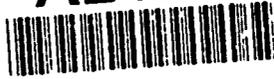


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NAVAL WAR COLLEGE  
Newport, R.I.

LOGISTICS LESSONS FOR THE OPERATIONAL COMMANDER  
- THE FALKLANDS WAR -

BY

MAJOR PAUL VALOVGIN  
UNITED STATES AIR FORCE

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Operations Curriculum.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College.

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**- THE FALKLANDS WAR -**

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## CHAPTER I

### INTRODUCTION

The general mission of any operational commander is to take forces into a theater of operations and achieve the operational objective. Victory results from two closely related elements. First, the operational commander must have an operational plan that will result in mission accomplishment. Secondly, the commander must ensure that his troops properly execute the plan and react to changes in the plan as events on the battlefield take shape.

A study of wars, campaigns and operations throughout history indicates that nations have met varying degrees of success both developing operational plans and executing those plans. The 1982 British and Argentinian conflict known as the Falklands War provides an interesting study. In this conflict, planning and executing logistics actions had a tremendous impact on the battlefield.

Despite the relative speed at which Great Britain accomplished its objective, the British faced a tremendous obstacle in supporting the war effort. The Falklands are well over 7500 miles from Great Britain--both Singapore and Tokyo are closer. During the war, the British moved over 100,000 tons of supplies and equipment as well as 9,000 troops to the islands.<sup>1</sup> Some of their success reflects superior planning. However, one real key to their ultimate success was their initiative, hard-

work and purposeful resolution of significant logistics problems which threatened their operation from start to finish.

Consequently, the remainder of this paper will look at how the British supported their war efforts. This paper will identify British logistics successes and failures from the initial response stage through war termination. These successes and failures will then lead to lessons learned and recommendations for the operational commander.

## CHAPTER II

### INITIAL RESPONSE

#### BACKGROUND

In February and March of 1982, British and Argentinian representatives finished another set of negotiations on the sovereignty of the Falkland Islands. Both countries had economic and/or political interests in these islands and since 1964, had stepped up efforts to resolve their differences over the Falklands. By 1981, Argentina struggled with massive internal problems and the Army Chief of Staff, General Leopoldo Galtieri, assumed the presidency in December of that year. General Galtieri viewed the recovery of the Falklands/Malvinas Islands as the glue which could hold the country together and give credibility to the country's military leadership. With credibility, the military government could implement an economic reform plan and hopefully solve a portion of the country's severe economic problems.<sup>1</sup>

On 18 Mar 1982, the Argentinians landed their first troop contingent on South Georgia Island and on 2 April, Argentinian troops landed on Port Stanley, East Falkland Island. The very next day, Prime Minister Thatcher said "The Falkland Islands and their dependencies remain British territory and no aggression and no invasion can alter that single fact" and by 5 April, British forces deployed to recover the Falklands.<sup>2</sup> Six weeks later, the

first British ground troops landed on the Falklands and by 14 June, the Argentinians surrendered.<sup>3</sup>

### PLANNING

In late March, 1982, British military planners began preparing for contingency operations in the Falklands. Although they did not have a formal contingency plan on-hand, their NATO deployment plan served as an initial reference source to help them get men, material, and equipment to ports.<sup>4</sup> On 2 April, when the British Cabinet decided to send a task force to the Falklands, they executed their NATO emergency plan.

In the NATO plans, the British rail service moves all War Maintenance Reserve (WMR) from storage facilities throughout the country to ports.<sup>5</sup> Since WMR keeps troops supplied for 30 days in a war, over 5,000 tons of fuel, vehicles, equipment and stores are committed to WMR.<sup>6</sup> When the British rail system quickly acknowledged they could not move this quantity of cargo by the deadline imposed due to repositioning and unloading constraints of current rolling stocks, the British successfully moved to the second option--road movement. Military owned trailers and civilian transporters successfully moved all cargo to ports to meet their imposed deadline.<sup>7</sup>

### STUFF SHIPS

Superior planning and execution of a NATO recommendation from the late 1970s resulted in the British establishing a

program to use civilian merchant ships to move military cargo.<sup>8</sup> Formally called the Royal Fleet Auxiliary, these ships were more commonly called STUFT--Ships Taken Up From Trade.<sup>9</sup> The British requisitioned or chartered over 50 ships from 33 separate companies to support sealift needs.<sup>10</sup> Most STUFT ships served as logistics support ships to include cargo carriers and even hospital ships. Moreover, the British immediately recognized the significance of a sustained refueling capability. As a result, they requisitioned 14 tankers to support operations.<sup>11</sup>

As naval planners focused on their requirements, they inspected STUFT ships to see how to best use these craft. In some cases, personnel were flown out to the embarked ships so they could assess vessel capabilities and therefore shave a few precious hours off the conversion time.<sup>12</sup> When possible, ships were selected to capitalize on their existing capabilities. At one port, the Royal Navy turned fishing trawlers into minesweepers. Oil rig repair ships fit in superbly as forward maintenance and repair facilities and even provided meals to troops aboard ships whose galleys needed repairs as a result of battle damage.<sup>13</sup>

Making those STUFT craft usable for the task force commander is a tremendous success story in and of itself. All ships underwent considerable modifications to meet deployment requirements. Shipyards installed military communications equipment on all vessels as well as replenishment-at-sea gear. Sixteen ships received helicopter flight decks and this proved to

be a critical modification as the British unloaded most ships over-the-shore at San Carlos.<sup>14</sup> In short, these ships were first-rate auxiliary craft that hauled supplies, ferried Harriers and helicopters and in one case, served as an off-shore maintenance facility for helicopters.

Some individual stories deserve special note. For example, the SS UGANDA, when requisitioned, had just completed a Mediterranean voyage. Within 60 hours of passenger disembarkation, the British shipyard workers installed a helicopter pad, casualty gangways, operating rooms and repainted the entire ship in accordance with Geneva standards for hospital ships.<sup>15</sup>

#### CONSUMABLE GOODS

Interestingly, the British divided responsibility for some common consumable items by service. For example, the British Navy provided all food and fuel to employed units.<sup>16</sup> This saved duplication of effort and probably saved much sealift capacity for other critical items.

Although initial actions based on the NATO emergency plans generally proved effective, shortages of some consumable items indicates that these plans need some adjusting. Specifically, troops aboard the SS CANBERRA gave blood enroute to the Falklands as blood supplies shipped failed to meet planned usage rates in theater.<sup>17</sup> Besides an obvious planning/execution error, this

must have had a tremendous impact on morale for those troops about to enter combat.

The planned consumption rates for munitions were flawed and almost seriously affected the British operations. In the attack on Goose Green and Darwin, some 105 MM artillery positions actually ran out of rounds--actual consumption rates were four times planned rates.<sup>18</sup> Similarly, some 105 MM batteries only had six rounds remaining when the Argentinians surrendered on 14 June.<sup>19</sup> Also, at the outset of hostilities, the British placed an order for 100 AIM-9 missiles with the United States.<sup>20</sup> Perhaps their NATO committed supplies remained in some forward location in Europe but one would imagine that the British would have enough missiles to support this contingency.

#### SUMMARY - INITIAL RESPONSE

Initial British actions resulted in a solid logistics support foundation for the task force commander. The NATO plan ensured all personnel, equipment and supplies arrived at embarkation ports/airbases in a timely manner. Plans to requisition merchant ships worked superbly and gave the commander a tremendous sealift and sustainment capability. Emphasis on tanker support reflected that the British quickly grasped the need for unconstrained strategic lift. Unfortunately, problems with consumable goods indicated that planning factors demanded immediate attention from the operational commander to prevent shortages in the field.

## CHAPTER III

### PLAN EXECUTION ACTIONS

#### TACTICAL LOADING OF SHIPS

Although the NATO plan provided for getting men, equipment and supplies to port, the tactical loading of all ships depended on the employment scheme from the operational plan.

Unfortunately, 17th Logistics Regiment personnel loading ships were told that forces would make an administrative landing so proper tactical loading schemes were abandoned.<sup>1</sup> Additionally, the British wanted to send a sizable force quickly to the Falklands so loading became a function of "how fast" instead of just "how".

Like any contingency operation, units sent their critical equipment to the ports first. Unfortunately, the first equipment in the port marshalling areas was also the first equipment loaded on ships. Taken further, the first items on ship are often the last items off so the British found themselves in a precarious situation. Ships like the BALTIC FERRY had all munitions in the bottom holds of the ship and could only be off-loaded through the stern entryway after removing all other cargo.<sup>2</sup>

Shortly after getting underway, logistics regiment personnel attempted to fix some of the known loading problems. Unfortunately, they traveled without accurate cargo manifests and in complete radio silence so logistics personnel could not easily build load lists enroute.<sup>3</sup> Finally, the 17th Logistics Regiment

was not aware of the operational plan; therefore, they had no idea on how to plan for the off-load once they arrived at the Falklands. All their planning was based on one premise; that they would perform an administrative landing at the Falklands.

### ASCENSION ISLAND

Ascension Island played a significant role during the entire operation. At slightly more than half way to the Falklands, this small island served as a staging area throughout the conflict. Initially, Ascension served as a cargo marshalling area in an effort to correct some of the obvious loading problems. For approximately ten days, troops partially unloaded ships, repacked items based on need and generally tried to solve some of the major loading problems.<sup>4</sup> Unfortunately, dock space, time and heavy lift limits worked against a complete reloading of support ships.

Similarly, the British used Ascension as a place where ground troops could catch up with their units already embarked or to place entire units on ships that departed without them. Once the conflict began, Ascension served as "the key forward base for the whole operation."<sup>5</sup> Thousands of fixed wing and helicopter sorties flew in/out of Ascension in the 70-odd days of the conflict through the Argentinian surrender.<sup>6</sup> This tremendous increase in flight operations created numerous challenges but apparently British planners thought through some of the major problems.

In particular, keeping an adequate supply of aviation fuel on hand took first priority. Accordingly, the British stationed a tanker off the coast to continuously pump fuel ashore. Initially, fuel bowsers carried aviation fuel from the storage location to the airfield but when this system proved inadequate, Royal engineers built a pipeline to the airfield; truly a responsive action to prevent a staging and storage problem.<sup>7</sup>

Logisticians also had concerns about the routing of air traffic into Ascension. Given the limited parking area and British C-130 and American C-141 sorties landing round-the-clock, aircraft carrying critical parts and supplies had to request landing priority. In some cases aircraft turned around and flew back to Great Britain or to other designated staging posts because cargo on board, although needed, was of a lower priority than other items.<sup>8</sup>

Transport aircraft such as C-130s ensured that critical items arrived when and where needed and served to fill in the holes created by lack of cargo manifest for ships. These aircraft flew from Ascension Island air-dropping supplies which may have already been on a ship sitting just off the Falklands.<sup>9</sup> Without manifests/load lists, needed items were impossible to find. The British generated hundreds of sorties to support this effort. Besides the actual C-130 sortie to deliver supplies, they had to generate an equal or greater number of refueling sorties to get the C-130 to the Falklands and back.<sup>10</sup> Given the average sortie duration of 14 to 18 hours for a roundtrip

flight, the simple tactical loading problem had far-reaching implications.

#### THE AMPHIBIOUS LANDING

On 21 May, the British landed at San Carlos.<sup>11</sup> Almost immediately the Argentinians flew interdiction sorties against the ships in San Carlos harbor. When the Argentinians sunk the ATLANTIC CONVEYOR on 26 May,<sup>12</sup> they seriously hampered British landing efforts. The ATLANTIC CONVEYOR had three of the four total CH-47 heavy-lift helicopters onboard when it sank. The following list shows some of the losses from the ATLANTIC CONVEYOR:<sup>13</sup>

- 3 CH-47 Helicopters
- 6 Wessex Mark V Utility Helicopters
- 1 Lynx-II Antisubmarine Helicopter
- 4000 tents
- Most Helicopter cargo slings

Surprisingly, the British never got replacement CH-47 helicopters to the Falklands until 14 June, the day the Argentinians surrendered.<sup>14</sup>

Without air superiority over the landing area, the British kept their cargo and amphibious ships at sea and only moved them in to the harbor for six hours each evening under the cover of darkness.<sup>15</sup> Add that hourly limit with the shortage of heavy lift helicopters, and off-load capability surfaced as a significant problem for the task force commander.

Nevertheless, there were still many other equally significant off-load problems. In most cases, the STUFT ships had no night

off-load capability using helicopters. Sea conditions played havoc with off loading actions on some occasions also. Twelve foot seas challenged logisticians using landing craft and mexiflote rafts to haul equipment ashore. In one case, personnel reported that mexiflotes attached to roll-on/roll-off ramps were lifted completely out of the water in harmony with ship rolling movements.<sup>16</sup>

Similarly, off-load capabilities between STUFT ships and specialized naval amphibious ships presented challenges for the task force commander. Stuft ships had off-load rates of 20 tons/hour while the specialized naval vessels averaged 90 tons/hour.<sup>17</sup> Unfortunately, almost all the cargo ships were STUFT vessels.

The landing of 5th Brigade really highlighted British problems in executing their amphibious landing.<sup>18</sup> In this case, the 5th Brigade's cargo ended up on two different ships, the BALTIC FERRY and the NORDIC FERRY. Unfortunately, the Brigade's off-loading equipment was on two other ships outside the total exclusionary zone (TEZ) when the 5th Brigade landed. The Commando Logistics Element commandeered a farm tractor, two Eager Beavers, and man-power to accomplish this off-load.<sup>19</sup> Obviously this method of off-loading equipment added many hours, perhaps even days to the eventual assault on Port Stanley.

The bottom line on all the above mentioned problems is that even six weeks after the first British troops landed, logistics personnel were still trying to unload cargo.<sup>20</sup> In short, the

task force commander was lucky he did not need the equipment and supplies on board ships to affect the outcome of the conflict.

#### THE ASSAULT ON PORT STANLEY

Prior to departing, the British made a conscious decision to reduce the number of vehicles taken to the Falklands. With only ten to twelve miles of paved roads on the islands, the British sent 300 vehicles to support a force that normally used 3000 vehicles.<sup>21</sup> Additionally, peat bogs and loose soil negated or limited the effectiveness of most other forms of transportation. The British added to their helicopter fleet but not nearly enough to overcome this 90% reduction in ground transportation. Consequently, British ground troops marched all the way to Port Stanley<sup>22</sup>--an obvious impact on maneuver, surprise and speed of attack.

Lack of vehicles and an unhampered supply line to forward positions also meant that combat resources ended up as resupply resources. In at least one situation, attack helicopters ferried mortar rounds to troops at Goose Green and Darwin because consumption rates were four times higher than programmed.<sup>23</sup>

Discipline links an effective logistics system to effective logistics support for troops in the field. Unfortunately, the loss of the three Chinook helicopters and lack of significant ground transportation may have caused a breakdown in logistics discipline. In short, troops often "hijacked" helicopters to support their immediate mission/goal.<sup>24</sup> Although helicopter

tasking schedules were built, once a unit got their hands on a helicopter, they took care of all their needs regardless of how their needs fit in the printed and coordinated tasking schedule.

Ultimately, hijackings and other logistics problems contributed to the perceived delay in attacking Port Stanley. As an illustration, ground forces needed 12,000 artillery rounds to begin the assault on Port Stanley.<sup>25</sup> One Sea King helicopter was capable of moving only 36 complete 105 MM rounds from San Carlos to forward areas in about 75 minutes round trip.<sup>26</sup> Add in refueling time, maintenance downtime, darkness, weather, hijackings, Argentinian air attacks and one can see how logistics affected all facets of this operation.

Sometimes the line between tactical level problems and operational level problems becomes obscured but in many cases tactical level problems can impact entire operations. In one such case, the British almost compromised their bomb fuzing capability because they lacked chain wrenches to properly tighten the fuzes.<sup>27</sup> Surprisingly, the cold weather caused this problem but given Great Britain's NATO commitments, one would suspect these wrenches should be common issue.

In another case, "clansman radio equipment" was taken from the British Army's Officer Training School and sent on the deployment.<sup>28</sup> The units which received this gear had never used it nor did they have any initial capability to maintain it in the field. This equipment had been sent because the original

communications gear was mounted on the vehicles which never made it to the Falklands.<sup>29</sup>

In another example during the battle for Port Stanley, five artillery batteries fired more rounds in 12 hours than an entire artillery regiment would fire in four years. After firing about 300 rounds, the artillery troops realized they were buried in trash and spent casings. They used the next two-three hours to clean up their position so they could continue effective firing.<sup>30</sup>

Similarly, lack of training and practice moving casualties around the theater definitely impacted the British. Extracting wounded troops from the bare and open battlefield was hard enough and then to have to wait for helicopter support resulted in some casualties having to "lay virtually untreated for up to 5 and in some cases, 7 hours."<sup>31</sup>

#### POST SURRENDER LOGISTICS

Even after the Argentinians surrendered, the British still faced many logistics problems. Troops looked forward to fresh rations after weeks of eating "composite rations--24 hour packs containing tinned and dehydrated foods."<sup>32</sup> The British planned to use the in-place warehouses previously used to store food stuffs for the local populace. Unfortunately, the Argentinians used these warehouses as quarters during their occupation. After weeks of cleaning and disinfecting, the warehouses were finally usable<sup>33</sup> but again, the timetable for unloading and

replenishment was thrown off and that affected all other actions within the operational plan, especially the eventual plan to lengthen the runway.

#### SUMMARY - PLAN EXECUTION ACTIONS

Almost immediately, the British compromised their combat capability by not properly loading ships. Developing the operational plan enroute and then keeping the plan from the 17th Logistics Regiment personnel compounded these tactical loading problems. Tactical loading deficiencies limited off-load effectiveness so ground troops could not aggressively begin offensive operations. Finally, loading problems caused the British to generate perhaps several thousand unnecessary air sorties to find and deliver needed items to the theater.

On the other hand, using Ascension Island as a forward staging area gave the task force commander flexibility. Stops at Ascension helped marry troops with ships and allowed for redistribution and loading of cargo. Installing an aviation fuel pipeline and staging a tanker off shore showed foresight as to the importance of that island.

Conversely, losing 75% of their heavy lift resources seriously hampered the British amphibious over-the-shore capability. Most significantly, logistics problems caused abuses in helicopter usage and the reverse was also true. Similarly, without bringing adequate ground transportation, the task force commander gave up his maneuver and surprise options.

## CHAPTER IV

### WHAT ABOUT THE ARGENTINIANS?

Ideally, a comparison of British logistics and Argentinian logistics actions would reveal important lessons. However, logistics factors played no part in Argentina's surrender after only four weeks of fighting. Simply put, Argentina did not have an effective operational plan that would even give them an outside chance at victory.

That old adage "actions speak louder than words" really helps one focus on Argentinian plans. On 2 May 82, HMS Conqueror sunk the General Belgrano using only two torpedoes. After that action, the 73 ship Argentinian Navy never left Argentinian territorial waters and never threatened the British war effort.<sup>1</sup>

The Argentinian Air Force flew interdiction sorties from Argentina but pilots usually had only minutes to acquire and attack British targets before they had to return to their home bases to refuel and rearm.<sup>2</sup> They flew heroically and in some cases brilliantly to support the operation. They inflicted serious damage on the British ships using only a handful of Exocet missiles and general purpose bombs manufactured during WWII.<sup>3</sup>

Lengthening the runway at Port Stanley would have given the Argentinians a forward-deployed capability. However the Argentinians did not attempt this monumental task as they felt it was virtually impossible to do. If they had attempted to add to

the runway, I doubt they could have completed work successfully before the British responded.

In fact, the British subsequently lengthened and strengthened the runway. Modifications included a 2,000 foot addition, five rotary hydraulic arresting gear, a fivefold increase in apron size three aircraft dispersal areas, five hangars, fuel storage and an offshore pipeline for fuel resupply. But, the British needed six months, 6,000 tons of materials, 5,000 tons of equipment and 1,000 Royal Engineering troops to complete all these upgrades<sup>4</sup>--a monumental task by any standard.

Finally, the Argentinian Army fought defensively from prepared positions. When they surrendered, they still had plenty of supplies and munitions on hand. Again, how these troops were employed played more of a factor in their defeat than any logistics factors.

## CHAPTER V

### LESSONS LEARNED AND RECOMMENDATIONS

LESSON LEARNED # 1: The British developed a flawless plan for mobilizing and deploying their forces. Their plan was built on their commitment to respond quickly to any crisis. They set a time limit on how long they could reasonably take to move forces to a theater, factored in their inherent strategic lift capability, figured out their lift shortcomings, then developed a program to quickly requisition civilian ships to augment their strategic lift. In other words, the British decide on how much force they want to generate to respond to a crisis then work backwards to secure strategic lift.

Conversely, the United States relies on a strategic warning window to give time for mobilizing and moving troops to a theater. We look at how much strategic lift is available then work backwards to see how much of a force package we can move to theater and how long this will take. Between programs such as the Civil Reserve Air Fleet (CRAF) and the Ready Reserve Fleet, the United States looks good on paper for an extended conflict; however, we are definitely limited at the outset of any quick response, large scale operation.

RECOMMENDATION: The Department of Defense has acknowledged a shortfall of strategic lift approaching 21 million ton-miles-per-day.<sup>1</sup> As our force structure decreases over the next five years in response to budget cuts, our strategic lift problem will

appear to decrease as we will no longer have as much of a force to move. However, now that CINCs have an input into the various services acquisition proposals, they must realistically look at their strategic lift needs, identify shortfalls and insist that services build a plan to fix the problem.

LESSON LEARNED #2: Obviously, the British never practiced for a major operation such as they executed in the Falklands. As a result, they made many mistakes and errors, some of which had tremendous impact on their ability to generate and sustain an offensive action to secure Port Stanley. Their execution phase errors are summarized as follows:

- improper tactical loading
- logisticians unaware of operational plan
- improper assumption about amphibious landing
- limited night off-load capability
- poor planning data for consumables
- lack of vehicles for logistics support
- lack of heavy-lift helicopter capability
- poor helicopter usage discipline
- new equipment deployed
- casualty evacuation plans
- poor assumptions on usable post-surrender facilities

All of these execution errors are indicators of a bigger problem.

That bigger issue is that peacetime training and exercises are not logistically realistic and consequently do not help forces identify potential show-stoppers. We assume that by exercising the "tip of the spear" we also validate our logistics support system and obviously, this is an extremely poor assumption.

Command Post exercises are no substitute for troops in the field trying to execute the plan. As Major Jonathan Bailey, Royal Artillery, Stated: "A field training exercise which takes up a

month on the wall planning chart often amounts to just five days in the field."2

**RECOMMENDATION:** To ensure we can project power wherever and whenever needed, we need to have realistic, annual training exercises to practice force employment scenarios. These training exercises need to be large-scale, joint, combined and realistic from a logistics perspective. With a number of DOD installations closing, we should retain a base on either the East or West coast and use this base as an austere training center. The real advantage of a closed down range and base complex is that you can control the training environment--no permanent quarters to house the troops, no Federal Express to deliver critical supply parts, no power production and no in-place hookups for communications or intelligence information. An austere training site would test both the planning and execution phases of an operation and provide critical feedback on combat capability.

## CHAPTER VI

### CONCLUSIONS

In an October, 1982 issue of The Naval Review, an article begins with these words:

In principle, there are no new lessons from the Falklands. It remains another twelve-inches-to-the-foot example...

Nothing could be further from the truth. The real lesson from the Falklands is that military forces continue to make the same mistakes over and over again. We give lip service to lessons learned especially when it comes to logistics issues. In 1915, the British Dardanelles Commission had this to say about the tactical loading of ships:

... it is hardly possible during the course of a campaign to repair errors committed in the original concentration. Shipping ... [had] been embarked as if for landing at a friendly port, irrespective of any tactical requirements and with regard only to economizing tonnage.<sup>1</sup>

Yet in 1982, the British had to learn this very same lesson all over again. Commanders must ensure that forces make their mistakes and learn their lessons during the execution of peacetime training and exercises so that logistics issues do not dictate the course of operations on the battlefield.

## ENDNOTES

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