NAVAL WAR COLLEGE NEWPORT, RHODE ISLAND 6 December 1933 - DOD DIR 5200.9, 27 SEF 1956 From: **Research** Department To: President, Naval War College. Subject: Operations Problem IV-1933 - BLUE-ORANGE. Analysis of and comment. References: (a)Parts I and II - BLUE Situation. Parts I and II - ORANGE Situation. Enclosures: (A) BLUE Situation -1 October 1933 A ~ (B) BLUE Situation - 1 November 193 / (C)ORANGE Situation- 1 October 193 3 ORANGE Situation- 1 November 193 (D) (E)BLUE Operation Order and Annexes. (F) ORANGE Operation Order and Annexes. (G) Chart Maneuver Detail of War College Staff. (H) BLUE details of Senior and Junior Classes, 1933. (I)ORANGE details of Senior and Junior Classes, 1933. (J_{i}) BLUE Cruising Disposition diagrams to accompany Operation Order. (K) History of Chart Maneuver Problem IV-Sr.-1933 44 MP from Move O to Move 44. (5-12+3, Ep record (L) Plans for future operations by BLUE and ORANGE C-in-C. (M) Critique - Notes by Captains Rowan, Todd, Coffey, Wright, Commanders Griffin and Rankin. (N) Stenographic notes by Mr. Whittier taken at Critique. Analyses and comment of Research Department by (0)(1) Captain W.R. Van Auken, U.S.N., on battleships, air forces, cruisers and train of ELUE. (2) Destroyers and submarines - by Captain Conant Taylor. (3) ORANGE plans, operations and all ORANGE types by Commander G.B. Hoey, U.S.N. (P) General Comment on Operations Problem IV by Commander J. W. Rankin, U.S.N., of Operations Department of Staff. (Q) Appendix- Analyses of previous BLUE-ORANGE problems 1927-1928, inclusive, showing damage inflicted on BLUE. in (R) Appendix - showing damage inflicted on BLUE in 1933 -Operations Problem IV.

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(S) Appendix - showing damage inflicted on ORANGE in 1933-Operations Problem IV.

(T) Summarized data on losses, damage, ammunition, fuel, communications, types, weapons and personnel. 1. The research Department has completed a thorough study and analysis of Operations Problem IV which was solved and played by the classes of 1933. A special effort was made to get and compile all possible data which might have a bearing upon the problem. To this end, there were collected copies of all essential plans, orders, various operations details, histories of the critique, and records of the analysis made of the entire problem. While various copies of these may be found in other departments of the College, it has been considered best to retain a complete file in the Research Department. These are referred to in the enclosures.

General Remarks on the Problem.

Before undertaking a detailed discussion of the problem, 2. it appears interesting to consider it, first, from a grand strategy point of view as it relates to the conduct of the war; and, secondly, as it directly affects the naval strategy, naval plans and operations. As the final problem of the year for the Senior and Junior Classes, it was in many ways the major strategical and tactical game and naturally of the greatest practical interest to us in studying the conduct of war in the Pacific between BLUE and ORANGE. It is doubtful if a harder problem could be designed or played. It was the climax of all previous studies and games. The class had the proposition put up to them of assuming that the BLUE and ORANGE Navy Departments had ordered the Commander-in-Chief to make an estimate of the situation and prepare plans to carry out the instruc-Each member of the Senior Class solved the problem and tions. afterward was given a solution of the BLUE and ORANGE situations made by the staff. The senior member of each section of the senior class was selected as Commander-in-Chief of the opposing sides. On the ORANGE side, Admiral C.R. Train used his own solution and plan; on the BLUE side, Rear Admiral Ernest J. King had a solution of the BLUE situation which did not fit well to make an interesting game and he consented to play another solution. It is interesting to consider that Rear Admiral Train, an officer of extended destroyer and battleship experience, and Rear Admiral King, of special staff duty, destroyer, submarine and aviation experience, conducted the operations through most of the game, but were detached for other duty before the decisive point was reached.

3. In this problem BLUE had to cut himself away from all facilities and supplies, project his fleet about 7,000 miles from home, and establish a base before he can begin offensive operations. The BLUE navy included all ships built, building or appropriated for in 1933, but did not include vessels in reserve. It is to be further noted that BLUE was given a fleet train of vessels which could make over 14 knots, with the exception of two 13-knot tankers and 9 12-3/4 knot tankers. An effort was made in this problem (different from other years), to increase the speed of the train vessels to 14 knots. It was desired to ascertain what effect this increased train speed would have upon the success of the fleet cruising disposition. In this same type problem of other years, the slow train had cut down the speed of the cruising formation to 11 knots or below, and in such problems this slow speed had made the formation very vulnerable from ORANGE submarine attacks. The analyses of games since 1927 have shown the tremendous damage inflicted upon the BLUE fleet in an overseas expedition. Therefore it was assumed in this problem that the fleet was capable of a sustained speed of 14 knots and that the slower auxiliary vessels of the train would follow in later convoys. It was assumed that the ASIATIC Fleet was as it now exists, including the HOUSTON and the ROCHESTER.

4. As to ELUE'S strategy and plans, it was assumed that he would wage a limited war and that the war would be primarily naval. The War Plans included a mobilization at LAHAINA ROADS, HAWAII, during the period of strained relations, and then the early advance in force to secure a base with a non-stop advance in the WESTERN PACIFIC. This involved fueling at sea and not taking a chance upon finding and providing fuel after arrival. It was ELUE'S strategy to avoid action, protect his train, reduce his damage to a minimum, secure a base in the FAR EAST and be in fighting trim upon arrival. ELUE considered that he might accomplish this by (1) upsetting the enemy's disposition of forces; (2) by bewildering and surprising him; (3) separating his forces; and (4) counter attack. He could do this particularly by changes of course, routes, speeds and formations.

5. With the above BLUE concept, the BLUE fleet later had anchored in LAHAINA ROADS, HAWAII, ready to execute their plan under Rear Admiral King, Commander-in-Chief. It is considered that the BLUE fleet was indoctrinated, determined, and ready to take advantage of all incidents which might arise in the approaching expedition.

ORANGE

6. On the ORANGE side, the problem is even harder than the task which faced BLUE. While he is nearer home, the distances through which he has to operate are still very great. The mere task of locating the BLUE fleet means a great dislocation of any of his forces, and then when located he, presumably, has a weaker force with which to attack. As contrasted to BLUE'S offensive war, ORANGE has a political object put up to the ORANGE Commanderin-Chief of preventing the establishment of BLUE in the FAR EAST. It is therefore to ORANGE both an offensive-defensive war of maximum intensity, and primarily naval.

7. The ORANGE Commander-in-Chief, Admiral Train, used his own solution of the problem. As in all other similar games, ORANGE was to attempt to wear down BLUE by a campaign of attrition after locating him. He realized that BLUE can not repair underwater damage at any PHILIPPINE base; whereas he can repair his own damage at his own bases. It was therefore ORANGE tactics to seek under-water hits from torpedoes and bombs. The ORANGE fleet included all combatant ships now in the ORANGE navy in commission in 1933. It may be noted that this included, among others, 6 BBs, 3 CCs, 4 CVs, 12 CAs, 17 CLs, 24 DLs, 70 DDs, 61 SS, 4 SMs, in addition to various AVs, XAVs and mining vessels. All additional train vessels were available practically as needed. Besides this fleet was a China Squadron of the oldest vessels in the ORANGE navy, which included 6 old CAs armored cruisers, 7 CLs, 21 DDs, etc. These were available for use in the game and were at the conclusion nearing the BLUE fleet.

8. From the ORANGE point of view, the great worry and problem was to get information of the movements of the BLUE fleet from LAHAINA, ensure accurate communications, and have sufficient forces ready to track and work attrition upon the BLUE fleet. Considering previous games, the element of surprise as to where the BLUE fleet would go made a tremendous problem for the ORANGE Commanderin-Chief. Based upon the analyses of other similar games, ORANGE must be prepared to quickly gain information of BLUE'S movements as he leaves LAHAINA and not be surprised upon any radical changes of course or probable destination. Therefore while the problem is difficult for BLUE to undertake, it is even harder for ORANGE on the defensive to place his forces and plan against all BLUE surprises. It is this particular phase of the problem in making a preliminary plan or plans that must be noted on the eve of war. ORANGE'S plan must provide for various contingencies and be most elastic and flexible.

9. The various plans and orders which were made are appended as enclosures. It is interesting to note that BLUE in general was able to carry out his general plan; whereas ORANGE had to change his plan and operations early in the game.

Operations.

10. The ELUE fleet left LAHAINA on 30 November. ORANGE submarines noted its departure but sighted no heavy ships, and by dark of the same night had lost contact. ELUE further surprised ORANGE by change of course to south at 1600, 1 December, so that no further contact with the ELUE main body was made by ORANGE for one week. The failure to maintain contact with ELUE kept ORANGE in the dark until dawn of 8 December. Then ORANGE submarines made contact with ELUE submarines well out on ELUE'S flank. This was a week of great suspense for ORANGE and required a re-disposition of scouting forces. The ELUE fleet which left LAHAINA at 1400, 30 November, on course West, took a generally southwest course to pass 500 miles from JALUIT. Except for the surprise run south during daylight of 1 December, the course of the ELUE fleet was according to plan, when it was changed to the Westward to remain 500 miles south of all the ORANGE Mandated Islands. (This was in accordance with the Staff Solution to try out the problem with ELUE'S course South of the Mandated Islands).

11. Beginning at dawn, 8 December, to the end of the game, ORANGE had approximate information of the BLUE position, and once this was established ORANGE felt more confident and began launching light forces and destroyer attacks upon the fleet. It must be noted that the initial contact was made upon the assumption that the ORANGE Commander-in-Chief, 4000 miles distant, could accurately communicate with all his forces and effect a re-distribution of his scouting forces which had failed to contact the BLUE fleet. On the other hand, if it had been assumed that this could not be done, it is quite probable that the BLUE fleet would have proceeded without interruption to the WESTERN PACIFIC. However, with contact made and maintained, the BLUE fleet formation became subject to attacks quite the same as in other previous years.

12. During the night of 10-11 December ORANGE launched a heavy massed torpedo attack on the BLUE fleet from the Northwest, but a change of course to South by the BLUE fleet delayed the torpedo attack and brought about only an ORANGE cruiser action. A second massed torpedo attack was made on the night on 14-15 December, with cruisers leading the two attack groups. As a result of these massed torpedo attacks and other offensive measures, BLUE received considerable damage to her battleships, carriers and cruisers; and, besides this, BLUE nearly had her entire train receive an under-water attack. By luck only, the loss of the train was averted, and ORANGE on the other hand lost most of his destroyers and received great damage to his battle cruisers and carriers. Generally speaking, BLUE was not able to continue the expedition and have a sufficient force in any sort of fighting trim to accomplish much after arrival. ORANGE on the other hand was equally weakened, with his capital ships about as far from the ORANGE bases as are the BLUE damaged ships from HAWAII.

Special Notes on Enclosures.

13. In the critiques by Captains Rowan and Todd (Enclosure M), special attention is invited to the background of the problem and the details of the set-up. Their comments upon the type of war which ELUE might use against ORANGE, and strategy in general, are worthy of consideration. In a study of the ELUE-ORANGE situation in the WESTERN PACIFIC, the difficulties which confront ELUE in an overseas expedition are pointed out.

14. It is interesting also to note the mission of Admiral Train (with Enclosure M) as Commander-in-Chief of the ORANGE fleet after his night attacks upon the BLUE fleet. Inasmuch as he was detached from duty at the War College at about the time his night destroyer attacks were being made, he was not present to be in command of further ORANGE operations which took place. He was not therefore able to be present at the discussions in the critique which took place after the problem.

Operations in the game.

15. The operations of the BLUE fleet under the Commander-in-Chief, Admiral King, are especially interesting to us in a study of the WESTERN PACIFIC. He used a solution which was purposely selected to investigate the possibilities of the route south of the Mandated Islands where ORANGE would have to have a logistic problem to consider. After his sortie from LAHAINA ROADS and the change of course to the south, it is interesting to note the surprise and upset which was brought to ORANGE. In many other problems of this type, ORANGE was able to contact and constantly report the movements of the BLUE fleet. In this problem, however, the BLUE fleet went along peacefully for a week unmolested. This brought about a complete change in the scouting disposition of ORANGE and baffled the ORANGE Commander-in-Chief. The cruising dispositions used by HLUE are of special interest and are shown in diagrams as enclosure (J). The use by BLUE of his air forces for scouting and later the loss of the AKRON and MACON are noteworthy. (Incidentally, on the game board the AKRON was lost at about the same date in April as was the actual loss off the coast of New Jersey on April 1933). The operations of the BLUE submarines and destroyers have been described by Captain Conant Taylor, U.S.N. (Enclosure 0-2), and the comments on battleships, air forces, cruisers and train are shown in Enclosure (0-1) by Captain Wilbur R. Van Auken, U.S.N.

16. Considering the problem after it had reached the tactical stage, the remarks are given in detail by Captain Coffey in the Critique appended (Enclosure M). This is of special interest in commenting upon the actions on the night of 10-11 December in which the cruisers and destroyers played a prominent part on both sides. The consideration of the use of torpedoes and cruisers at night, star-shells, searchlights and gunfire are of special interest. And, again, the description of the night action on 14-15 December gives a very excellent picture of the night conditions, the BLUE Cruising Disposition Number Two, and the offensive made by the ORANGE light forces against it. Inasmuch as there have been few occasions to study night actions on the game board, these two engagements brought out interesting points relative to the use of different types of ships and different weapons at night.

17. Of special note to those on the BLUE side (regardless of the heavy ORANGE losses) is the fact that three battleships were sunk or reduced below 10 knots speed; 12 heavy cruisers disabled, sunk, or seriously damaged; three light cruisers disabled or sunk; and the aircraft RANGER sunk, besides the loss of over

30 destroyers, some auxiliaries and planes. With these losses over 3200 miles away from PEARL HARBOR, it is probable that all ships with under-water damage would be lost. Nevertheless the ORANGE losses of 14 heavy and light cruisers and nearly 75 per cent. of all his destroyers were severe. As to the actual lineup of the two fleets after these engagements, both Commanders-in-Chief considered themselves superior. It is therefore problematical as to what would happen during the next week at sea. However, it must not be forgotten that this heavy damaged BLUE force x is proceeding to a base in the PHILIPPINES where it must receive repairs, fuel and general service. Therefore, if further casualties come to the BLUE train or tenders, it is difficult to appreciate how the BLUE Commander-in-Chief can maintain his force. This point brings up the question of BLUE'S being assured of a permanent base, fully equipped and secured against the enemy attacks; for as the problem ended, even assuming that another general engagement did not take place, the logistic situation for BLUE is bad.

ORANGE Operations.

18. The complete ORANGE operations and analysis of the problem were made by Commander G.R. Hoey, U.S.N., of the Research Department, who as a student in the Senior Class had been in command of a force on the ORANGE side. His detailed remarks on the operation are appended for future study as Enclosure (0-3). Comments upon the ORANGE problem and operations, both on the strategical and tactical phase, are given by Captains Rowan and Todd in Enclosure (M); and the details of the tactical phase covering the ORANGE side as brought out in the two night engagements are given by Captain Coffey in his Critique (Enclosure M).

General Statistics and Leading Features.

19. In order that the statistics and leading features be taken from the problem after its playing, the Research Department was fur-nished with a comment by Commander Rankin of the Strategy Department of Operations of the College, who assisted in the drawing up of the problem and the chart maneuver. In this enclosure is found a brief description of the operations and the damages which took place in the night attacks. Finally, the outstanding features as observed by him are of special value. On the BLUE side, the use of a line of slow submarines on the northern flank for giving warning; the use of the large dirigibles for information, their vulnerability and lack of value; and the use by BLUE of radical change of course with his formation were outstanding; whereas on the ORANGE side he notes the failure of the ORANGE submarines to regain contact after the BLUE fleet's departure and the conviction of the ORANGE Commanderin-Chief that BLUE would take a northerly course, besides the fact that the ORANGE Commander-in-Chief attempted to direct details of x operations 6000 miles away. He showed the henormous waste of effort by ORANGE in scouting during the first eight days of the BLUE fleet movements and the attempt of the ORANGE cruisers to obtain

unnecessarily accurate information from dawn 8 December to 10 December. These repeated contacts put BLUE on the alert and were responsible for the radical change of course of the BLUE fleet on the evening of 10 December which resulted in the first night torpedo attack being cancelled before the attack groups made contact.

Conclusions.

20. In a consideration of all phases of the problem and all data appended, the following general conclusions or possible lessons may be drawn which will be interesting to us in a study of the BLUE-ORANGE situation, plans and operations in the WESTERN In the first place, it was assumed for BLUE that his PACIFIC. entire navy was in all respects ready and assembled at LAHAINA ROADS as existed in 1933. This of course is entirely proble-It would be impossible and impracticable for such a matical. BLUE force to be available, trained and ready. The manning of all ships, their docking, fitting out and mobilization at LAHAINA, even if desired, would be an enormous problem. Besides, it is quite probable that the BLUE grand strategy of the war might require a naval strategy quite different than was assumed in this problem. For example, it is believed that the BLUE fleet might be divided so that a certain part would be assigned to the CARIB-BEAN, another to the PANAMA CANAL and PACIFIC COAST, besides the part left at the HAWAIIAN base. In a consideration of this phase, it would seem apparent that not over 50 per cent of the BLUE navy would be assigned as a striking force for the overseas expedition that was attempted in this problem. And of such a force which had little or no training in large cruising dispositions, communications, and with possible foul bottoms bringing a reduction of fleet speeds, the actual BLUE fleet would be quite a different one than was given the BLUE Commander-in-Chief at the outset of this game.

21. On the ORANGE side, the same comment may be made relative to their forces. It is not presumed that without the knowledge of BLUE, the ORANGE navy could have been disposed far into the BLUE zone in such a force. The logistic problem which would have faced ORANGE with such an advanced force is a most difficult Considering his communications and the enormous area which one. he must scout, his situation is not a pleasant one. Whether or not BLUE would have had such an easy time evading ORANGE submarines In many other games of a similar type off HAWAII is a question. the BLUE fleet has been tracked. But nevertheless in this game, due to the combination of circumstances, the ORANGE Commander-in-Chief was obliged to re-dispose his scouting force, which finally contacted the BLUE fleet after a week. It is possible that this could have been done and it illustrates (as we have noted frequently on the game board and in our fleet maneuvers at sea) that a pre-conceived plan and operation order can not always be carried It is the unforeseen \\that happens and sometimes the conout. viction and decision of a Commander-in-Chief may be a wrong guess.

In this case for ORANGE it was, but was corrected by later dispositions.

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Considering the BLUE fleet as it existed and as it was 22. disposed, it appears that the BLUE Commander-in-Chief took advantage of all situations and accomplished as much as might be expected with the force which was given him. His radical changes of course, indoctrination of his force, and use of his formation appear to be about as much as could be expected. His aggressive use of his air forces for scouting and keeping down submarines Luck, at times, was more, especially when the was noteworthy. BLUE train escaped destruction on the night of 10-11 December. The use of the AKRON and MACON in the game was interesting. Even though they accomplished nothing, they at least kept ORANGE concerned until they were destroyed. The ORANGE air commander (Captain F.R. McCrary, formerly commander of the SARATOGA) ex-pressed the view that he was afraid these dirigibles might contact the ORANGE air dispositions in the Mandated Islands. Looking at their movements from the ORANGE side, it appears that potentially they were of advantage to BLUE in their psychological effect upon Nevertheless, once seen, both the AKRON and MACON could ORANGE. not withstand any heavier-than-air craft attack. Their value in the game was generally negligible.

23. On the subject of damage and damage control, it was shown again as a fact that the BLUE damage and losses far from the HAWAIIAN base would leave a crippled BLUE fleet after several ORANGE attacks. When it is realized that all of this damage resulted from two night attacks only, it can be visualized what <u>might</u> occur if the BLUE fleet had received attrition attacks from the beginning of the voyage.

24. The previous studies made of games since 1927, which were reported upon under the subject of the Balanced Treaty Navy, in May 1933, are confirmed all the more by the operations of this BLUE'S losses in capital ships, cruisers, tenders and game. train vessels in a formation under 14 knots continued about the same as in other years, where the formation speed was 10 or 11 This brings up the point as to whether even a 15-knot knots. formation speed under similar conditions would result in much It appears that once the BLUE fleet is contacted improvement. and tracked, sooner or later ORANGE will make a massed attack at night or at dawn with all or part of his force. Furthermore, it appears possible for ORANGE to so dispose his submarines as to get foul of the BLUE formation as it passes through his line. It appears practically certain that the BLUE cruising disposition must meet such an ORANGE massed attack and be upon the defensive; and if such massed attack of surface ships is aided by a strong ORANGE air offensive the damage to the BLUE fleet would rise very high.

The strategical features of this problem bring up the 25. important point of whether the entire operation fits in with the grand strategy of BLUE. Considerations of all factors of the BLUE government which form grand strategy would make it appear that no such overseas expedition under present Far Eastern conditions would be attempted. It would seem certain that the people would not back such a war where the chances of failure of the fleet and its convoy appear so tremendous at the start. Therefore this problem accomplishes a great deal in bringing out the various points which must be overcome by BLUE in all strategical and tactical plans. Of those important are -the size and condition of the HLUE fleet, the training of the personnel, the logittics, the security of HAWAII, the WEST COAST and the PANAMA CANAL. Further, the fact that MANILA cannot be expected to hold more than two weeks. The lack of a secure base in the PHILIPPINES and the enormous project of taking a suitable base against opposition and holding it until the fleet arrives, and even after its occupation, stand out each year. Whether or not DUMANQUILAS or any other base can be guaranteed to the BLUE fleet for future operations is a serious question.

Considering the various types of ships, a study of this 26. problem emphasizes the vulnerability of battleships from torpedo fire and the possibilities of what bombing attacks or even poison gas might do. In this problem no poison gas was permitted on either side and therefore BLUE had one less worry. In future games it is understood that poison gas will be used and it is possible that the BLUE battleships, carriers and tenders may suffer. In any event, the BLUE under-water damaged battleships in any sort of heavy weather would probably never be able to seturn safely to HAWAII, and the damages to heavy cruisers would probably cause their destruction in heavy weather, when it is visualized how easily and seriously their hull can be penetrated. (Our first opportunity to observe this in our new 8-inch cruisers even from a collision took place in October 1933 when the CHICAGO was struck by a British freighter of only 6,000 tons at low speed. The damage received on the port side forward of the CHICAGO compelled her immediate passage under good weather conditions, only 200 miles from POINT SUR, CALIFORNIA, to the Mare Island Navy Yard). The need for more destroyers or sloops by BLUE was most apparent. The continued value of submarines on both sides was again emphasized. The contacts made by submarines and their use in attrition attacks are most important.

26. The work of the air forces is of special interest in view of the fact that the BLUE Commander-in-Chief and the ORANGE air commander are both naval pilots and ex-commanders of the aircraft carriers LEXINGTON and SARATOGA. They used the air forces aggressively and according to the latest doctrine and their own experience. Had the game continued longer, it is probable that the air operations on both sides would have brought material results.

27. The use of destroyers in these night attacks by ORANGE was of a most aggressive nature and resulted in a huge loss. The firing of torpedoes at night and the methods of firing are matters of great importance. In such a melée it is problematical as to how practicable curved fire ahead is from a division or squadron of destroyers which have made an attack at night upon a formation in which the location of capital ships and cruisers is unknown. Furthermore, the question of recognition signals and the control of gunfire under these night conditions is a serious one. With the illumination of searchlights and starshells it would be very difficult to tell friend from foe in such a melée. Whether or not the use of torpedoes by cruisers at night justifies carrying torpedoes on all heavy cruisers is another question. In all of these night surprise encounters upon which decisions were made on the game board, there is a possibility that no maneuver rules could visualize and cover the unforeseen conditions.

28. With the amount of data and observations made upon this problem - more detailed than have heretofore been compiled - it is possible to establish a foundation for future study of such problems. Therefore an attempt was made to retain all records, data and reports which might have a value in future studies. A consideration of all of these, and even of the personnel features of the game, may be of assistance in drawing up future games and playing future problems. It appears that with the results of future games thoroughly analyzed there may come a time when sound deductions and conclusions can be drawn as to all the various merits and factors of the strategy and tactics to be used in a war in the WESTERN PACIFIC. This should also be of value to the students of the Advanced Course who may concentrate upon the planning and conduct of such a campaign.

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Wilbur R. Van Auken, Captain, U. S. Navy.

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APPENDIX - ANALYSES OF PREVIOUS BLUE-ORANGE PROBLEMS 1927-1928, INCLUSIVE, SHOWING DAMAGE INFLICTED ON BLUE.

(Accompanying letter from Research Dept. to Pres. Naval War College, of 6 December 1933)

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1927 OP. II Geme days <u>45</u> 44 Sr. 26 Jr. 12 Staff War days <u>27</u>

Method and Route

ORANGE used forces in taking of Phil-ippines and Guam. Then used Striking Force in attacks on BLUE.

1928 CP. IV Game days <u>36</u> 42 Sr. 36 Jr. 15 Staff War days 26

ORANGE captures Manila Striking Force used for attrition attacks before main engagement off Tawi Tawi 25 March

1929 OP. V Game days <u>45</u> 49 Sr. 52 Jr. 14 Staff War days 38

1930 OP. III Game days <u>42</u> 48 Sr. 35 Jr. 14 Staff War days 17

1931 OP. IV Game days <u>55</u> 46 Sr. 39 Jr. 18 Staff War days 17

1932 OP. IV Geme days <u>51</u> 42 Sr. 36 Jr. 16 Staff War days ____

ORANGE planned to make attrition attacks before gen-eral engagement in Philippine area with all forces.

Attrition attacks prior to engage-ment with Main Body.

ORANGE	Force

Philippines & Guam oper	ation
4 CC 3	ADO
12 CL 4	XOCA
4 OCA 1	CL
48 DD 16	DD
3 CL 12	SS
2 CV 1	007
1 AV.1 XAV 1	XAD
2 OCM 1	AS
23 AM. 13 XAM 2	XAF
3 XAD 5	AO
2 10 5	XAC
99 XAP 6	XAP
M	
Tactical Phase	
6 BB	
2 CC	
11 CL.3 OCL	
3 0CA	
76 DD	
1 57	
16 55	

Available at beginning

6 BB,4 CC	4 AS
4 CA,6 OCA,11 XOCA	4 XAS
18 CL,5 OCL	3 AD
2 CV,1 0CV	3 XAD
8 DL	2 AV
81 DD, DM	15 AO
10 0DD	4 AC
34 SS,10 0SS	15 XAC
10 SF,8 OSF	2 AF
2 OCM	4 XAF
24 AM	1 AG
1 PG	2 A.E
plus	2 AK
1 CL,3 DD	1 XAK
10 March	3 XAV

Tactical Phase

6	BB,3 CC
5	OCA,4 CA
16	CL
7	DL
68	DD,2 ODD
1	OCM .
6	DM, 10 AM
4	SF.2 OSF
8	SS.5 088

Force ready by D+30 Navy

4	CC	2	AC
5	BB	3	AF
5	CL,6 OCL	13	AO
2	CV,1 0CV	10	XOC.
7	OCA	2	XCL
5	DD	4	XOC
B	DL	5	XAS
5	SS,11 SF,4 SM	2	XAV
4	OSF	7	XAF
1	PG,2 AV	7	XAO
2	OCM		and
4	AM		XAK

2 DL 3 BB 3 CC 2 CV 27 DD,4 ODD 40 SS and SF 6 OCA,4 XOCA 6 PG 8 CL,2 OCL (see remarks on BLUE)

London Treaty Ndavy In Philippine Campaign built to 1937

strength.

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1 XCL 7 XAK 2 XAP Damaged

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CL

D + 60

London Treaty Nawy built to 1937 strongth.

6 BB 3 CC 12 CA 4 CLV 24 DL 11 XAH 103 XAK 20 XAO 22 SF, 4 SM 13 SS 2 CM 15 DM 16 AM 40 XAP 10 XAR 8 XAS 13 XAV 6 PG

4 SM 13 SS 1 CM 45 DM

6 BB

3 CC

5 CV

10 CA

20 CL 24 DL

22 SF

	4	XAT	7
Availab	10	D	+
11	7	CL	
7	X	CV	
23	2	CM	
31	2	CAC	
7	3	CAD	
7	3	AE	

On M+10 Day 2 XCL 2 XCV 6 XCM

8 XAC 4 XAD 2 XAE 4 XAH 26 XAK 8 XAO 22 XAP

6 XAR

Actual existent Records not complete. Manila Bay.

RESEARCH DEPARTMENT Naval War College

May 1933

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- Abstract of Trans-Pacific Problems as Played at Naval War College, Newport
 - (ORANGE damage in operations against BLUE 1927-1932)
 - Note: Data on BLUE shown on separate sheet.

Losses or damage to GRANCE forces

Prior to Tactical Phase on 27 February 27 February Damage Damage Loss Loss 1 CL 8 SS and SF 2 88 2 CV 1 CL 1 CC 1 BB 2 OCL several BB 1 007 1 CL 2 CC 24 DD -----Record does not state 9 XAK all losses clearly 1 XOCA

ecord units	of demage by incomplete	Percentage de of life at		
	2 55	ORANGE		
	2 CV			
	2 CL	65%	Caj	
	1 00	70%	Cri	
	1 BB	45%	DD	
		37%	SS	
		0	Mir	
		and		

Remarks

OL T	ile at oegini	nng
ANGE		BL
5%	Capital	7
0%	Cruiser	10
5%	DD	3
7%	SS	
0	Mind iv	2
9%	Air	3
5%	Total	6

beginn	i terms	
	BLUE	
ital	78%	
ser	100%	
	32%	
	8%	
1 17	27%	
	315	

Guam Bonins MacKenzie

Pelews

Maug

Guam

Pelews

Bonins

Maug

Uluthi Ulie

Total pla	nes avail	able at star in Phil.are	t - BLUE 268	B = ORAN	CE 337 168
Air Force	as on both	sides almos	st annihilate	d.	
Combatan Southern 1	t ships af Philipping	loat in s at end:	Unde	ama ged :	
ORANGE	Type	BLUE	ORANGE	Type	BLUE
5	BB	10	0	OCA	• 2
2	CC	0	4	XOCA	0
5	0CA	1	1	OCL	0
4	CL	2	2	DD	18
2	DL	0	0	SS	12
24	DD	61	0	OCM	2
0	OCV	1	0	XAV	2
1	XAV	9			
7	SF	2			
2	SM	0			
30	SS	18			
9	055	0			
1	0014	2			

Condition of Fleet at end not given.

Guam Maug Truk Pelews Hotje Ponape Jaluit



ORANGE apparently made one night air attack on BLUE on 24th day, losing 1 CL and 27 VT and making one bomb hit on a BB, one on a CV. ORANGE then concentrated all forces in Philippine area, allowing BLUE to make Tawi Tawi. The two fleets finally met SW of



RESEARCH DEPARTMENT

Naval War College

July 1933

BLUE

Date & approx.No. officers involved in Game	Method and Route	Disposition & Speed	Time of Year	BLU
1933 OP. IV Came days <u>48</u> 48 Sr. 41 Jr. 16 Staff War days	S.Gilbert Islands keeping 500 miles south of Mandate Islands.	Circular 12 Kts. Limited by Train.	Left Hawaii 30 Nov. War declared	15 BB 4 CV 15 CA 9 CL 87 DD 20 SS 1 SM 1 CM 4 DM 2 ZR
				14 AM

Ast	ati	0	
2	CA.		
4	PG -		
1	PY		
13	DD		
1	AD		
- 6	ss,	3	13
1	AS,	1	AI
1	AV		

LUE	Force Convoy	Remarks	Lossos
	4 XAH & AH 4 XAE & AE 4 XAP & AP 4 XAP & AP 4 XAV & AY 4 XAR & AR 5 XAS & AS 22 XAO & AO 6 XAD & AD 4 XAF & AF 31 AF, AM, DM, ote.	Actual ships built and building and ap- propriated for. 1932.	2R-5 destroyed 2 I ZR-4 10 I ORANGE attrition a night of 10/11 Dec by planes based on <u>Damage</u> up to and including night action 10/11 7 DD sunk 3 CA sunk 1 CA - 50% UW De BB-37 - 65% UW D returned Honolu
MM LD			

BLUE had 584 planes of all types at be-ginning of game.

ORANGE

6	BB	7 AC & XAC	
2	CC	20 A0 & XA0	
4	CV	2 AF	
12	CA	12 XAK	
17	CL	4 XAE	
94	DD & DL	4 XAH	
65	88	4 XAR	
16	CM, DM & AM	13 XAP 1/2	
3	Netlayers		
	China Sq	uadron	
	(not under	C-in-C)	
6	CA	2 XAD	
7	CL	1 XAS	
21	DD		
	DO		

10 PR 15 SS

Actual ships built and building and ap-propriated for. 1932. ORANCE kept his BBs and 1 CV at Okinawa, put most of his DDs, cruisers and submarines in a Striking Force or stationed in the Mandate Islands to oppose movement of HLUE to bestward. Had shore based airplanes in Mandate Islands. Striking Force (3 CC, 8 CA-new, 7 CL-old, 3 CL-new, 6 XCL, 32 DD-new, 34 DD-old, 24 DL, 6 CL-old as destroyer leaders, 3 CV with 64 VF, 32 VB, 44 VT, and 44 SS and auxiliaries). Undamaged Damaged 6 BB 1 CC 3 CV (flight decks gone) ORANCE SS lost contact 1 Dec. ORANGE cruiser scouting line, using planes, regained contact 1 CV (amall) 1 CA 8 Dec. 4 CA 2 CL 6 CL 3 DD ORANGE made attacks as given above. 12 DD 60 SS During night attacks CRANCE losses -ORANGE had 470 planes 13 CM & AM ORANGE lost: all engagements: or all types at begin- 150 plames of ning of game, including 82 with A.E.F. all types 7 CA 9 CL Damaged See above. 79 DL & DD 2 CC 5 SS 3 CV 3 DM 1 CA 1 CA 2 CL 3 DD Additional -Torpedo hits from all sources on both sides -7%. .
 Planes
 VF
 VS
 VB
 VT
 VP
 VO
 A.E.F.
 Total

 Losses
 100
 38
 50
 80
 32
 2
 18
 320

 Remaining
 20
 20
 10
 10
 16
 64
 150
ORANGE Torp.hits 7% " 4% " 10% " 25% Cruisers Remaining 20 20 10 10 10 16 64 Destroyers Planes Loss = 68% Subs

7	CA	- sunk	or d	lisabl
7	CL	-		
57	DD			
24	DL			
14	VS	planes	lost	•

Abstract of Trans-Pacific Problems, beginning 1933 - with most complete data.

Total Auxiliaries Lost

bec. off Rongelab. : CRANGE lost contact with ELUE on 1 Dec. Did not c. ahead of Fleet. : regain contact until 8 Dec.

ttacks were confined to two massed destroyer attacks led by cruisers, . and 14/15 Dec.; two air attacks by carrier based planes; 3 air attacks Mandate Islamis; and by submarine attacks.

a had men by Day and a final a state of the	0 10
: Detween II Dec. and : during night action 14/15:	a ak
.: night action 14/15 Dec .: Dec. and to end of game .:	
: 3 BB damaged: : BB-33 sunk :	wr. de
: BB-37 - 50% UW : 5 CA "	AP (
: BB-38 - 20% UW : 2 CL *	
: BB-43 - 20% UW : 2 CV (2 and 4) munk	
: CV-2 - damaged : 20 DD sunk :	
: CV-4 - " : 1 DM "	
: 2 CA munk : 2 AM "	
: 1 CA - 645 UN : BB-39 demaged	
: 1 CL damaged : BE-43 - 505 UV	
: (1 DD sunk) : BR-45 - 405 AW	
: (1 DD - 30% dam.) : BB-46 - 10% UW	
: (Philippines) : BR-48 - 245 HW	
· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·	
THE TO THE TO THE THE THE	
Tanes 17 13 15 11 17 10 14 10481	
Remaining 40 42 36 50 60 18 9 261	

			by ORANGE
BBs 39, 37, 43 a ropairs.	nd 3 DDs returning to	Hawaii for	See special Pelews Truk
We end of Proofe	m stor has remaining:		Rongelab
Undemaged : 7 BB : 2 CV : 2 CA : 5 CL : 71 DD : 21 SS : 3 DM : 261 planes of :	4 BB (10 to 40% dam.) 4 CA 1 CL 11 DD	: All of train in- tact less 2 AR 2 AR 1 AP	Jaluit Wotje Guam Nomoi Kapingaman
ELUE now equal i in submarines an	n cruisers to ORANGE, d superior in all othe	inferior r types.	

chart

angi

At end of game ORANGE had about 45 SS taking position ahead of BLUE Main Body.

Loss = 58%

Game was called 16 Dec. with HLUE west of Admiralty Islands and about 1500 miles from Dumanquilas.

Sources of damage:

ORANGE		BLUE	
6%	Torp.	13%	
10%	Bombs	4%	
27%	Guns	15%	

