemy.		
7.07	Div. leaders cc to 166° to column to avoid torpedoes.	6.55	Battle Fleet executed ships right about. Scout. Divs. I and II to the southward were ordered to attack head of British column. All Flotillas were instructed to "attack" Destroyers were sent to rescue crews of Weisbaden. Scout. Divs. I and II went ships right about; and proceeded on an easterly course in advance of Battle Fleet.
7.08	Torpedo went astern of Argincourt.		
7.09	Torpedo went astern of Revenge; two ships ahead of Iron Duke reported Subs. on port bow	7.05	High Seas Fleet again came to under heavy fire. Scout
7.10	Iron Duke sighted one or more to German flotillas supported	7.15	Div. I and Div. 5 began to suffer heavily - 17th and 18th Half Flotillas attacked center of British line and at 7.15 were within 7000 yards of it. 11th Half Flotilla near S.D.I about to deliver an attack. Flotillas III and V were in 2nd line. 3 boats of Flotilla were advancing under heavy fire towards Weisbaden.
7.15	by a Lt. Cruiser bearing 2160. Battle Fleet opened heavy fire on them, but did not stop them and at 7.15 they were probably 7500 yards distant.		
7.12	Marlborough fired 14 salvos at a vessel of the Kaiser class.	7.12	Scheer signalled B.C.F. "At the Enemy."
7.10	British destroyers had reached to assigned positions about 3		
7.15	miles ahead of the Battle Fleet and a little advanced toward the enemy.		
7.15	Position of Lt. Forces: 1st Flotilla slightly forward of port beam of Lion; 4 Lt. Cruron on port quarter of B.C.F. on course 180. 4th and 11th Flotillas slightly abaft beam; 4th Lt. Cruron, 2nd Cruron and 1st Lt Cruron port beam, 1st B.S. Div. trying to gain station ahead of fleet.		

Chronological Table - Phase II (CONTINUED) 6:16 to 8:38 p.m.
CONTINUATION OF THE ACTION - 6:55 p.m. to 7:15 p.m.

Time	BRITISH	Time	GERMAN
7:15	12th Flotilla and 2nd Lt. Cruron on starboard quarter of 5th B.S. 13th Flotilla on port quarter of 5th B.S.	7:13	S.D. I proceeded under a terrific fire to S.E. CC at 7:15 to S. Range to B.C.F. 9000 and to Iron Duke only 8500.
7:15	The entire Battle Fleet were delivering an effective fire on the German fleet.	7:12	Fire on Dread German Battle Fleet had become very heavy and Koenig was forced to CC to Southard and was followed by other ships in his division in succession. The situation was now critical.

COMMENTS.

The disposition of both forces was tactically sound, except possible for the S.D. I which was separated from the Battleships and which was ordered to go in an attack. The range was such, however, that they were supported by the Battleships.

Jellicoe's turn into column at 7:00 was another evidence of the absence of the spirit of the offensive - though it may have been due to the fear of torpedo menace.

The use of heavy guns on Destroyers, when the Fleet was engaged, seems to me tactically sound when there is not time to bust up the attack by other forces especially under the baffling visibility conditions then existing.

Scheer's decision and subsequent action in reopening the engagement is a striking example of the use of the offensive as a defensive measure. His object was to extricate his fleet from an unfavorable situation. He was on the defensive, so he used the offensive to demoralize the enemy and he entirely succeeded. It exemplifies the old maxim that "the best defense against an enemy's fire is a well directed fire from your own guns."

The German Destroyers were handled with courage and determination and in accordance with sound tactical principles.

The efforts to save the crew of the disabled Wiesbaden shows a true conception of the principle of moral building and leadership.

Von Scheer's handling of his forces during this and the preceding and subsequent moves shows a high conception of tactical principles, high state of efficiency and discipline of his fleet, and the result of indoctrination.

Chronological Table - Phase II (CONTINUED) 6:16 to 8:38 p.m.
CONTINUATION OF THE ACTION - 7:15 p.m. to 7:30 p/m.

Time	BRITISH.	Time	GERMAN.
7:15	Battle Fleet in column on course 166°, speed 17. B.C.F. in column, course 210°, speed 18.	7:15	Koenig had turned South followed by ships of the leading Division - other ships still heading East, making a bend in the line.
7:20	Battle Fleet reduced speed to 15 knots.	7:17	Admiral Scheer saw that the situation was critical, ordered ships "right about". The Friedrich der Grosse, was at the pivot to give more room, went left about. Column was formed on inverted order, course 260°.
7:23	Battle Fleet CC to 144° by sub-divisions - 1st and 3rd ships of each Division CC simultaneously, the 2nd and 4th ships following them, thus making 12 columns of 2 ships each. 5th B.S. of 3 ships proceeded in 1 column.		S. D. I and II continued around to the Southard to cover retreat of Battle Fleet.
7:28	B.F.F. again CC to 121°. These changes were to avoid possible torpedoes.		Derfflinger and Seydlitz literally shot to pieces.
7:25	Iron Duke sighted another flotilla 30° forward of the starboard beam, distant 9000 yards headed for King George. 4th Lt. Cruron and 4th and 11th Flotillas were ordered to counter attack and went at German Destroyers at high speed.	7:18	Having commenced, the turn Admiral Scheer ordered S.D. I to withdraw, they took Course 260° - Derfflinger at the time firing a torpedo at range 9000 yards.
7:17	B.C.F. sighted 2 enemy Battle Cruisers and 2 Battleships of Koenig class at head of German line. He opened fire and increased speed to 22 knots.	7:20	Smoke from burning Lutzow hid ships from British line.
7:20	Range 15,000 yards. B.C.F. CC to 213° to close.	7:15	17th and 18th Half Flotillas from position 6500 yards from the British Battle line, fired a large number of torpedoes and turned away under heavy fire from main battery of British Battleships. Only S-35 was lost.
7:25	Head of German column turned under cover of smoke screen and this was the last seen of the German Battleships by the British Battleships.	7:17	11th Half Flotilla advanced through S.D. I, pushed home an attack to within 6000 yards of British Battle line - fired torpedoes and retired without loss.
7:15	The British fire during this to period was as follows:		
7:30			
7:15	Iron Duke firing at Battleships, range 15,000 yards.	7:20	3 boats of Flotilla III, which were advancing towards Wiesbaden, were compelled to withdraw by very heavy fire - V-73 and G-88 fired 4 torpedoes at 5th B.S., then withdrew laying dense smoke screen. This torpedo threat forced Jellicoe to turn away at 7:23 and torpedoes passed through the line and put the British line into considerable disorder, the ships being forced to maneuver individually to avoid them.
7:20	Iron Duke trained guns on vessel of Lutzow class but target disappeared before fire could be opened.		
7:17	King George firing on ship supposed to be leading ship of column, range 13,000 yds.		
7:01	Orion firing on vessel of Koenig class.		
7:01	St. Vincent was firing effectively at Battleships until 7:26, range 9500 yards.		

Chronological Table - Phase II (CONTINUED) 6:16 to 8:38 p.m.
CONTINUATION OF THE ACTION - 7:15 p.m. to 7:30 p.m.

Time	BRITISH.	Time	GERMAN.
7:06	Agincourt opened fire at 11,000 yards on Battleship - four of her salvos straddled. Revenge made 2 hits on Battle Cruisers.	7:30	The H.S. F. had extricated itself from a critical situation and had escaped what seemed certain destruction.
7:12	Colossus firing on Lutzow to 9000 yards. Made several hits.		
7:20			
7:12	Marlborough fired 14 salvos at ship of Koenig class, forcing her to leave the line.		
7:15	Royal Oak opened fire at 7:15 on leader of 3 Battleships.		
7:15	Other vessels of Battle Fleet probably firing with equal effect.		
7:30			
7:20	British Battle Fleet had practically ceased fire. The B.C.F. continued the fire at increased ranges.		

COMMENTS.

The disposition of forces was tactically sound, except that the German line was not normal to the enemy, but for the purpose of his maneuver Scheer could hardly have had it otherwise - surprise and vigorous attack was his purpose. Attack mostly with his destroyers and light forces. His Battle Fleet was in the nature of a supporting force. He depended upon low visibility and smoke and the element of surprise to prevent serious damage. as it was he suffered severely because of the self imposed cap, and the maneuver would have been suicidal under normal visibility.

The German destroyers performed their mission with courage, determination and efficiency and they were well supported.

Jellicoe's turn away to avoid the almost certain torpedo menace was tactically sound. The movement by sub-Divisions is noted and seems an effective way to increase mobility and quickly turn out of the torpedo menace. It might have been better, however, to have turned away by individual ship movement. This movement took the British Battleships out of range and action, but the B.C.F. still had contact and was firing but at increased ranges.

Chronological Table - Phase II (CONTINUED) 6:16 to 8:38 p.m.
CONTINUATION OF THE ACTION - 7:30 p.m. to 8:38 p.m.

Time	BRITISH.	Time	GERMAN.
7:33	Jellicoe judging he was clear of torpedoes, had been heading away since 7:23, CC to 166° and formed in single column.		
7:38	Jellicoe CC, head of column approx right to 177°.		
7:33	No less than fifteen torpedoes passed through rear of line, ships of which had to maneuver to avoid them, and rear of column was thrown into disorder. Jellicoe by his turn away had not avoided torpedoes but he had increased the range so that the torpedoes were running a slower speed and were more easily avoided.		
7:25	1st and 4th B.S. opened fire on to the other advancing force of		
7:50	enemy destroyers. 4th Lt. Cruron advanced against these destroyers, which fired 4 torpedoes at the Calliope from position on starboard bow, range 7,000 yards.		
7:55	1 torpedo passed 5 yards ahead, one 10 yards astern and 2 others fairly close to Calliope. After torpedoes had passed, 4th Lt. Cruron headed directly for destroyers and 2 torpedoes passed on either side of the Caroline.	7:30	H.S.F., having extricated itself, continued Westward.
		7:56	H.S.F. CC to S.W.
		8:10	H.S.F. CC to South and later to S.E.
7:50	2nd Lt. Cruron and 1 Div. of 12th Flotilla attacked enemy advancing destroyers which now retired. 2 boats sunk and others badly damaged.	7:30	Scheer sighted Lutzow, badly damaged, on his port beam, but she could make 15 knots; all other Battleships and Battle Cruisers were still in formation.
7:30	B.C.F. engaging leading German Battleships on course 290°.	7:40	S.D.F. CC to N.W. and evaded B.C.F. which up to this time had been firing at long range. The Derfflinger was hit by 25 heavy shells and had only 2 12" and 2 6" guns in commission. She was on fire forward and aft. The after magazine had to be flooded.
7:45	B.C.F. changed course to 235° to close enemy.	7:50	Destroyers that had started the attack at 7:15, 7:17 and 7:20 had to retire and two more flotillas advanced to the attack.
7:47	Beatty sent the following message to C-in-C - "Submit van Battleships. Follow B.C.F. We can cut off whole of enemy Battle Fleet."		Flotilla V approached to range 7000 yds., but did not see Battleships, but British Battleships (1st and 4th B.D. at 7:50) opened a heavy fire on the destroyers.
7:54	Iron Duke received the above message.		
7:58	Iron Duke sighted a few enemy Battleships to Westward at long range.		
7:59	Battleships CC by Divisions to 256° to close; enemy increased speed to 17 knots.		
8:14	Jellicoe signalled 2nd B.S. follow B.C.F.		

This was blanked through error.

Chronological Table - Phase II (CONTINUED) 6:16 to 8:38 p.m.
CONTINUATION OF THE ACTION - 7:30 p.m. to 8:38 p.m.

Time	BRITISH	Time	GERMAN.
8:00	4th Lt. Cruron and 11th Flotilla were advancing toward German Battle-ships sighted by the Iron Duke at 7:58. German Battle-ships opened fire on 4th Lt. Cruron, range 8000 yards. Calliope was hit by a heavy shell but kept on and fired a torpedo at leading ship, range 6500.	7:50	Destroyers fired 6 torpedoes, then retired without loss.
8:00	1st and 3rd Lt. Cruron, by orders from Beatty, began search to Westward.	7:40	Flotilla III intercepted by 2nd Lt. Cruron and a Div. of 12th Flotilla at head of British line and retired without loss.
8:20	1st and 3rd Lt. Cruron made contact with enemy.	7:40	Scheer made his decision to for the night.
8:22	2 Battle Cruisers and 2 Battleships were sighted and B.C.F. opened fire, range 10,000 yards. The leading enemy ship being repeatedly hit by Lion turned away, followed by the others.	8:20	--
8:25	Mist shut out enemy from view.	8:20	High Seas Fleet was proceeding on a Southerly course - B.S. I and III in single column; Westfalen leading. B.S. II on Westfalen starboard bow. S.D. I was on the port or engaged bow. S.D.'s II and IV were ahead. Suddenly a heavy fire was opened on S.D. I by unseen ships. Not being able to see the enemy S.D. I CC to right 90° in succession and went between B.S. I and II. B.S. I followed S.D. I. B.S. II received enemy's fire for a few minutes, but as enemy ships could not be seen B.S. II went ships right 90°. This was the only time B.S. II came under heavy fire. Holstein and Pommern were each hit by 1 heavy projectile. During this time S. D. IV also came under fire for the first time, engaging some light Cruisers.
8:25	Lion CC to 211°.		
8:38	Falmouth, the last ship to see the enemy, reported that he had turned away to the Westward.		
8:30	Jellicoe had previously made his decision as to his night movements and formed the Battle Fleet in single column on course 211°.	8:28	The action was over and the day action had closed for the Germans.

The day action was over.

COMMENTS.

The visibility conditions were in favor of the British during this entire period.

In my opinion Jellicoe's turn away was tactically sound, and it certainly reduced the menace. Hind sight, of course, tells us that if he had turned towards the enemy, he would have held his fire which he lost by his turn away. A vigorous offensive would also have given him the initiative which his turn away surrendered to the Germans. Hind sight cannot tell us, however, what his losses might have been had he turned towards them, and in view of all the conditions I cannot feel but that tactically his turn away was sound. At any rate it further indicates that Jellicoe ever had in mind his probable instructions to preserve the Fleet and his "Mission" to retain command of the sea.

Jellicoe had been criticised for not acting immediately upon Beatty's message made at 7:47 - "Submit van of Battleships - follow B.C.F. We can cut off whole enemy Battle Fleet". Let us consider the situation. Jellicoe received this message at 7:54. At 7:58, before he had time to act, sighted enemy Battleships to Westward. He immediately at 7:59 CC to West to close range and increased speed to 17 knots. As Beatty was not in touch, what was more natural than for Jellicoe to head for the enemy Battleships in sight - when he again lost contact, and at 8:14 he ordered B.S. 2 to follow B.C.F. I do not think that his decision was unsound nor that there was undue delay to act on Beatty's signal. Furthermore, Jellicoe had already begun to consider his plans for the night and, in view of his decision concurred in by Beatty not to fight a night action, I think, if he did reject Beatty's plan, his decision was wisely taken.

The German Destroyers, supported by Light Cruisers, were well and efficiently handled. They acted with determination and courage and in accordance with sound tactical principles.

The counter attacks by the British Destroyers, supported by their Light Cruisers, were also in accordance with sound doctrine. Again was emphasized the necessity of using everything you have to break up a destroyer attack. The British Battleships used their main battery on Destroyers; as the Battleships were not under fire this was tactically sound.

The advantage which the British had as to visibility conditions is emphasized by the numerous instances when the German Battleships, Cruisers and Destroyers were under fire and could not see the vessels firing at them.

The entire action, in my opinion, is indicative of the lack of the true offensive spirit on the part of Jellicoe. Before, during and after deployment he failed to have the initiative at any time and he could have taken and held the initiative from the beginning if he had acted with boldness and with the true offensive spirit. I believe the lack of this spirit was due to his "Mission" and instructions from the Admiralty, which of course is primarily due to the fact that the Admiralty controlled and directed every movement of the High Seas Fleet instead of permitting Jellicoe to be Commander-in-Chief, actually as well as in name. This is a lesson which we can do well to take to heart.

The losses up to this time were as follows:-

<u>British.</u>		<u>German.</u>
Queen Mary	CC	Five Destroyers (5-DD)
Indefatigable	CC	
Invincible	CC	
Defense	CA	
Nestor	DD	
Nomad	DD	
Shark	DD	

Vessels which sank from damage received in the day action.

<u>British.</u>		<u>German.</u>
Warrior	CA	Lutzow CC
		Wiesbaden CL

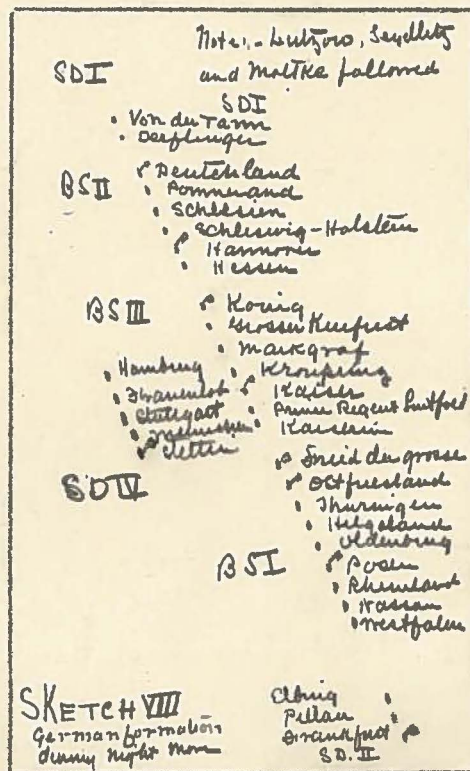
Vessels put out of action by damage inflicted in day action.

<u>British.</u>		<u>German.</u>
Warspite	BB	Destroyers (not known)
Onslow	DD	
Defender	DP	
Acasta	DD	

Vessels damaged but which remained in action.

<u>British.</u>		<u>German.</u>
Chester	CL	Derfflinger CC
Calliope	CL	Seydlitz CC
Lion	CC	Moltke CC
Princess Royal	CC	Von der Tann CC
Tiger	CC	Koenig BB
New Zealand	CC	Grosser-Kurfurst BB
Barham	BB	Lt. Cruisers
Malaya	BB	Destroyers
Marlborough	BB	

(Hollins p 96)



Flotillas II - V - VII - some boats &

1st Half flotilla standing by Lutzow.
Other boats were kept with Rostock and
Regensburg -
many destroyers had expended all their
torpedoes.

Chronological Table - Phase III - 8:38 p.m. 31 May to 5 a.m. 1 June
NIGHT ACTION.

Time	BRITISH	Time	GERMAN.
8:38	<u>DECISION:</u> To avoid night action. <u>MINOR DECISIONS:</u> To take course South; to place Destroyers in position astern.	8:38	<u>DECISION:</u> To maneuver so as to obtain liberty of decision as to accepting battle June 1. <u>MINOR DECISIONS:</u> To take course for Horns Reef and hold it at all hazards; to hold Destroyers in readiness for night attacks.
8:38	Grand Fleet on course 211°, speed 17. B.C.F. on course 211° at 8:30. The King George was bearing 80° from the center of the German Fleet, distant 18,000 yards. B.C.F. bore 160° from the center of the German Fleet, distant 13,000 yards. 1st and 3rd Lt. Cruron near B.C.F. - 4th Lt. Cruron slightly ahead of Battle Fleet - 2nd Lt. Cruron on starboard quarter of 5th B.S.	8:40	H.S.F. CC to SE'ly.
		9:06	H.S.F. CC to SSE 1/4 E, speed 16. Course for swept channel off Horns Reef. The formation was as is shown in Sketch VIII. Lutzow could only make 15 knots and the Seydlitz 21.
9:00	Jellicoe signalled for Battle Fleet to change course by Divisions to 166°, directing other forces to conform to movements of Battle Fleet. Soon after the fleet was ordered to take "Second organization".- The fleet formed in 4 parallel columns, interval 1 mile, the Divisions being in order from West to East- 2nd, 4th, 1st and 5th. 4th Lt. Cruron ahead and 2nd Lt. Cruron astern of 5th B.S.	9:00	Hipper hoisted his flag on the Moltke.
9:24	B.C.F. and 1st and 3rd Lt. Crurons CC to 166° maintaining position 14 miles on starboard beam of fleet. 2nd Lt. Cruron CC to 166° and maintained position about 7 miles on starboard beam of Battle Fleet.		
9:32	Abdiel, leader of mine laying flotilla, was directed to lay a mine field on a defined area 15 miles from Vyl Lightship which was done without detection by the enemy. During the night 3 Subs were stationed 4, 12, and 20 miles West of Vyl Lightship.		
10:00	The whole Grand Fleet on course 166°, speed 17. At this time Destroyers took station 5 miles astern of Battle Fleet in formation West to East. Castor and 11th Flotilla, 4th Flotilla, 12 Flotilla, Champion, and 9th, 10th and 13th Flotillas (Position 1st Flotilla not given) Fearless, leader of 9th Flotilla astern of Champion.		

Chronological Table - Phase III (CONTINUED) 8:38 p.m. 31 May
to 5 a.m. 1 June. NIGHT ACTION.

- 10:04 Castor, dropping astern, sighted several German Light Cruisers, including Hamburg and Elbing. Germans opened fire and Castor's radio was disabled and she was not able to signal to vessels of her flotilla during the remainder of the night. Castor, Magic and Marne fired four torpedoes; other destroyers did not fire as they were not sure the ships were enemy.
- 10:20 2nd Lt. Cruron sighted 1 Cruiser and 4 Lt. Cruisers (probably S.D. IV) engaged fiercely for 15 minutes. German fire rapid and accurate. South Hampton and Dublin received many casualties. South Hampton sank Frauenlob.
- 11:00 Active, astern of 2nd B.S., sighted a large ship coming up from astern. Enemy 1st B.S. opened fire and sank her probably. "Black Prince", Active and Colossus received damage from submerged objects, possibly subs.
- 11:30 4th Flotilla, probably 5 miles North from 5th B.S., sighted group of enemy Lt. Cruisers which opened very heavy fire. Destroyers fired 11 torpedoes. As a result of this action, Tipperary was sunk by gun fire. Broke rammed the Sparrowhawk which had to be destroyed. Spitfire carried away 29 feet of plating of Lt. Cruiser.
German losses. Stettin and Munchen were torpedoed. Elbing was rammed by Battleship and had to be sunk. Rostok was sunk. 4th Flotilla after attack continued on to SE'd and at midnight came in contact with 4 enemy Deutschlands.
- 12:00 Garland and Fortune fired 4 torpedoes. German Battleship Pommern torpedoed and sank immediately. Fortune was sunk by gunfire. Marlborough could not make 17 knots and dropped several miles astern. 12th Flotilla, originally astern of 1st B.S., had fallen more than 5 miles astern of Battle Fleet due to 1st B.S. not being able to maintain speed.
- 12:00 Another Flotilla on starboard side had forced 12th Flotilla to S.E.'ly course and at midnight was 10 miles N.E. of Battle Fleet.
- 12:30 Ardent made second attack, after firing a torpedo was sunk by gunfire. At the same time the Nassau rammed and sank Turbulent, and damaged the Petard by gunfire.
- 1:30 High Seas Fleet reached entrance to swept channel and changed course to about 120°. Lutzow had become unmanageable; her crew were removed by 4 destroyers and she was sunk. These destroyers, crowded with men, twice made contact with British forces, and G-40, whose engines were injured by gunfire, was taken in tow by one of the others. The Regensburg then took over the tow and was sighted by the Dublin at 4:25 just entering the swept channel.
- 2:00 12th Flotilla attacked the German battle line, probably Squadron I - fired 15 torpedoes and claimed 1 hit.
- 2:25 Maenad fired torpedoes and claimed a hit, possibly Pommern, which Germans state was sunk at 2:20 A.M.

Chronological Table - Phase III (CONTINUED) 8:38 p.m. 31 May to 5 a.m. 1 June. NIGHT ACTION (CONTINUED) 8:38 p.m. to 5 a.m.

- 2:35 Moresby fired a torpedo at B.S. II. This also may have been the Pommern.
- 2:50 V-4 hit a mine and was lost with all her crew. (This was the mine field laid by the Abdiel).
- 3:00 Scheer assembled his forces off Horns Reef and decided to wait there for information of the Lutzow, information of whose loss had not reached him. After waiting one half hour information was received that the Lutzow had sunk. Scheer continued on through the swept channel.
- 5:30 Off the Island of Tylt the Ostfriesland was damaged by a mine but reached port safely.
- 2:00 Marlborough slowed to 12 knots. The 5th Division of Battleships continued on with the Fleet while the 6th Division stopped. Burney shifted his flag to the Revenge. Marlborough was ordered to proceed to base.
- 2:47 British Battle Fleet formed single column on course 346° and held it.
B.C.F. turned to Northward, visibility was still bad. Admiral Jellicoe made no attempt to renew the action stating "The difficulties experienced in collecting the Fleet (particularly the Destroyers) rendered it undesirable to close Horns Reef at daylight (2:30 a.m.) as had been my intention when deciding to turn to the Southward during the night. It was obviously necessary to concentrate the Battle Fleet and destroyers before renewing action.
- 3:44 Grand Fleet headed 256° by Divisions.
- 3:50 Sighted airship and CC to 346°.
- 4:10 Grand Fleet formed in line of Divisions on course 346°.
- 4:25 Dublin reported sighting German Lt. Cruiser and two destroyers (The Regensburg and Von der Tann). These vessels soon disappeared in the mist..
- 5:15 B.C.F. joined the fleet and was directed to search for vessels reported by Dublin.

This ended the night action of the Battle of Jutland. The British Fleet held the Battle field but the Germans had escaped with their force practically intact.

COMMENTS.

Jellicoe's decision not to fight a night action was sound, and the contacts and general mixups in the night destroyer actions is a mild indication of the confusion and disastrous results which would have taken place had he attempted it.

His decision to take a course South was sound.

His night disposition of forces was sound as is evidenced by the fact that none of his Battleships were in action during the night.

COMMENTS (Continued)

The contacts during the night should have indicated to Jellicoe that the German Fleet was crossing his stern but I am of the opinion that he could not have done otherwise than hold to his Southerly course and as later events proved he could not have prevented the Germans from entering the swept channel without fighting a night action, and this he had decided not to do. The course of the two fleets is shown in Sketch IX.

Admiral Scheer took practically his entire fleet into its base, and this could have been done only by a real leader, a man of courage and determination thoroughly familiar with every phase of his profession and of the higher branches of war - a man imbued with the fine offensive spirit.

The torpedo fire during the entire action is not what we would expect from our destroyers. There seems to have been very few destroyers fired and fewer hits made. This is probably due to the comparatively few torpedoes carried by each destroyer, both on the British and German sides.

The British fired at total of 85 torpedoes and obtained 11 actual hits.

The Germans fired 66 torpedoes and made 2 hits.

The following is a table of losses:

<u>British</u>	Disp.	<u>Sunk.</u>	<u>German.</u>	Disp.
Queen Mary	26,350		Lutzow	26,180
Indefatigable	18,800		Pommern	13,200
Invincible	17,250		Wiesbaden	5,400
Defense	14,600		Elbing	4,500
Warrior	13,550		Rostock	4,900
Black Prince	13,550		Fruenlob	2,700
Tipperary	1,430		V-4	570
Nestor	890		V-48	750
Nomad	890		V-27	640
Turbulent	1,100		V-35	700
Fortune	965			
Ardent	935			
Shark	935			
Sparrowhawk	935			
Total	111,980			60,190

Vessels seriously damaged.

Warspite	BB	Derfflinger	CC
Marlborough	BB	Seydlitz	CC
		Moltke	CC
		Von der Tann	CC
		Koenig	BB
		Grosser Kurfurst	BB
		Markgraf	BB
		Ostfriesland	
		G-40	DD
		S-32	DD

Vessels moderately damaged.

<u>British.</u>		<u>German.</u>	
Lion	CC	Heligoland	BB
Tiger	CC	Kaiser	BB
Princess Royal	CC	Holstein	OBB
New Zealand	CC	Frankfurt	CL
Barham	BB	Pillau	CL
Malaya	BB	Stettin	CL
Colossus	BB	Munchein	CL
Calliope	CL	Hamburg	CL
Dublin	CL		
South Hampton	CL		
Chester	CL		

Personnel losses.

Killed.

Officers	172	2400
men	2414	
Total	<u>2586</u>	<u>2400</u>

Wounded.

Officers	41	400
men	449	
Total	<u>490</u>	<u>400</u>

Total killed and wounded	<u>3086</u>	<u>2800</u>
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Compared to the forces engaged the British losses were much greater than they should have been.

A discussion of tactical principles violated or adhered to is found in "Comments" at the end of each period, and they are briefly summarized as follows:

Beatty violated principle of concentration of forces in when he opened the engagement.

Beatty followed tactical principles in getting his ships out of smoke interference.

Beatty maneuvered to change range and confuse enemy fire. Sound tactically.

Von Hipper failed to keep all Battle Cruisers under fire. Unsound tactically.

Von Hipper used his secondary with his main battery. Proved unsound and was discontinued.

Both sides at times failed to support destroyer attack with Lt. Cruisers. Unsound tactically.

Both sides at times supported destroyer attack with Lt. Cruisers. Sound tactically.

The tactical advantage of the weather gauge did not always prove an advantage in this action.

Beatty failed to take advantage of the weather gauge. Jellicoe did.

The use generally of Battle Cruisers, Light Cruisers, and Destroyers was in accordance with sound tactical principles.

Beatty's tactics in concentrating upon head of enemy line in run North was tactically sound.

Beatty's turn to starboard so as not to blanket fire of 5 B.S. was tactically sound.

Jellicoe was not in battle formation when decisive range was reached; he had to deploy under fire. Unsound.

Jellicoe's line was not normal to the enemy on his advance. Unsound.

Jellicoe, in deployment, disengaged two of his Battle Squadrons. Unsound.

Jellicoe surrendered the advantage of surprise which was given to him. Unsound.

Jellicoe deployed so that part of his forces were out of range and part in. Violates principle of concentration.

Jellicoe, after deployment, handled his forces in accordance with sound tactical principles.

Jellicoe failed to realize the advantage of the vigorous offensive, so lost the advantage of the initiative. Unsound.

Scheer took the offensive thereby taking the initiative away from and forcing Jellicoe to conform to his movements. Sound.

Scheer used the offensive as a defensive measure - to extricate his fleet from a perilous situation - "The best defense is a strong offense."

Scheer violated the principle of concentration by sending 5 Battle Cruisers to chase 5 Battle Cruisers and 4 fast Battleships.

Scheer violated a tactical principle when he headed his forces into the British Battle line. He deliberately took the cap depending upon the boldness and unexpectedness of the maneuver, and the protection of destroyer smoke screens. He counted the cost and won.

The decision for the night movement seems tactically sound, briefed under the existing conditions.

(16 March, 1921)

