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ADVANCED INFANTRY OFFICERS COURSE
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AIRBORNE ATTACK

1. THE CAPTURE OF STE. MERE EGLISE, FRANCE, ON 6 JUNE 1944
2. REINFORCEMENTS FOR FIFTH ARMY ON SALERNO BEACHHEAD, 13 SEPT 1943
3. CONTINUOUS PLAN FOR AIRBORNE ATTACKS
4. THE 503D PARACHUTE REGIMENT ASSAULTS CORREGIDOR ISLAND, 16 FEB 1945
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7. THE 3D BATTALION 504TH PARACHUTE REGIMENT INVADES HOLLAND, SEPTEMBER 1944

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ADVANCED INFANTRY OFFICERS CLASS NO. 2

INCLOSURE # 2

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(NOTE: This monograph contains quite a bit of information that has been gleaned through 5 years of airborne experience, which has seen the author as Platoon Leader, Company Commander, and Aide-de-Camp to Maj General James M. Gavin, war-time commander of the 82d Airborne Division).

(While all the various facts are footnoted where necessity calls for it, the continuity in all cases is as a result of this above mentioned experience, and does include the principle on a large scale of "personal experience".)

AIRBORNE ATTACK

PREFACE

This monograph isn't actually a research into military history, but more a significant indication of the trend that military groups will follow more decisively in the future. It does contain examples that are the results of past campaigns -- true-- but the study itself is designed by the author to more or less acquaint the reader in a very general way with the ways and means of airborne attack.

In submitting this study, it is borne in mind that some of the subjects are dealt with in the same sense of importance as others, whereas actually this isn't the case. There are divisions of thought and principles that would require much more space to cover. This isn't possible, so a sense of generality will prevail throughout the entire study as a result.

INTRODUCTION

The science of airborne attack is new, but the underlying principles and basic thoughts are old. (1) It has coursed through military minds for centuries, this idea of landing troops from the air to overcome the enemy both through weight and surprise. (2) It has been fostered by many, among which were such people as Benjamin Franklin (3) and General Billy Mitchell (4), General Billy Lee (5), and the always incomparable Winston Churchill. (6)

Airborne attack as we know it today is the result of only a few years of actual study and experimenting. (7). The Russians pecked at the hull of its possibilities; the Germans further improved on it, but it was at last left up to the American and British armies to really get to the core of vertical envelopment. They dug out points and differences between this highly effective means of destroying the enemy and those measures already in use. It was these two countries, working in cooperation from 1942 on, that caused results to come out fast and furiously. Perhaps the height of their coordination in airborne attack was reached in 1945.This year saw the action of the First Allied Airborne Army, made up of 4 American airborne divisions, 2 British, and elements of French and Polish airborne troops. (8)

Airborne attack as we know it today is quite different from that as employed by this great army in 1945. However, the principles and theories are the same. Its experiences on the field of battle are the text books for this type of warfare. (9)

(1) A-15, p. 1266; (2) A-8, p. 12; (3) A-19, Introduction; (4) A-8,p.vii
(5) A-23, p.vii; (6) A-3, p.232; (7) A-31,p.28; (8) A-12, p.213;
(9) A-23, p.37.

PRINCIPLES AND TECHNIQUES

Airborne attack is an assault operation into combat, using as its means air transportation, and as its weapons the elements of surprise, deception and mobility. (10) The true principle of airborne attack involves the correct use of the means, and proper execution of the operational elements.

Being dependent upon good conditions, and relying on necessary principles to attain success, it is best to first consider the purpose of an attack by air, bearing in mind the above principles.

Where there exists a definite handicap or obstacle to an ordinary tactical maneuver, such as frontal assault, flanking, or an attack to the rear, then is the time to overcome this handicap by an airborne assault. It is capable of hitting at the heart of the enemy, tearing the center of his activities apart, and furnishing an open flank for exploitations. (11)

By "envelopment from above" the assaulting troops use a route and direction that heretofore has been used only sparingly. However, its possibilities are immense, for this approach to the enemy is always open. (12) It can lead to the heart of the enemy and to the center of hostile operations. It is quite conceivable that tactical units cannot get to the nerve center or strong points of enemy aggression through his normal ranks. But envelopment from the air always leaves an open route to the enemy.

Not only does attack from above constitute a serious defense problem to the enemy, but one of the advantages of having units trained in airborne attack is their diversionary aspects. An airborne unit of any size keeps the enemy tied up with reserves, even though the outfit

(10) A-8, p.33; (11) A-8, p.5; (12) A-8, p.5.

is perhaps back in the rear area. This causes the enemy to localize and keep spaced regular bodies of reserves, keeping them in position to counterattack any action that the airborne unit might precipitate on hostile territory, even though the parachute and glider units may be well in the rear and have no idea of a mission, actually. The enemy doesn't know this, and here is the paradox that is peculiar to airborne tactics. Airborne units can tie the enemy up, even though they aren't in action. (13)

Surprise of course adds so much to this problem that perhaps it can be said that the element of surprise is the firmest principle and technique of airborne operations. (14)

It is sufficient to make this type of warfare the most dreaded attack of all. Any country can fortify its harbors and beaches, but it can't arm all its prairies, grain fields, beet patches and pastures. These are the landing places for airborne attack from the skies. The larger the country, the better chance of accomplishing the ideal attack. That is, transport large bodies of men long distances, catch the enemy by surprise, and then land them all unknown to the enemy. (14)

This would be an ideal maneuver. It sounds impossible, but it isn't. In fact, it is more probable now in 1948 than it was in 1944 and 1945 when it was done several times.

An example of historical significance that relays the perfect idea of surprise is the operation in Normandy on the morning of "D" day, 1944, by the 3d Bn 505 Parachute Regt. (See Hist. Ex. #1, Map 1)

From the preceeding illustration, it can be seen that the element of surprise is the paramount advantage enjoyed by the attack. However, underlying this element is the mobility of the operation which is, of course, due to the aircraft which transport it over a great distance

(13) A-33, p.5; (14) A-33, p.6.

in a short time. (15)

Too, adding to the transportation principle of mobility, the means of effectively utilizing this mobility to an efficient end should be considered briefly. Of course, that means the tactical use of parachutes, gliders and transport landing to actually get the troops on the objective.

The parachute gets tactical strength from its ability to land a fully equipped soldier practically anywhere at anytime. The glider is capable of landing in most open spaces with little or no previous preparation for its landing. Of the three methods of getting these troops on the ground, the above two will be used more in the tactical sense as far as the objective is concerned. (16)

Landing the troops by bringing in the transport planes entails previous preparation on some one's part, usually on the parachutists and gliderists going in first to seize an air strip so they can land. Regardless, the movement is made, the troops are on the ground in a matter of minutes in some instances, and certainly in a matter of hours in others, and the only restraining point to this great mobility is the payload capacity and range of the transport planes. (Note: The above paragraph excludes the possibility of enemy action, weather, etc, which all, of course, would restrict the mobility of such units. It is given as a general conception). (17)

Perhaps the popular conception of mobility entertains all the points that are given above, but for those who perhaps don't quite have the true import of the word itself, let's go back to 1943, and

(15) A-19, "Italy History", p.nd numbered; (16) A-33, p.6;
(17) A-33, p.4.

look at a bit of action that took place on the Salerno Beachhead in September of that year. (See Hist. Ex. #2, Map 2). (18)

A. CHARACTERISTICS AND DISTINGUISHING FACTORS

Tactically, the airborne operation is very different in its accomplishment of its mission than that of regular ground forces.

Airborne attack is fundamentally a series of actions that go to accomplishing an assigned task in a series of events very dissimilar to ordinary methods of warfare. Before an airborne attack is successful there are handicaps that have to be overcome above and beyond the usual mission of closing with and destroying the enemy. (19)

First, the attack must take shape in the form of an airborne unit landing in enemy held territory or in close proximity (See Map 1)

Secondly, it must establish itself in this enemy territory so as to repel the action of the enemy. (See Map 4)

Next, the attackers must reinforce and supply themselves, probably one of the most essential of all. (See Map 7).

Last, but not least, the unit must move out and accomplish its assigned task or mission. It has very little time to do all these. It has many difficulties getting them done, but to be successful, an airborne attack must master them all. (See Hist. Ex. #1)

The principles and techniques mentioned above, of course, are the overall factors that control and give the characteristics to this particular type of attack. However, there are many tactical problems and difficulties to overcome before these principles can be applied to an assault on an enemy position. (20)

(18) A-19,'Italy History', p.not numbered; (19),A-27, p.88;
(20) A-33,p.5.

For a simplified, but essentially all important breakdown, airborne attack constitutes several steps of tactical requirements that may be noted under three main headings, with several subdivisions being necessary to get clearer conception of the overall picture.

I. Preparation of the Attack:
   A. Planning
   B. Coordination
   C. Training

II. Transportation of Units to Target Area:
   A. Command Functioning
   B. Disposition and Protection of the Units (21)

III. The Attack
   A. Types
   B. The Attack Itself
      (1) Landing
      (2) Assembly and Reorganization
      (3) Resupply
      (4) Move On Objective

I. PREPARATION OF ATTACK: (A) PLANNING

There isn't any action that takes more detailed planning than an airborne attack. Of necessity, the plans must start at very high level, army or higher. (22) And in most cases, it will be in theatre command. This simply is due to the amount of coordination and cooperation that is necessary to make such an action possible (23)

(21) A-2,p.12; (22) A-2, p.13; (23) A-33, p.6.

The attack plan is conceived in higher headquarters, either by planning officers, or by some field commander who sees the chance of bettering his position. Or, it may come from the headquarters that has been given the responsibility of making a landing on hostile shores or in enemy territory. The planning is always a result of tactical completeness, and not as an addition to some theory or fancy. The plan is put out when there is a sound basis and purpose for using it. The decision to use airborne troops doesn't rest so much with the persons in higher headquarters as it requires a situation where its unusual capabilities can be used at an advantage and not as a boomerang in the form of immense losses and failure. These are the governing factors of airborne planning. (24)

There must be a reason to use these units, and the situation must be such that it can be done with common sense limits on amount of casualties, cost of operation, availability of material, and sufficient time to plan properly. The mere desire to have help in the form of an airborne attack isn't sufficient. The principles must be there, or else there isn't any more chance of using an attack from the vertical flank than it would be for the navy to support ground forces far inland.

Once an airborne attack has been planned in the higher headquarters, the work of actually putting in effect the plan will be carefully worked on by all concerned.

The area or areas must be thoroughly reconnoitered, both visually and by photos. An evaluation of the terrain must be very

(24) A-27, p.88; (25) A-23, p.37.

detailed, for the depth of a stream may mean the success of a mission or its failure. The estimate of the situation must be as thorough as all agencies can possibly make. Orientation is going to be given out soon to every man in the units, and this information must be as accurate as humanly possible to make it.

Careful selection of the proper drop zones and landing zones requires careful consideration. (26) The poor selection of these areas can break the back of the operation. They must be chosen with several thoughts in mind. They must be sufficiently clear of the enemy or any hostile forces capable of interferring with the units getting together on the ground and accomplishing their job. Landing close to an enemy installation would cause a serious reaction. The interception that followed would result in a violent battle that would present an obstacle to accomplishing the mission. It would be a fight that could have been avoided. Too, the DZs and LZs must be reasonably close to the objective (See Map 1) and between the enemy and the objective. They should be fairly well distinguishable with aids in identification. They certainly should have some cover and concealment reasonably close. In the immediate vicinity should be located terrain that would be suitable for assembly areas. There should be freedom from obstacles and dangerous terrain features. Good routes of approach to the objective nearby are also desirable.

The logistical question of supply is an interesting sidelight to the tactical employment of units in an airborne operation. The problem of supply and the act of resupply is the making and breaking of any airborne attack. The troops must be resupplied with

(26) This is a quote from Gen James M. Gavin's book "Airborne Warfare"

everything immediately after their initial commitment, or very soon thereafter, else their effort is doomed to failure. Consequently, planning in the higher echelon must, of course, devote painstaking work to the problem of supply and resupply by air. Too, another problem for planning is the job of continuous resupply either by air or through land elements as long as the committed units are in action.

Time enters the supply question. This has a definite influence on control plans of resupply, as the length of the actual airborne phase means whether continuous resupply by air is going to be necessary or if the more easy system of land supplying is to be possible. The length of the airborne phase is from the time that the airborne assault starts and such time that the actual airborne phase is over.(27) This phase is terminated by either a link-up with land forces,or relief by ground forces.

A good example of this was the two campaigns in Europe in 1944. The Normandy airborne operation had a time limit of eight hours. In other words, that was the time the plans called for relief of the airborne forces by arrival of supplies from the beaches. This was a little off, but not too much. This time limit didn't necessitate too much resupply-by-air planning, other than the emergency planning in case of poor initial successes.

In Holland, however, the airborne forces weren't contacted for several days, and the problem of resupply by air had to be worked down to a fine point pf precision.

The logistical question of evacuation in an airborne operation is dealt with in a down-to-earth manner. There isn't any evacuation

(27) A-33, p.4.

until many hours and days after the commitment; so it causes little planning, other than the attachments and assignments of medical units to go in with the units on the assault. Evacuation normally comes when land elements join the force and give a route of evacuation. Perhaps in the future there will be more development of getting the casualties out by air while the airborne phase is still in progress.

BASIC RULE FOR PLANNING

To keep the airborne attack threat always imminent in any situation, planning for its being committed must of necessity be anticipatory and continuous. To achieve surprise, it naturally must be done in the strictest of secrecy and consorship. This poses a difficulty here that must be overcome at the first inception of an attack by air. The only control over this is absolute adherence to the principles of secrecy. That is another story, though, and the function of other agencies.

As to continuous planning, there is a good example of this in two phases of the last war.

Historical Example #3

There were 17 missions planned for airborne operations between the period of "D" Day and 17 September 1944. (28) All these plans called for the combined effort of the First Allied Airborne Army. They were discarded because of rapid advances of the ground forces. Several times the men were loaded on the plans, only to be told to unload, that "Old 'Blood and Guts' is on the dammed DZ!!!! ". (29)

(28) A-9, p.78; (29) A-19, 'History of Holland', p. not numbered.

ANALYSIS AND CRITICISM

A brief analysis of this little example can be stated by saying that in my opinion the ground advances were possible to a large extent by the knowledge that this great force was ready and waiting to help out in case some difficulty arose. It gave security to overall planning, and doubtless caused the enemy headaches, wondering where and when they were going to be attacked.

One criticism is against this continuous alerting, and then the mission being called off. It was very disconcerting and depressing to the troops. There was quite a bit of strain to be continuously going through. Some way should be found to be a little more sure of each mission, so that if it gets as far as the staging area, then it should be carried through.

AIR FORCE PLANNING

Planning on the part of the air forces is concurrent with the planning of the tactical units. The intelligence sections of the Air Force have the responsibility of picking the proper routes of approach, taking into consideration the known enemy installations and the most desirable routes to take in going over the area that the attack is to cover. (30) It is the duty of the Air Force to prepare a plan of navigation so as to present as simple a problem as possible. It must be well worked out, for it is very easy to become lost on a mission such as this, especially in cloudy weather, and most certainly if the mission is at night. The airborne units pick the drop zones and landing zones, but the air force has the say-so in selection of how the

(30) A-23, p.68.

force is to get there. One more big responsibility passed on to the Air Force is the coordination with any forces that will be passed over or near during the approach to the target. This prevents any cases of mistaken identity, perhaps causing an error or mistake being made and resulting in firing by friendly forces on the airborne units.

SELECTION OF TIME

One of the guiding factors of airborne attack is the selection of the time of the operation. This simply means: Is it to be done in daylight hours, or at night?

Let us approach the aspects of an airborne attack by the light of day. There are many details that enter into this kind of attack which differentiate it from an attack being made at night. It is my personal opinion that daylight operations are more desirable than night operations, but that is not in thinking with the majority at all, as the following facts will bear out. (31)

First of all, there must be air superiority by friendly forces before a day attack can be planned. This is absolute, because interception by enemy air forces would really play havoc with a large group of slow flying transport planes. In a daylight operation, the group can make an exact landing on the designated target. This choice of time also gives the glider pilots better view of the fields which they have to land in, and gives them a better chance of making a successful landing. The paratroopers assemble more quickly, and get to their objectives sooner. (32)

(31) A-27, p.86; (32) A-2, p.13.

Too, the psychological angle is paramount in the minds of all concerned. The drop into an area where a man can see what there is around him deals more easily with him than it would if it were under the cover of darkness.

In a daylight operation, the navigation problem of the air forces isn't nearly so hard as that of an afterdark attack. (33) The job of maintaining proper formations is greatly handicapped at night, whereas in daylight hours this isn't true. In all, it forms better control on the overall operation. It is mostly characterized by a heavier attack being made simultaneously, whereas in the dark the airborne operation may be strung out over a little longer period of time.

Normal assembly for any operation in daylight takes less than two hours. This is more than enough time for the personnel to assemble, pick up their equipment, and for all groups to move out on the mission assigned them.

Going over to the possibility of an airborne attack at night, it is noted that this form of attack involves the principle of surprise to the utmost, something that is more or less pushed to the rear in an operation in daylight. This principle here makes it quite evident that operations at night are not to be ignored in any sense. In fact, this alone is enough to outweigh many of the factors that have been pointed out as characterizing the good points of a day time operation.

Attack at night would certainly be made where there isn't air superiority by the friendly forces, or where there is doubt as to who actually controls the air over the target area and the approaches to it. (34)

(33) A-2, p.12; (34) A-1, p.16.

An example of this was the jumps that were made in Sicily, Italy, and Normandy during the past war. This was done to the uncertainty of air control. When it became apparent after "D" day that the Allies controlled the air, then the following two airborne operations, Holland and the Jump Across the Rhine, were both planned and executed in daytime. (35)

It has already been stated that an attack at night has the advantage of gaining more complete surprise than a daylight operation. This is true in view of the fact that the planes, of course, are blacked out, and fly on detailed instrument courses. This makes it very difficult for enemy observation to tell whether the planes are bombers, transports, or what not. Too, it has the initial success of causing confusion and delay, which is very advantageous to the attackers. Also, the direction of flight is more hard to discern, thus adding more confusion and the necessity of assumin g on the part of the enemy.

Airborne operations at night are not as dangerous or hazardous as it might appear at first thought. True, it causes a large loss of men, due to accidents, inability to reorganize, and the inability of some to locate their proper weapons and equipment. Nevertheless, it has a devastating effect on the enemy. It causes fire fights to be fought too soon, but these facts are over balanced by the disorganization that is caused in the command channels. It causes the command organization to become confused and thus prelays any chance of proper use of reserves and artillery. The confusion that is there, of course, is present in the ranks of the attacker as well as the defender. This cuts down on the

(19) A-18,

overall effectiveness of the units, and in some cases may prevent them from taking on their missions as planned. Their efficiency may be affected by this confusion and in some cases there may be complete change of attack procedure due to some unit being unable to organize. All in all, the disruptive effect of the attack on the enemy compensates for the disorder in their own plans and operations schedules. They lose a lot by using this form of attack but gain good operational results. Attack at night is harder on the men psychologically, though. This fact is one thing that does make this time of attack seem more undesirable.

There is a time for night attack. There has been in the past and there will be in the future. It is another phase of airborne attack that lives with the situation and status of action. (36)

COORDINATION

This business of dropping armed men behind enemy lines is a direct invitation to disaster and failure. (37) There are of course means of assurance against such a happening, and, besides, make victory almost a certainty. That means is graphically included in the meaning and strength of the word "coordination".

To drop these men on a hostile beach requires coordination with ground forces, air units, and often naval forces. (38)

Coordination enters the picture very early in the planning stage. Initially, it doesn't play too big a part, but as the time for the operation draws near, the success of the venture lies in the overall effectiveness of the coordination and help that mutual action will give.

(36) A-1, p.16; (37) A-8, p.26; (38) A-12, p.213.

Besides the route planning that has already been mentioned, the Air Force must coordinate with the airborne units so as to present as easy a problem as possible in getting the planes loaded, lashed with equipment, issuance of various air force supplies, and, above all, the placing of the planes and gliders.

Here is a phase that deserves particular attention, and it is one that an average person will overlook, or underestimate. (39)

More than likely an airborne division headquarters will be centrally located near all its attached and assigned units. Perhaps nearby are a couple of airfields, and maybe down the road there are a couple of more. Here is where the best in coordination must come in.

It requires a great number of aircraft to get an airborne division in the air, including the number of aircraft to pull the gliders, plus the fighter aircraft that are to fly along as escorts. All these planes cannot be based at one port, or two, or three. It takes many airports to get the planes of this unit in the air. (See Map #3)

This poses the problem of getting the right plane loaded with the right equipment; getting the plane initially in the right place, preferably as close as possible to the unit to which the equipment belongs, and by whom it will be used in action. To do this causes a minimum of shuffling planes and gliders. The shuttling of transportation from the unit to the planes, hauling equipment and men is cut to bare necessity by proper placing of planes.

The disposition of the planes and gliders, although the responsibility of the Air Force, must be in coordination with the airborne

(39) A-15, p.14

units so, as I mentioned above, the correct planes may be loaded by the proper personnel with a minimum of confusion.

This is of prime importance, as sufficient time must be made available to do this work effectively. Using units need at least 24 hours actual work on the planes that they are to use. More time can be utilized, but this is long enough to load all the supplies, stow all the equipment, and, in general, get the plane ready for the action to follow. This time limit also gives the commanders time to make up loads, change what may be necessary and in general get that stage of the operation settled down.

The action phase of coordination involves the help that is actually derived from some unit that is giving support to the attack. Exemplifying the results of good coordination is the action that took place on 16 February 1945 by the 503d Parachute Regiment in its assault of Corregidor (See Hist. Ex. #4, Map 4)

TRAINING

Basically, the airborne soldier is trained in the art of warfare the same as any other ground soldier. The only difference lies in the fact that the airborne soldier gets additional training in the fundamentals of loading, lashing, and air transport of supplies and personnel, plus learning how to make exits from an aircraft in flight by way of a parachute. (40) Too, he receives training in glider transportation.

Like all others, an airborne division is as good as the training it has received, both organically and individually. Due to the hazards involved, training must entail the proper selection of men,

(40) A-2-p.14.

and thorough training in their work before an attack is performed. (41) This calls for extensive training facilities and courses. (42)

A minimum of 5 weeks is scheduled in the Basic Airborne School which indoctrinates the new soldier into the basic principles of loading and lashing of equipment in gliders and transports. Also, the new men are taught parachute packing and jumping.

After the completion of this course, it is left to the tactical units themselves to train the soldiers in the actual tactics of airborne. This is done by several means. The main one, of course, is the actual training jumps and assembly problems that are carried out as routine training. (43) These problems consist of taking a realistic situation, running through the issuing of equipment, loading of planes, assignments of missions, marshalling, and jumping.

These groups, ranging from squads to divisions, are flown to an area or areas where they are dropped or glider-landed. Once on the ground, assembly is practiced, and the movement onto the objective is started. Since only by actual doing will the unit become proficient, then these problems are run as often as possible, often between missions, and certainly before an assault as more or less a practice to the real operation. (44) As an example of this, I quote General James Gavin, wartime commander of the 82d Airborne Division. In his book AIRBORNE ATTACK, General Gavin says about pre-assault training, "Thorough small-unit training was conducted and finally full-scale dress rehearsals were staged to check by actual performance the details of the final plans".

General Gavin was speaking of the final planning stages of the Normandy Invasion of 1944.

(41) -p.6; (42) A-23,p.vii; (43) A-9, p-76; (44) A-19 'England History', p.not numbered.

This type of training requires above the average in physical conditioning. The factor of not having transportation when once on the ground makes it necessary to have men capable of long, sustained periods of marching, perhaps running, in instances. Too, the acts of parachuting, assembly, etc, require better than normal physical health. All these factors lead to the desirability of having younger, tougher, and more mentally alert soldiers for this type of work.

A part of training that has an unusual amount of bearing is the procurement of replacements. They must be sufficiently trained so as to take the places of the men who are lost through battle casualties. It was a great handicap during the war, for there were, and will continue to be high casualty rates among airborne personnel. (45)

The action is quick in an airborne attack, and it is very decisive in its accomplishments in a matter of a very few days, and often in a few hours. This, coupled with the high rate of casualties, requires replacements quickly, and they must be trained in this type of warfare. There can be no substitution. Ordinarily, replacements in airborne warfare and tactics come from the Basic Airborne School located in the zone of the interior, but there can be supplements to this. This can be seen in Historical Ex. #5.

Another form of training to further the airborne attack is the cooperative training with attached units. This is necessary as an expedient of teaching the teams to work together, for once contact has been made with land elements these airborne units will be working with them for some length, the time depending on the mission and situation.

(45) A-29,

Normally, though, when the airborne units are contacted by land elements, the fight is only started, so proper methods of operating with these units are a part of airborne training.

Once the primary objective has been taken, there must be held from other units, either by land or by sea. These units must have larger weapons and transportation. To better work with the airborne units, it would be most desirable to actually train together for this phase of the attack. This was not possible in the last war, but in 1947 the need for this type of training caused a whole new group of attachments to be made available to the airborne division.

It was the need for bigger weapons and more transportation that brought these attachments and caused a major change in airborne tactics after the initial airborne phase is over. (46)

There are heavy tanks attached now with the prime purpose of breaking through to the airborne units. In the airborne division now, too, are large anti-tank guns capable of knocking out the best in armor. There is more artillery and more elements assigned to reconnaissance duty. These attached units, although not airborne in nature or ability, nevertheless have the training and purpose of being the first to contact the airborne element on the ground as soon as they can possibly get to the drop zones and landing zones.

II. TRANSPORT TO TARGET AREA

After all plans have been coordinated, dry runs and rehearsals conducted, an airborne operation is only one step removed from the

(46) A-34, p.7.

attack itself.

This stage is the transportation of the units from the loading zone to the target area, or as are better known, drop zones and landing zones.

Good tactics call for a thorough briefing of all command echelons before the units arrive at the loading fields. This is usually the case; also, due to the time spent on the airfields waiting, there are checks and rechecks on all phases. Re-orientations are given. Maps and diagrams are pored over constantly, and unit leaders remain constantly with their men, talking with them and discussing every part each is to play in the coming operation. Every plane is checked and rechecked to make sure the bundles are packed correctly and the proper equipment is going with the correct groups. (47)

Finally, the time to load comes and the planes and gliders are loaded. The time for take-off comes and the operation is on.

A. COMMAND

In the process of flying from the loading zone to the objective, all units are under the direct command of the Air Forces. The commander of the Air Force transporting the units has the responsibility of command of all the troops. He doesn't exercise this command unless something unforeseen happens. However, he has the authority to make any command decision that may arise. (48)

B. SAFETY AND PROTECTION

It is in the stage of going from the loading zone to the operation area that there is most danger of huge losses in men and

(47) A-37, p.229; (48) A-7, p.229.

material. It is in this period that the group is highly vulnerable to both air attack and ground batteries. (49)

The airborne personnel are in the hands of the air forces completely. It is the responsibility of this branch to furnish protection to the formations. This protection is against both air strikes and installations on the ground that may be in position to cause casualties. They must protect this force until the men are actually on the ground, then the air force must immediately seek to isolate the airborne unit on the ground from enemy aircraft.

This protection is usually the employment of fighter escorts and attack bombers. The Air Force protects the airborne units to the DZ, drops and lands them on their target areas, and then the men on the ground are on their own.

Protection on the ground is nil. There is none whatever. The only bit possible lies in how quickly they can reorganize, collect their equipment and bring fire to bear on the enemy, either by repelling his ground attacks or fighting off air strikes. It is a very weak phase of airborne attack, and only careful planning, good intelligence information, and complete knowledge of the capabilities of the enemy will make this phase one that can be passed through without actually hurting the attack itself. (50)

III. THE ATTACK

What type of attack can be made by these men tumbling out of the planes and getting to the/ ground in gliders? Therein lie the types of airborne attack that are prescribed as being those that more effectively use the particular characteristics of this specially

(49) Quotation from Mark Watson, correspondent, writing in Army-Navy Journal, 4 Nov 44, on "Airborne Forces"; (50) A-37 - p.230.

trained force.

To all intents and purposes, an airborne attack can be typed by the purpose behind the attack.

Purposes of an airborne operation are such as: (51)

1. Drop behind enemy lines to seize vital points and key terrain features. (See Hist. Ex. #1, Map 1)

2. Seizing small areas or islands to deny the use of the island to the enemy forces. (See Hist. Ex. #4, Map 4)

3. Dropping behind friendly lines and acting as very badly needed replacements. (See Hist. Ex. #2, Map 2)

4. Seizing areas from which to attack the enemy in conjunction with other forces making landings on enemy held beaches. (See Hist. Ex. #1, Map 1)

5. Movements intended to harass the enemy, create sabotage, and destroy lines of communication until land elements can join them or a return to friendly lines can be made.

All the above mentioned types of missions are battle-tested, and historical examples have been given for that particular situation. Perhaps the last type mentioned, number 5, is the most interesting, for it is the type of mission that popular conception has practically placed the whole idea of airborne attack under. Whereas, actually, this type of mission is only one of the many jobs these specially trained troops can accomplish; perhaps it should be noted here that it is part of airborne plans as much as any of the others, but not as much as popular fancy has it. There is one striking example of this kind of task, and it should be looked into at this point. It bears the earmarks of possibly living up to its imaginary position as the most important job of all. (See Hist. Ex. #6, Map 2 and Annex to Map 2)

(51) A-38, p.5.

B. THE ATTACK ITSELF

Generally, the attack can be broken down into four definite parts. These include:

1. Landing
2. Organization and Assembly
3. Resupply
4. Move on objective (52)

Upon hitting the ground, initially the first thing an airborne man thinks of is getting out of his harness, or glider, locating his equipment and weapons, and getting out of sight of the enemy. He does this in orderly fashion.

As soon as his chute collapses, or his glider has stopped, he gets out of his harness, quickly orients himself to his surroundings, looks for the other members of his immediate team, and goes to his immediate superior to facilitate quick organization.

As an aid to quick assembly, different signals have been used. Such things as lights at night, and, oddly as it may seem, in the invasion of Holland, cow bells and whistles were used to guide groups to asembly areas.

Using pre-arranged areas as assembly points, the group utilizes this as a base of operations temporarily. During this short period, recevery groups are sent out to collect the bundles that have landed on the DZ in equipment parachutes. This is quite a job, as the biggest and heaviest items are out there in bundles. In fact, it takes approximately one third of any organization to round up all the equipment that belongs to that group, necessitating leaving a small force at the asembly point.

(52) A-38, p.10.

As soon as the recovery is complete, the group moves out on its mission. (53)

The attack itself, while consisting of the parts that are named above, is actually more than the simple listing of the above phrases would have it appear. Definitely, these four actions incorporate corrigate all the principles and fundamentals that have been brought up so far. There being a definite mission to perform, the airborne units act to accomplish it, using all the elements of tactics and essential doctrines that have been studied thus far. Since these ideas are the accepted ones of today, then it can be said that a study of airborne attack is completed when it can be clearly seen how these factors actually affect a mission being accomplished.

As a sort of pulling together of all these ideas and principles, this study will be completed with an overall picture of the employment of them all. Therefore, in the interest of giving a specific example of the use of these tactics, the invasion of Holland will be used to point out an action that represented the perfection that airborne attack achieved in 1944 when The Netherlands were freed by airborne attack.

The actions and accomplishments of the 3d Battalion, 504th Parachute Regiment, 82d Airborne Division, 1st Allied Airborne Army, clearly shows all that can be desired to illustrate airborne attack. (See Hist. Ex #7, Map #7)

(53) A-38, p. 9.

HISTORICAL EXAMPLE #1

Being a part of the 82d Airborne Division, the 505th Parachute Regiment fell within the command responsibility of that division, and had a proportionate part in the overall assignment of objectives in the assault on Normandy.

The mission of the division on "D" day in 1944 was a dangerous one (54), and to make its position more acceptable it was decided that one of the first necessary objectives in overall accomplishments was to capture the little French town of Ste. Mere Eglise.

The capture of this town was passed to the 505th, and in turn the chain of command placed the direct responsibility of taking it on the men of the 3d Battalion. The other two battalions were to take other immediate objectives, each mutually supporting the 3d Battalion. (55)

The importance of the little town couldn't be over-emphasized. The communications cable of all the peninsular went right through the town, made junction there with the other cables from over the entire Cherbourg peninsular, and then went on into the interior of France.. Too, the road net in that area formed a hub at the little town. The Germans placed quite a bit of importance on it. In fact, they had an army headquarters there. It would have to be taken. It was a detriment in the hands of the Krauts, and a prize in the hands of the invaders.

The drop zone was selected just a little northeast of the town, about as close as it could possibly be put.

That night, the 3d Battalion jumped into pitch black darkness at H minus several hours. Nothing could be seen. They jumped on signal from the pilots.

(54) A-21, p.1-3; (55) A-21, p.2.

Luck was with some of them. Most of these hit near the drop zone, and some landed right on it. Among them was the commanding officer of the battalion. He immediately began rounding up as many men as he could locate in the confusion and chaos caused by the pitch black darkness. So far, there had been no action from the enemy.

In a matter of minutes, the Lt Colonel had 180 men of his battalion with him. He sent out searching parties and rounded up a few more. He hastily formed them into two companies and moved out.

The original mission of the battalion was to encircle Ste. Mere Eglise, set up road blocks and contain the enemy therein, preparatory to making an all out attack on it. (56)

In the process of organization, luck played in their hands again in the person of a drunken Frenchman who was dragged into the CP, blabbering information that was more valuable than can be analyzed.

He offered to guide the group into the town by an unused trail. The proposal was sound in principle when he further informed the Colonel that most of the Kraut troops had been moved outside the town, protecting it from entry by any attackers that might be expected. (57)

The Colonel immediately formed his men, followed the drunken peasant into the town. Inside the village, he immediately dispatched groups to road-block all roads coming into town.

Within the town itself was about one company of troops, plus some other personnel. They were there to guard the motor park,

(56) A-21; (57) A-7.

headquarters, and to work in the army headquarters. They were all killed or taken prisoner as they lay sleeping.

Surprise had been so complete that within a matter of hours, before good daylight, the town was in American hands. By 0900 there were well over 300 men in Ste. Mere Eglise. Clean-up squads had flushed out the Krauts and set up firm road blocks. Each man had jumped with one anti-tank mine; so the town was well protected, plus the bazookas and gammon grenades that each trooper carried to use against armored vehicles.

Then the word got out. The first French town had been liberated! This boosted the morale of every man and child of the Allied cause. It put new hope in the breast of the soldier, and faith in the invasion. (58)

Aside from these facts, the taking of the town was tactically a great success. It had been the perfect sabotage. The cables were cut, the road net blocked, and the headquarters had been routed. The saboteurs sat there and guarded against the repair of the cables, against use of the roads, and made stable the position of the airborne division in this area.

This was not the end of the fighting in Ste. Mere Eglise, but that is another story. (59) It was about this time that the element of surprise gave way and a fight against an organizing enemy was started.

ANALYSIS AND CRITICISM

Looking back on this operation, it can be seen that this was truly a fine example of operational surprise. True, luck was there,

(58) A-21, p.5.6; (59) A-20 - 'Normandy', p. not numbered

but how do we not know that perhaps luck as we know it goes hand in hand with such aggression as this?

It is certain that it was never thought for a minute that the town would be taken so successfully, but it was, and only through the principles and techniques that are peculiar to this type unit.

There is no criticism of this operation in a critical sense. There were mistakes made that wouldn't be made again. The big mistake, of course, was the inability to land the whole battalion in the proper area. This called for better assembly methods and jump procedure.

HISTORICAL EXAMPLE #2

THE AIRBORNE OPERATION ON SALERNO BEACHHEAD: 13 September 1943
By the 1st and 2d Battalions of 504th Parachute Regiment.

The invasion and subsequent capture by Allied Forces of Sicily was completed early in the summer of 1943. Some of the invading units had returned to North Africa. Others had stayed in Sicily. Among those returning to North Africa was the airborne units that had made the initial assault of Sicily. (60)

In this group was the 504th Parachute Regiment. Many airborne operations were planned for this period, with the result that the 504th was finally moved back to Sicily in preparation of one of these assaults. However, the operation was junked at the last minute, leaving the 504th pacing the landing strips of Comiso, Sicily.

It was at this time that the 5th Army was storming the beach at Salerno, making the first landing on 9 September 1943.

On 13 September, 1943, the 1st and 2d Battalions were alerted, the 3d having made an amphibious landong on the beachhead 4 days previously. (61)

Immediately after the alert order, the men were loaded on the waiting planes, no mission having been given, nor any orientation other than the information "going to the aid of the 5th Army". (62) Before take-off by just a matter of a few minutes the information was passed out that the two battalions were jumping in the rear of friendly troops to give them a bolster and help to keep the beachhead from being overridden by the Germans.

(60) A-19, 'Italy History', p. not numbered; (61) A-40, P.24-27
(62) A-27, p.89.

Arriving over the selected areas, the DZs were clearly marked, and all units hit well on the selected areas. They were in the immediate vicinity of the VI and X Corps. (63)

Reassembly was very quick, and organization was affected in a minimum of time. It was history's greatest example of the mobility of airborne warfare. In exactly 8 hours, these two battalions had been alerted, notified of mission, loaded on planes, flown 250 miles over land and sea, and in action against the enemy.

By dawn the two battalions were firmly intrenched in a defensive position about 3 miles from Paestrum, Italy, and S. W. of Albenella. The days of the 14th and 15th were spent in beating off continuous German attacks, and preparing for a tank attack that threatened from the Calore River region to the north. On the 16th, these two battalions occupied Albanella, and were ordered by Genefal Clark , commanding general of the 5th Army, to seize Altavilla, once in Allied hands but now lost and again controlled by the Germans.

The days that followed were, to quote General Mark Clark, Commanding General of the 5th Army, "The days that saved the Salerno Beachhead". (64)

The 1st and 2d Battalions swung out, and against intense artillery fire, small arms fire,and tank formations, took Altavilla. The enemy immediately counterattacked, stubbornly, and at last on the night of 17 September the two battalions were surrounded completely and cut off.

For the second time in 7 days Altavilla was ordered to be evacuated by Allied troops. Instead of leaving, the 3d Battalion

(63) A-40, p.26; (64) A-19, 'Italy History', p. not numbered.

was dispatched to rejoin its regiment, if it could.

After repulsing stubborn attacks by the Germans, the three battalions reunited, kept Altavilla in Allied hands, and made the Salerno Beachhead safe. The 5th Army could now go on the offensive. (65)

ANALYSIS AND CRITICISM

This action demonstrates the swift mobility of airborne tactics and attack. Here was a situation that could not include prior planning, for the situation developed fast, and was getting in the dangerous stage when these units were committed. The time element here showed that although the two battalions didn't represent any great amount of strength; just by being there at the right time, at the needed time they did what would have taken much larger forces to do a few days hence.

There is no criticism for this action, for the whole operation was successful from inception to the completion of the fight. It is true, the action took many lives, and was unusually hard fighting, but, tactically, it represented a new step in beating the enemy to the punch with mobility of ground forces, transported from great distances to decide/a critical phase in combat.

(37) A-25, p.23.

HISTORICAL EXAMPLE #4

This operation is given to further show the worth and value of close coordination betweens arms and services, and how, by having this coordination, the operation is made easier on the soldier who actually closes with the enemy, which in this case were the soldiers of the 503d Parachute Regiment. It is a story of their assault on Corregidor Island, Philipines, in February,1945.

This operation was an achievement in complete understanding of purpose, principle, and use of all coordinating agencies -- the Air Force, and Navy and Ground Forces. (66)

To get this complete understanding, many conferences were held and great pains were taken to get preferences and ideas of individual desires in the overall planning.

The Navy was instrumental in a super display of pinpoint "on-call" fires. The Air Force, after a thorough reconnaissance of the island, let it be known there were 37 known anti-aircraft guns on the island. This didn't include the countless ones that couldn't be observed. They took on the job of knocking these out so the paratroopers wouldn't be killed in their harnesses as they came to earth, or be shot down in the plane before they had a chance to jump.

The Navy, besides making plans available to the Ground Forces for "on-call" fires, took on the job of knocking out the shore defenses and in-shore batteries that could be used against the regiment of paratroopers.

The 503d got ready for the all-out assault for the island.

The fight for Corregidor started on 23 January 1945 when the Air Forces began a systematic bombing and strafing of the island. Here it should be noted that the island is only a little over 7000 yards long, and about 2500 yards wide at its widest point.

(66) A-41, p.8.

(See Map). Hence, the constant day by day bombing of the small island had wonderful results. (67)

One of the reasons for the constant bombing, carried out always during the daytime, was to knock out the gun batteries. More important, it was for the indirect reason of keeping the Japs underground during daylight hours, for it had already been decided to jump the paratroopers on the upper plateau, or "Top-side" of the island during daylight hours.

On 13 February, a Naval task force, consisting of cruisers, destroyers, PT boats, and other crafts began a systematic shelling of the island and the lower Bataan peninsular.

The shelling was continued until the time for the assault, at 0800 hours on the 16th. It was here that the great team work began to display its power.

As the paratroopers "hit the silk", naval fire lifted, and started to firing on point targets and "on-call" missions. The Air Force flew over the grounded troopers and strafed every bit of the island that was out of their immediate vicinity. (68)

Napalm bombs were dropped on the areas behind the drop zones, and a general working over of the outside area was done to a perfection by the low flying attack bombers. These planes were on call to take out any target that should present itself. This was possible from the minute the men hit the ground, because the coordination had been so thorough that Air Force personnel had parachuted to the ground with the troopers, set up their radios and went about getting air strikes against the enemy. (69)

(67) A-23,p.124; (68) A-42, p.4; (69) A-41, p.6

After the first wave of paratroopers had landed on their small drop zones, the 3d Battalion of the 34th Infantry hit the San Jose beaches to clean out that part of the island and to assist the airborne regiment in its assault.

The Navy and Air Force vied for targets, and often the two forces were shelling and air striking one target simultaneously!

In a few hours, the 503d joined the 3d Battalion, 34th Infantry, and soon the island was theirs! (70)

ANALYSIS AND CRITICISM

An analysis of this operation will doubtless show that this kind of attack necessitates large naval forces, large forces of available aircraft and air superiority. This type of operation wouldn't be possible without all these military principles. It might be said that this operation was one of so called "all-out effort", but with such forces available for service, then why not use them? This operation was certainly successful as can be attested to by the taking of the objective in record time, number of enemy killed and captured, and the comparative low casualty rate of our own forces, infinitely smaller than they had been anticipated. There was just too much on the Japs to make any kind of defense possible.

There is one small criticism here. From all appearances, much too long a time was taken to plan, coordinate and execute this maneuver. Although it was looked on as an extravaganza of might, nevertheless the principle of economy should be practiced here, including the minimum of time. Perhaps over a period of time more missions could be executed by efficient use of planning time than otherwise possible.

(70) A-41, p.1-30.

HISTORICAL EXAMPLE #5

In the last war, a shortage of airborne replacements was felt sharply in the ETO. This was a definite hindrance, and was remedied by setting up airborne training centers in North Africa, Sicily, Italy (71) and England. Later in the war and soon after, training schools were established in Japan and Frankfort, Germany.

All of these schools were on division level or higher. The training schools in North Africa, Sicily, and Italy were under the supervision of the 5th Army (72). The schools in England and Japan were run by the G-3 section of individual divisions.

However, early in 1946, due to the rapid loss of men due to redeployment, and the complete lack of any replacements from the zone of interior, the 508th Regimental Parachute Combat Team in Frankfurt, Germany opened an airborne training school, which over a period of 10 months not only replaced all redeployed personnel, but increased the strength of the regiment above its original number. These men became some of the most capable airborne men in the team.(73)

ANALYSIS AND CRITICISM

These training schools were the result of a desperate need for replacements. They definitely met an existing need, and aided the Allied effort immensely. Too, it showed that small units could accomplish something that had heretofore been considered only capable of being done in the zone of interior. This fact was proven by the Parachute School as set up by the 508th RPCT.

(71) A-44; (72) A-43; (73) Personal experience.

Here with a few company grade officers and a small staff of non-commissioned officers, a training problem that is unique to the airborne forces was overcome and very effectively.

A criticism is the necessity of having to do this hurried training. The zone of interior should be well enough organized to train these troops and furnish the needed replacements that are certainly going to be needed. This would be possible with more planning and looking to the future on the part of training boards in the zone of the interior.

HISTORICAL EXAMPLE #6

This operation concerns the 509th Parachute Battalion, a combat team that saw initial action in the invasion of North Africa, in 1942, and had since that time been active on the battle fronts, being assigned to the 5th Army.

Soon after the initial landings on the Salerno Beachhead in September 1943, the 5th Army was being given a hard battle by the Germans. It was really getting to be a threat to the whole operation with the chance of losing the beach becoming more pronounced each day. Something had to be done and done quickly. The 82d Airborne Division was in action or in the process of going in, and they weren't available for any other mission. (74)

The 509th Parachute Battalion was back in North Africa waiting for a chance to get in the fight. Immediately a mission was given them and just as quickly it was executed. They were to jump high in the mountains of Italy, behind the Beachhead, in the vicinity of Avelino. They were to drop by parachute, cut all lines of communication, blow bridges, sabotage any installations and, in general, harass the enemy as much as possible and prevent help from getting down to the beach. (75)

The DZ was selected. It was a small valley at the base of the mountains near Avelino. The drop was at night and in very bad weather. There was a haze and fog that night, thus making navigation utterly impossible. (76) Obstacles were tremendous in getting the loads over the DZ, so much so that there were troops scattered all over the mountains and valleys. Very few actually hit on the selected DZ. To quote General James M. Gavin, later

(74) A-40, p.24-27; A-40, p.32; (75) (76) A-45.

Commanding Officer of the 82d Airborne Division, "The battalion was scattered over an area of more than 100 square miles. Despite this handicap, individual troopers and small units gave good accounts of themselves. They mined roads, blew bridges, destroyed German communications, and shot and ambushed German columns and messengers. Later reports show how well they caused a considerable number of German troops to be committed to anti-parachute and searching work".

In spite of its untold hardships and unlooked for complications, this drop by the 509th was successful. It was a handsome compliment to the ability and ingenuity of the individual troopers who banded together, made up their own missions, and over a period of days, some extending over a period of 3 weeks, accomplished what had been their original mission.

ANALYSIS AND CRITICISM

This was an example of a desperate measure being taken in order to stave off defeat. It is my opinion that it was quickly conceived, too quickly executed, and violated all principles and fundamentals of good tactics. It showed poor planning in that the DZ was poorly selected, in very unfavorable terrain to get the most efficiency from such a unit, and didn't show good direction on somebody's part; for the drop should have been cancelled when it became apparent that the weather was going to hamper its execution. An alternate plan should have been executed, which very well could have been to wait perhaps until maybe the next day. Regardless, it was successful, and since it did accomplish its mission can be described as tactically sound, but it was the pluck of the individual soldier that made it so, and not an overall strength and higher echelon efficiency in committing the battalion as it was.

HISTORICAL EXAMPLE #7

Early in the fall of 1944, the whole western front was more or less at a standstill. Plans were made to make assaults on the Siegfried Line, and preparations went forward to get the Allied forces settled down for winter fighting. There was a general slowing down to the entire Allied offensive, and it became apparent that this was a good time to strike and strike hard. (77)

Back in England, the newly formed 1st Allied Airborne Army was waiting for an assignment. Planners began to set up a mission for an airborne assault on the western front. The plans were well formulated, and all the proper steps were taken to insure success, through coordination with other units and services.

However, these plans never materialized, because by the time that all the planning data was completed, the forward echelon of the Allied forces were in the vicinity of the proposed drop, thus making the operation unnecessary. This happened several times, but the planning continued in the higher echelons, and, of course, lower echelons were carrying on their part of the program,too. They were on a constant alert status, and the trend of action in the units was check, recheck, practice, and rehearsal. All to make the operation a success when it did come off.(78)

As time passed into the middle of September, there finally came the mission that the airborne had been waiting for, but not necessarily wanting. Regardless, on 10 September 1944, air force personnel met with airborne personnel at the Headquarters of the 1st Allied Airborne Army, somewhere in England.

(77) A-2, p.89; (78) A-9, p.78.

At that time the mission for the Army was given. The mission was to create an airborne protected corridor from the Belgian border to Arnhem, Holland. Through this corridor would pass the columns of the XXX Corps, 2d British Army, and on across the Rhine River. There it would be in a favorable position to strike at the vitals of Germany itself. (79)

In a very few days, the commanding officer of the 3d Battalion, 504th Parachute Regiment, received his battalion's mission in the coming operation. Initially, the job was to act as reserve battalion, jumping in support of the other two.

To better get a sense of operational stability, the missions of the two supported battalions were given, so that in the case of any eventuality, time would be saved. This was done, and the last man in each rifle squad knew what was to be done by the others, so he could do it in case of trouble. (80)

Immediately, loading forms were made up, manifests were changed and rechanged. Regimental S-4 requisitioned supplies on an urgent operational basis. The Air Corps parked the planes and gliders in nearby airfields. Parachutes were inspected by parachute maintenance and arranged in piles where they could be gotten at quickly.

Squad sergeants and platoon sergeants supervised the bundle rolling and packing of equipment. Ammunition was packed in the bundles. Food was rolled up in canvas rolls, attached to an equipment parachute, and made ready to be put on the para-racks.

Meanwhile, the company commanders and officers in the battalion were busy collecting all the information that could be gotten

(79) A-32, p.1-35; (80) A-19 'Holland History', p.not numbered.

and disseminating it down to all the troops. The intelligence flow of information was such as to give every man a sens eof security, since they all felt that they knew the hottest "poop" on the whole situation.

Consolidations of company records and necessary administrative supplies were loaded along with the equipment and ammunition.

In what spare moments they had left the men of the 3d Battalion were washing their clothes, being sure to have clean outfits on when they entered the battle, since that might be the only clothes they would have for some time.

Individual loads were put on and taken off. Some equipment that had to be jumped, but with no one to jump it, was loaded on some unlucky person who already had strapped on his person a SCR 300 radio, two land mines, two gammon grenades, four fragmentation grenades, one medical aid kit, and one field bag, containing extra socks and toilet articles.

Under and over and around this went his M-1 Rifle and as many bandoleers of ammunition as he could get on. In his big patch pockets on his leg were three days "K" rations. Strapped to his leg was his trench knife, and under his belt were such things as an extra pair of boots, plus two parachutes -- a main one and a reserve one.

Across the squad tent from him might be a man with a light machihe gun instead of a radio, or perhaps two field telephones and two rolls of wire. They had to have this stuff, and they had to carry it. It had been proven in the past that to be certain of having it, equipment had to be jumped with the trooper.

All in all, the 3d Battalion was ready to go. Up until the last minute there were some that figured it was another dry run, but it began to look like the real thing.

On the afternoon of the 16th of September, 1944, invasion money was issued and the final stage was set. The next day was the day. Sunday,17 September,was to be the day that Holland was going to be on the receiving end of the largest airborne force ever assembled in the world. (81)

Early Sunday morning, prayers were said and church services were held right on the airfield where the troops had been since early the morning before. Special food was dished out at breakfast time. Troops looked at one another when they saw that for breakfast they had bacon and eggs, sausage and eggs, hot cakes, ham and eggs, fried chicken, fried steak and pie. This was some breakfast -- many ate hungrily, others ate sparingly.

Back in the battalion area of the permanent camp, final work was done on packing and crating supplies, equipment and belongings that were to be dropped later by re-supply, brought in by gliders, and also by truck with the first land elements.

As the sun began to dry up the mist that hung over the English airfields, troops were loaded into the planes. Gliders were being jockied around, and trucks were running up and down the taxi strips, bringing the last of the equipment.

Overall there was an air of expectancy and cold knowledge that before that sun set it would shine on spilled blood of many of these men. In fact, it shown on some before the planes ever left the field.

(81) A-2, p.89.

In an extra big hurry to get a box of anti-tank mines unloaded, an inexperienced truck driver kicked a full box of them off the gate of his truck. The truck went up in pieces, and several planes were damaged, including men who were already on board. This is an example of necessary supervision even in the last minute of preparation.

To the last man, every one was glad when finally the planes took off and the fields of England could be seen below. That had been a ticklish job, getting ready, waiting, getting ready again, waiting. Now it was here, and it was on.

Some of the men smoked and others just sat in their seats and look at nothing in particular. Some slept.

Meanwhile, the Air Forces were making their rendezvous, and the armada grew larger and larger. Finally, it quit circling and, turning, headed east. Down below,the channel was dotted with craft, naval craft of the American and British Navies.

They weren't just there. They were there by design. They rescued personnel from disabled craft, helped in guiding the planes, and put up mobile anti-aircraft batteries out where they might be needed. (82)

After the final rendezvous was completed, there was fighter planes buzzing in and out of the formation. They had little or no work to do out over the channel, but soon the coast of Holland came into view. Then ack-ack began to burst among the closely flying transports. Some were hit, but not to a serious extent. (83)

(82) A-1, p.17; (83) A-1, p.18.

As soon as a ground battery would open up, fighters would dive on the installation and blast it with rockets and bullets. It was seldom that more than one burst came out of one position. This was all the Air Force needed to know, and off they went after it. Too, the darting of the fighters in and out of the planes gave a sense of security to the men that had never been felt before on previous jumps. (84)

Nearing the objective, the men were alerted, and all equipment was checked. Finally, the green light came on and out the door they went, jumpmasters tripping the para-rack switches as they left the plane.

The only Germans seen thus far had been a few scattered motor convoys along the roads. These had been fired on by the fighters, so the 3d Battalion began assembly, knowing that they had complete surprise in their sector. Too, the drop had been perfect. The DZ had been squarely hit, and all the men of the battalions were in their proper units immediately.

Immediately upon reorganization, the 3d Battalion put out a defense to cover the regimental zone of responsibility, which included protecting the landing zones for the gliders coming in and the resupply that was to follow. However, very shortly afterwards the battalion commander received orders to assist the 2d Battalion in their mission of capturing the Grave Bridge across the Maas River. (85)

The bridge across the Mass at Grave was very important. In fact, the 504th had been ordered to take it at all costs. But this wasn't necessary. Due to the surprise and mobility of the whole movement, the defenses around the bridge and its outlying areas was taken in a matter of a few hours, even though the Ger-

(84) A-4, p.94; (85) A-12, p.2.

mans greatly outnumbered the paratroopers. They had landed 57 miles behind the enemy lines, engaged the enemy, taken their objectives, and travelled a distance of 400 miles -- all in 9 hours. Thus, at 1800 on "D" Day of the Holland Campaign, the 3d Battalion went into a perimeter defense for the night, sending out patrols and collecting the equipment that was still on the landing zones, for since their landing, gliders had come in with their units, and also equipment for the parachutists. (86)

On the day of the 18th, strong enemy patrols began to probe the areas and the patrols sent out by the 3d Battalion ran into many fire fights. Too, keeping the DZ open became harder by the hour, as the Germans were beginning to shell the area with 88s and mortars. Even so, gliders and equipment came on in and suffered less casualties than would be thought under the circumstances.

On the night of the 18th, it was apparent that the Germans were beginning to oppose the attack with greater numbers each hour. (87) Meanwhile, the whole attack was being resupplied by heavy bombers who flew in with supplies of ammunition and food. Back in England, the 325th Glider Regiment was waiting for fair weather to take off. The DZs and LZs had to be kept open for them.

Intelligence reports gave the information that General Dempsey was on his way to link up with the airborne element. Previous plans had called for a link-up sooner, but he had run into unexpected enemy resistance. (88)

On the 19th, the British land elements joined with the 2d Battalion of the 504th Parachute Regiment. Immediately, coordination was

(86) A-32,p.70,89; (87) A-1, p.31; (88) A-1, p.30.

put into good use, with the British putting tanks and heavy guns in to give protection to the paratroopers against the German artillery fire. This helped to put the troopers on a little more equal footing. (89)

Meanwhile, at Arhnem, the Britist 1st Airborne Division had run into trouble.(90) In two days fighting, the British had sustained heavy losses and were very much in danger of being completely cut off from all possible help, unless something was done to better the situation. The key to this help was the bridge across the Rhine River at Nijmegan.

It had been an overall objective of the division, so it had to be taken now more than ever. (91)

On the morning of the 20th, the 3d Battalion was lined up on the west bank of the Rhine, 500 yards downstream from the bridge. Behind them were elements of a British tank battalion, firing overhead fire on the positions across the river. (92)

Even with the dire necessity of taking the bridge, the British commanders readily admitted that to them it seemed impossible with the equipment that the paratroopers had, plus the help that the tanks gave them.

From somewhere, 26 canvas boats were dug up, each capable of carrying 16 men. With the airborne engineers in charge of handling the boats, the 3d Battalion was going to attempt to cross and take the German positions on the far bank. At this point, the river was well over 300 yards wide.

Early in the morning, after a small preparatory fire by the British tanks, and the help of the 81 mortars in the battalion, the troopers ran down to the river, jumped in the boats and started across the river.

(90) A-1, p.32; (91) A-32, p.89; (92) A-1, p.34-35.

Immediately after the first man got in the boats, the Germans opened up with everything. There was direct fire by 88's, flak wagaons, ack-ack batteries, machine guns and rifle fire. Artillery shells and mortars made the water into geysers, swamping the boats and drowning troopers right and left.

The going was terrible. The men in the boats were being hit time and time again.

Finally, the first boat nosed up on the bank, and there in front of the observers on the west bank, and in line with machine gun fire from the Germans, troopers crawled out, stood up and vomited. The terrible exertion of paddling, fighting, and tediously getting across the river had nauseated them to the point of vomiting and insensibility. They were shot in their tracks. Of the others following, only 11 made the crossing. The others were sunk or blown up. Some of the men stripped off their clothes, jumped into the river, and swam the river -- holding onto their rifle and cartridge belt.

The group that finally got to the bank included some naked, vomiting, half-crazed men, who charged up the banks and cut the Germans down in their own holes. One man in the process of beating the brains out of an enemy machine gunner, stopped to vomit all over the half dead German. (93)

On the west bank, the onlookers were aghast at what was going on, but the boats never stopped. With the Germans' attention diverted by the first group, the second wave had better success, and succeeding waves built up on the small toe-hold that was held on the far side. (94)

(93) A-46; (94) A-1, p.35.

Then, in the face of direct fire, the men began to advance, slowly but surely. Casualties were lying everywhere. A man could not surrender if he had wanted to. If he had stood up, he would have been cut down, and if he laid down, a mortar shell would get him, so they moved forward, taking the first approaches to the bridge.

Hours went by, and the dead and wounded were stacking up. Then, the battle began to give. The paratroopers had gotten help, for the 3d Battalion was just about wiped out. With this help, the bridge was finally taken, and the way to Nijmegan lay open, and beyond this lay help for the British at Arnhem. The airborne phase was completed. Ahead lay many days of hard fighting, but that would come from additional missions and would be caused by subsequent events. Right now, all the planning back in England had been carried out.

ANALYSIS AND CRITICISM

This example is the best airborne operation that had been conducted up to that time. It employed everything. It had innovations that came out of previous experiences , and ushered in a new type of airborne attack, that is, attacking during daylight hours. By far this was the most important development in the whole operation.

On this operation the DZs and LZs were hit squarely, and the units were organized in a matter of minutes. Resupply was well coordinated and planned. There were a minimum of casualties from flak and ground action, while in transit, because of the close cooperation of the fighter aircraft. The intelligence information of the area was complete, enabling the units to move very freely on their first objectives.

Criticism of this operation lies mostly in the dependency that was put into flying reinforcements in. This was held up for many days because of bad weather, and could have been rectified by the plans having called for all the units being taken in at once, and then form a reserve on the ground. Too, having to hold the DZs proved a hard job. Planning should include the drop zones in the immediate area of the objective, for to protect them and at the same time strike out for the objective leaves a lot of unsound principles to be used.

CONCLUSION

Airborne attack is certainly a new step in the principles of war. It entails some new thoughts and new ideas that have been proven in the past to be sound and remarkably effective.

The principles that have been discussed -- surprise, mobility, deception, and use of mass -- are surely to be developed more in the future. At the present, it is my opinion that the science of airborne attack is really yet in its very beginning.

As a basis of this opinion, it can be recalled how all thru the years military leaders have striven to deceive their adversaries and to supprise them, both in the use of men and material as often and as completely as possible. And here in this type of warfare lies ~~the~~ another principal means of accomplishing all these feats.

As if by magic, a military situation may be moved thousands of miles in a few hours. It takes the battleground to areas that previously have been considered impervious to any threat of armed might. Its possibilities are immense and great. There is only the education of the army in airborne affairs to stand in the way of making all the armed forces of a country airborne and thereby furnishing airborne principles to every man in the ground forces, and not to just a few specialized volunteers.

How about argument?

There are several points to remember that for no good reason seem to be on the less important side of the overall picture. One of these facts is the safety of the men involved in airborne tactics. At the present time, the hazardous duty is compensated for by additional pay. To all purposes, this accomplishes the flow of necessary volunteers, but in a situation that demands an all out

effort, this probably wouldn't be the case. Therefore, in the future that question must be thoroughly explored to find ways and means for making an airborne trained unit, not just one concentration of specialists performing hazardous duty, but a unit trained in normal operational functions. How this can be accomplished will be found by boards and experiments, which will include better parachutes, better gliders, or perhaps some new inventions that would make these two means obsolete. All this is in the future, but is being worked on at the present.

The factor of surprise and mobility depends on great amounts of censorship and control on intelligence reports. At the present time, this should be more improved than it was when airborne operations were conducted in the last war. It is doubtlessly true that on many of the airborne operations conducted, the enemy had previous warnings. These could have been more disastrous than they were, but, too, they could have been less disastrous.

This will necessitate a new way of alerting, having troops stand by, and have equipment capable of being moved on a minute's notice. Too, it will obligate higher echelons to set up a more or less SOP to be used as a short cut to planning and preparation. In this way, a mission can be called for, planned and executed before the enemy has time to evaluate his intelligence reports. This is going to be a great stride in better perfection in the use of the principles of surprise and mobility.

Some method should have been developed in the last war to more capably train reserves. This was brought out in the historical examples quoted above. At the present time, a step is being taken in this direction by the newly added Replacement Company to an airborne division. This will perhaps perform the much needed task of

unit training to newly acquired personnel before they are sent down to the line company as a member of that team. Perhaps this is a step in the right direction; if not, then some thought deserves to be given to this problem.

During the last war, trained airborne personnel were used for the jobs that had no bearing on their abilities whatever. Many were the times that these special units were used as amphibious troops. Although they did a good job, it wasted personnel as a result of casualties that were more valuable to the overall effort as specialists in airborne training. Too, they were given jobs that they handled very capably, but it didn't take much insight to see that the jobs were given more or less as a substitute for a correct mission. The reason that correct missions were sometimes scarce was a breakdown in planning in some higher echelon. To be applied properly, airborne units should be committed, resupplied, contacted by other units, and then they should be relieved, thus freeing them for another job elsewhere. But this was never carried out in the last war. This principle could be expounded to a great potential, and doubtless will be in future action.

Airborne is a definite part of the army, and as such should be taught to all branches. In the last war, there was too much feeling that this force was a "novelty" unit, to be used and done with by someone in high headquarters. This, of course, isn't the right outlook. Airborne attack and tactics of these units should be intergrated in the training of all branches so that a firmer basis of understanding and knowledge can be gained by all. This would cause fewer headaches to people who, because of their affiliation with airborne units in the last war, sometimes found themselves alternately on the top of the list in priorities, and conversely, a few days later, awake to find the position reversed. This came

as a result of dealing with individuals or parties who were ignorant of the wants and needs of these principle airborne units. A general education within the army is cutting this problem down at the present time. This is being done by giving airborne courses to men who are key members of organizations and units.

A principle of war is the economy of force and material. This wasn't too closely adherred to in the past with airborne units, as can be seen by investigation of some of their missions and jobs. This all boils down to the job and immense expenditure that is necessary to train men in airborne, and then turn right around and use them for a mission that could just as well be done by other less skilled units. This showed poor planning and judgment, and calls for an orientation in all echelons of command and planning sections. There is no need of alerting a man to make a parachute drop into enemy territory after months of training for that particular job , and then just a few hours before the attack take him off a plane that he is acquainted with, put him on a boat for perhaps the first time in his life, and then proceed to land him on a beach as a regular ground soldier. Perhaps the individuals are actually better off in a selfish sense to be done this way, but when a man is trained to fight in a certain fashion and the effort requires that type of fighting, then be sure that he fights in the way in which he has been trained.

As conclusion to a general inspection of the fundamentals and principles of airborne attack, let it be said here that in due time these criticisms will be corrected. True, airborne attack is the

newest member of the fighting family. It has had its growing pains, but is now beginning to reach maturity. Like all other proven experiences, the airborne attack of tomorrow will be the direct result of attacks yesterday, and in true light of military theory, will attain success in battle, in a battle that perhaps will see surprise, mobility, deception and the use of mass as the deciding factors in bringing that success to a speedier end.