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THE EFFECTIVENESS OF AIR INTERDICTION DURING THE KOREAN WAR

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PART I

EVALUATION OF AIR INTERDICTION

THE EFFECTIVENESS OF AIR INTERDICTION

DURING THE KOREAN WAR

In measuring the results of air interdiction, the ideal source of damage information is a timely ground reconnaissance of target areas after strike. The effect of this damage is best seen by obtaining objective enemy assessments of the impact the damage had on enemy capabilities, plans, and operations.

When this ideal method of measurement cannot be employed, as in the Korean War, the effectiveness of air interdiction must be weighted on less reliable scales. Damage information comes from after-strike photographic interpretation, aerial observer reports, claims by pilots of striking aircraft, intelligence agent reports, and prisoner of war interrogations. Best evaluations of the effect of the reported damage come from those who are able to judge intelligently enemy capabilities, enemy intentions, and the combat situation as it was before and after the interdictory effort. Statistical errors and some bias in judgement are inherent weaknesses of such assessments. These evaluations are nonetheless useful, the most useful undoubtedly being the consensus of all assessments made.

The Framework of Assessment

Any assessment must of course start with the definition of air interdiction. To the USAF, interdiction means the employment of airpower to destroy enemy troops, supplies, and equipment before they

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reach the battlefield, or otherwise to hinder rear area movement so as to delay or prevent the arrival of troops and supply at the front.¹ Since the USAF has primary responsibility for the conduct of air interdiction on land (as was laid down in the Functions Paper of the Armed Forces and the Joint Chiefs of Staff shortly after the unification of the armed forces), each measurement of effectiveness should be based on the USAF definition.

Evaluations also must reckon with the USAF view that air interdiction, as defined, can have a vital, decisive effect on the course of ground operations. As General Otto P. Weyland, one of the Far East Air Forces commanders during the Korean War, expressed this view: "I would say that in a long-term war, tactical airpower will contribute more to the success of the ground forces and to the over-all mission of a theater commander through a well-planned interdiction campaign than by any other mission short of attainment of air supremacy."²

Next, there must be recognition that damage claims are generally overstated. In 1952, for example, the Fifth Air Force in

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Korea noted that the experience of World War II had proved the validity of halving pilot claims, and that the need for a similar reduction of claims was being born out by the Korean experience. The USN, in a study of close air support in Korea, went even farther, concluding that pilot claims were of such questionable reliability as an index of performance that they should be omitted from consideration altogether.³

Finally, in properly judging whether air interdiction did or did not have decisive results, the nature and capacity of the enemy's logistical needs and system must be understood and considered. Without that knowledge, or if it is ignored, no fair decision as to whether or how much the interdiction damage affected enemy logistics is possible.

Useful in understanding enemy logistical needs during the Korean War is a comparison of daily requirements to keep a full-strength U.S. infantry division, Chinese division, and North Korean division in action:⁴

U.S. division (15,000 men) - approx. 500 tons

CCF division (10,000 men) - approx. 60 tons

NK division (11,000 men) - approx. 70 tons

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Enemy supply problems were obviously more manageable than were American. More important of course is the application of these figures to the number of Chinese and North Korean divisions in action. By best estimate, the maximum number of enemy divisions in Korea at one time during the war was 58 Chinese and 19 North Korean. Assuming for purposes of discovering maximum needs that all of these were in action at the front, and using the tonnage requirement for an infantry division in action, the peak daily Chinese requirement would be 3,480 tons, the peak North Korean daily requirement would be 1,330 tons; and the enemy's total daily requirement would be 4,810 tons.⁵

From the capacity of Korea's major lines of communications, judgments can be made as to how much reduction of that capacity could be sustained before enemy forces at the front no longer could obtain the needed quantities of supply. In their main structure, Korea's rail and road systems have a north-south orientation and assume an X-shaped pattern with the crossing at Seoul in western central Korea. The rail system in North Korea is divided by the mountainous backbone of the peninsula into a western and eastern network. The maximum peacetime capacity of the western network stood at 9,000 tons per day,

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of the eastern network at 5,000 tons per day. North Korea's road system, generally speaking, parallels the rail system, although the entire area is crisscrossed with roads of varying quality. During the war, 2,000 miles of roads were estimated to be in each half of North Korea. Although the peacetime capacity of North Korea's roads is not known, road engineers during the war estimated the capacity of these roads to be at least 1,500 tons nightly.⁶

Below Seoul, where the main lines of communication from the north converge, the rail lines spread out again, a lesser line moving inland through the valley of the Han River then southeastward through central Korea into the valley of the Naktong. The main line, farther west, moves southeastward diagonally across the peninsula to Pusan, but also extends a branch into the southwestern corner of the peninsula. The capacity of the rails in South Korea undoubtedly matched and probably exceeded that of the networks in the north. The same probably held true for the southern road system, whose anatomy, as in the north, generally traces the rail lines.⁷

Along with enemy logistical needs and the capacity of the

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main enemy lines of communication must be considered the enemy supply distribution system. As in the U.S. Army, the impetus of enemy supply was from the rear. Several adjustments were made in the enemy logistical chain. But for the greater time, procurement and distribution started with a combined North Korean-Chinese Rear

Services Command under which six logistical commands operated. The distribution system extended from these logistical commands through a series of depots, sub-depots, and supply points to the front.⁸

In moving supplies through this system, every available means of transportation was employed: railroads, trucks, pack animals, oxcarts, pushcarts, and human portage. This display of versatility was both the strength and the weakness of the distribution system. Whereas the wide use of more primitive modes of transportation permitted the delivery of supplies, it also restricted the enemy's ability to sustain offensive operations. Without regard for any effect that UN interdiction efforts might have on the flow of enemy supply, it appears that enemy logistics, largely because of a lack of sufficient motor transportation, were geared to sustain the impetus of an offensive for no more than 14 days.⁹

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The Interdiction Campaign by Phases

At every opportunity, enemy lines of communication, troops behind the lines, supply and communications installations, motor vehicles, railroad power and rolling stock, and all other suitable targets were kept under attack from the air. The interdiction effort nonetheless had three discernible phases, two distinguishable by a difference in principal target, the other by its concept of attack.¹⁰

In Phase I, which lasted from August through November 1950, selected rail and highway bridges were the principal targets. Until mid-September, the bridge targets were located variously from the bomblines in southwestern Korea to the Yalu River boundary between Korea and Manchuria. It was the FEAF concept that destroying the main bridges in North Korea would sever enemy road and rail traffic from the north and that concurrent attacks on river crossings in South Korea would completely interdict the flow of enemy troops and materiel to the battlefield. In September and October, as UN troops pushed the North Koreans out of South Korea and moved above the 38th parallel, FEAF concentrated on bridges whose destruction could help to prevent an orderly retreat by the North Koreans. Then, when the Chinese first appeared in Korea in late October and early November,

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interdiction air attacks centered on the international road and rail bridges spanning the Yalu.¹¹

In Phase II, from December 1950 to August 1951, bridges again were the main targets but emphasis was placed on concentrated attacks within designated zones. The zones received priorities according to their considered importance to enemy movements; and the air plan called for attacks by massed airpower, one zone at a time, according to the established priorities. Special attention was given to the rail system since the enemy was expected to make maximum use of its larger capacity. As a noticeable result, the enemy

shifted the bulk of his movements from the rail lines to the roadnet. Consequently, near the end of Phase II, the area destruction plan was modified to include concentrated attacks on major roads within a specified zone. Beginning in June 1951, this effort, known as Operation Strangle, concentrated on the roads in a one-degree latitudinal belt across the peninsula just above the battleline. This operation lasted two months and bridged Phases II and III.¹²

In Phase III itself, which lasted ten months from August 1951 to June 1952, the rail system became the principal target. Whereas previous operations against rail lines had stressed the

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destruction of bridges, the new objective was to make multiple cuts of the tracks and roadbeds. Repairing such damage, it was judged, would be more difficult for the enemy than was repairing or replacing downed bridge spans. At the termination of this effort, a program of general destruction was instituted wherein all available airpower was employed to make the conflict as costly as possible to the enemy in terms of equipment, facilities, and personnel. Although this might be considered a fourth interdiction phase, interdiction itself became secondary to the intended purpose of encouraging the Chinese and North Koreans to conclude armistice negotiations.¹³

The three phases of the interdiction campaign and the general destruction program matched the chronology of ground operations as follows:

<i>Air Phase</i>	<i>Date</i>	<i>Ground Phase</i>
I	25 Jun 1950-25 Nov 1950	North Korean Invasion, Pusan Perimeter, Inchon Landing, Breakout from the Perimeter, Pursuit into North Korea, Chinese First Phase Offensive, UN Advance Toward the Yalu
II (Opn Strangle)	25 Nov 1950-10 Jul 1951 (Jun-Aug 1951)	Chinese Second Phase Offensive, Chinese New Year's Offensive, UN Killer Operations, Chinese Spring Offensive, UNC Advance to Lines Kansas and Wyoming
III and General Destruction Program	10 Jul 1951-27 Jul 1953	The Stabilized Front during Armistice Negotiations

Below are assessments of each of these interdictory phases.

Phase I

In prefacing the official Far East Air Forces Report on the Korean War prepared in 1954, General Weyland, then FEAF commander, declared that "air power was the decisive force in the Korean War. Seizing the initiative as soon as authorized to do so, it blunted the first sharp thrusts of communist aggression and prevented the expulsion of our forces from the peninsula."¹⁴

Lt. Gen. Walton H. Walker, who commanded the Eighth Army during Phase I, earlier had supplied sufficient grounds for General Weyland's second statement. Speaking to a U.S. Air Force Evaluation Group in November 1950, General Walker said, "I will gladly lay my cards right on the table and state that if it had not been for the air support that we received from the Fifth Air Force we would not have been able to stay in Korea."¹⁵

But General Walker, who was killed in December 1950, had no opportunity to respond to the flat conclusions drawn by FEAF in 1954

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as to the decisiveness of the air role during Phase I. According to FEAF, "The destruction wrought by air power was the decisive factor in the defeat of the Korean People's Army."¹⁶

The best available evaluation of air operations during Phase I is found in the official Army history of that period of the Korean War. It gives air operations during the period the same credit as that given by General Walker, but presents a more moderate evaluation of the degree of effectiveness than that claimed by FEAF:

[By early July 1950,] UN air attacks on North Korean armor, transport, and foot columns had become ... sufficiently effective so that the enemy no longer placed his tanks, trucks, and long columns of marching men on the main roads in broad daylight. Afterward ... the enemy generally remained quiet and camouflaged in orchards and buildings during the daytime and moved at night. The North Koreans also used back roads and trails more than in the first two weeks of the invasion, and already by day were storing equipment and supplies in tunnels.

The Far East Air Forces probably exercised a greater relative influence in August 1950 in determining the outcome of the Korean battles than in any other month. [But] while it is clear that air power wrought great destruction of enemy equipment and troops during [August 1950], it is not possible to state accurately just how great it really was. Pilot claims are the basis of most estimates of air damage and destruction. Experience has shown that these are subject to many kinds of error.

[Overall,] the North Korean People's Army had shown a remarkable ability to maintain transport to its front lines over long lines of communications despite heavy and constant air attacks. This accomplishment is one of the outstanding feats of the North Korean war effort in the Pusan Perimeter period. The United Nations air effort failed to halt military rail transport. Ammunition and motor fuel, which took precedence over all other types of supply, continued to arrive at the front, though in diminished quantity. There was still a considerable resupply of heavy weapons, such as tanks, artillery,

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and mortars, at the front in early September, although a steady decline in artillery can be traced from the middle of August. There was a sufficient supply of small arms ammunition, but a shortage of small arms themselves became apparent by mid-August and continued to worsen with each passing week. Rear areas were able to fill only about one third of the requisitions from the front for small arms in mid-August and resupply ceased entirely about the middle of September. New trucks were almost impossible to obtain. There was no resupply of clothing. At best there were rations for only one or two meals a day.¹⁷

The above assessment, probably the most carefully researched study of the period in existence, does indeed credit air operations with a great deal of effective support. But it hardly permits the FEAF claim that air power was the decisive factor in defeating the North Korean Army. Contrary to FEAF expectations and claims, the North Korean's ability to repair bridges quickly, the fact that many streams were fordable, and a lack of effective night attack capability among the UNC air units allowed the flow of some enemy reinforcement and resupply to the front. At most, the interdiction effort did hamper enemy movements, especially of heavy equipment and guns, and in combination with the UN ground defense, helped to dissipate the enemy's offensive capability and to reverse the course of the war.¹⁸

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Phase II

In judging the results of air interdiction from late November 1950 to the opening of armistice negotiations in July 1951, a period which included five distinct Chinese offensive operations, FEAF again concluded that "airpower was the decisive factor in the outcome of battle." In commenting on the UN withdrawal during the Chinese offensive at the beginning of this period, FEAF pointed out that "since October, air strikes against the build-up of this force had not been possible because the bomb-line actually was on the Yalu River in several places. Feeling the pinch caused by this lack of air interdiction, the UNC was forced to fall back with severe losses." But after the UN withdrawal from North Korea again exposed the enemy rear to air attack, the interdiction effort, according

to FEAF, "...caused the collapse of the CVF [Chinese] logistic system and obliterated enemy mass tactics by the tremendous casualties it inflicted."¹⁹

If enemy logistics, as established earlier, were geared to sustain the impetus of an offensive for no more than 14 days, the following statistics on the duration of enemy offensives bear directly on the FEAF evaluation of the effect of interdiction on the enemy logistic system:

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First Phase Offensive (actually during air phase I)	25 Oct-6 Nov 1950	13 days
Second Phase Offensive	25 Nov-1 Dec 1950	7 days
New Year's Offensive (two impulses)	31 Dec 50-8 Jan 51	9 days
	11 Feb-18 Feb 1951	8 days
Spring Offensive (two impulses)	22 Apr-29 Apr 1951	8 days
	15 May-20 May 1951	6 days

The number of offensive operations and their duration hardly support the FEAF conclusion that there had been a "collapse" of enemy logistics during this phase.

Nor does the extensive study on the Effectiveness of Tactical Air Support in World War II and Korea, prepared by the U.S. Army Command and General Staff College in 1961, support such a conclusion:

During the withdrawal of the UN forces from N. Korea in late 1950, the primary attention of the Far East AF, which included Navy and Marine units, had been directed towards the close support of the ground forces. As the situation stabilized early in January 1951, FEAF directed that emphasis be shifted to the interdiction of the enemy's rearward lines of communication and supply. By June 1951, it was apparent that in spite of the destructive and widespread attacks of aircraft the battlefield had not been interdicted. The enemy had been able to mount two large-scale offensives within a month, and it was obvious that sufficient supplies, troops, and equipment were getting through from China to the frontlines in N. Korea. The Chinese placed more dependence on night truck traffic to offset the rail damage. The vehicle count of enemy trucks jumped from 7,300 in January 1951 to 54,000 in May 1951. Practically everything travelled [*sic*] at night. The skillful and highly-organized repair efforts of the enemy generally matched the rate of destruction.²⁰

Again, it appears, the Air Force overstated the effects of interdiction. While the area destruction attacks, which got fully underway in January 1951 and continued until May 1951, clearly reduced the enemy's ability to move troops and supplies forward, they did not cause a collapse as claimed. To keep men and materiel moving, one enemy response to the air effort was to shift their main movements out of the zone currently under heaviest attack. The enemy also employed crude methods and large amounts of impressed labor to replace bridge spans on key routes in a matter of days, stored repair materials nearby some bridges in anticipation of attacks, and even built some by-passes before bridges were destroyed. In this fashion, the Chinese and North Koreans were able to assemble the men and materiel for their Spring Offensive.²¹

Operation Strangle

Evaluations of Operation Strangle, unlike those of other interdiction phases, are closely in agreement. In this concentration on a narrow strip of the enemy roadnet, aircraft of the three services cratered assigned roadbeds, destroyed bridges, bombed passes, attacked tunnels with rockets, and sowed butterfly bombs and delayed action bombs at designated choke points. Increased night heckler flights were made to impede enemy movements under the cover of darkness. But after 13 days of such operations, a preliminary Air Force

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assessment indicated that while movement past choke points had been almost entirely stopped, and the enemy inconvenienced by being forced onto secondary roads, total north-south vehicle sightings remained about the same and arrivals in the front line area showed little ascertainable change. By late summer of 1951, it was apparent that Operation Strangle had failed. The reasons were simple: a bomb crater on an unpaved road could not stop a truck—the hole could be quickly filled in or bypassed. Even a damaged highway bridge was no impediment. A simple bypass could be built, or a ford made across the unusually summer-dry streams. Furthermore, in comparison to the rail networks, there was greater flexibility and greater area in the highway networks to make air attacks more difficult. As a result, Operation Strangle was closed in mid-August 1951. The final assessment, generally agreed upon but as stated by FEAF, was that "Operation Strangle was not successful ... due to the flexibility of the Communist logistic system."²²

Phase III and the General Destruction Program

Air Force and other evaluations of the effect of interdiction attacks during the last two years of the Korean War are again

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dissimilar. According to FEAF, "Airpower, by denying enemy reconstitution of forward units, supplies, and airbases in North Korea, proved to the Communists that seizure of Korea by force could never occur. Concurrently, the full impact of war in North Korea by

our air offensive created the havoc and confusion that brought enemy accession to an armistice."²³

A comprehensive study of enemy logistics conducted by a historian working under the auspices of the Office of the Chief of Military History, DA, reached conclusions quite opposite:

American logistics officers never ceased to be amazed at the staying power of the communist armies opposing them in Korea. Here was a force operating on a peninsula without the benefit either of naval or air superiority. United Nations warships ranged its coasts continuously, and American and Allied aircraft attacked its supply lines almost daily. Yet this force was able not only to maintain itself logistically, but actually to build up its strength.

No more eloquent testimony to the fact that the communist logistical system was functioning effectively could be found than the reports of steadily increasing communist artillery fire throughout most of 1952. ... in June 1952 the number of artillery shells falling on United Nations positions represented a 2,000 percent increase over what it had been a year earlier.

The tremendous increase in communist artillery fire on United Nations positions in 1952 indicated not only that the enemy had been able to build up an effective supply of ammunition, but also that the number of artillery units and weapons had been increased substantially. In July 1953 the Communists had an estimated 270 field artillery battalions.

But the expansion of communist fire power was not limited alone to the artillery. Infantry units too showed signs of important increases in weapons and personnel strength. As late as early 1952 some Chinese communist rifle companies were found to have as few as

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30 percent of their troops armed with individual weapons—rifles, carbines, pistols, or submachine guns. By the beginning of 1953 rifle companies—whose total strength had, at the same time, been increased—had as many as 60 percent of their men armed with individual weapons. In addition infantry battalions and regiments now had been equipped with 3.5-inch rocket launchers, 57-mm. recoilless rifles, 12.5-mm anti-aircraft machine guns, 70-mm. infantry howitzers, and 120-mm. mortars.

All through 1952 the communists appeared to be stockpiling supplies throughout North Korea. By October 1952 it was estimated that stockpiles in forward areas had reached a level to support a full-scale offensive for

up to fourteen days. Whether available transportation would be able to move supplies forward to keep up with a sustained offensive remained doubtful. [But] in spite of United Nations harassment by air and sea, the communist logistical system at the end of 1952 appeared to be stronger than ever.

At the end of combat operations in July 1953, communist logistics were in the best condition of any time during the war. Weapons and ammunition supplies on hand were greater than ever, and Chinese soldiers were getting almost as many calories a day—though not the variety of foods—as were Americans. Clearly much remained to be done in improving the effectiveness of attacks against lines of communications in this kind of restricted, limited war.²⁴

Actually, although the new system of rail interdiction attempted between August 1951 and May 1952 enjoyed considerable success during the first four months, it became obvious by January 1952 that the enemy's ability to repair the rail lines again had caught up with the UNC's ability to damage them. Over the next six months, enemy supplies and equipment moved, if slowly and with interruptions, to the battlefield so that the forward stockpiles were sufficient to support the operations undertaken during the armistice negotiations then in progress. It was in recognition of

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this fact that the "track-busting" system of rail interdiction was terminated in June 1952 and the general destruction program substituted for it.²⁵

Overall Assessments

Air Force Evaluations

After making extensive claims of effectiveness for the various phases of the interdiction effort, FEAF presented a more modest evaluation of interdiction for the entire war:

Of the three classical missions of tactical air power, interdiction had the most checkered history in the Korean War. We got off to a slow start in interdiction due to the urgency of the ground situation, our limited air power, and the preoccupation of the Far East Command with direct support of ground fighting. During the first year of the war, when the ground fighting was conducive to an intensive interdiction campaign, the majority of our airpower was concentrated on battlefield support. Later, the ground fighting slackened, and FEAF could devote a major portion of its efforts to interdiction. By this time, however, the enemy's logistic requirements were low enough so that he could satisfy them even with his limited transportation. By not pressing the ground war the UN permitted

the enemy to hoard his supplies, and thus nullify much of the value of interdiction.

We learned that our developed tactics, our weapons, and the capabilities of our aircraft, limited our ability to interdict a ground logistic system, particularly at night or under bad weather conditions. The enemy's superb use of passive defense measures, and route management techniques, and his adroit employment of anti-aircraft protection indicates the kind of obstacles which our tactical commanders in a future war must be prepared to overcome.

In spite of our limitations in equipment and weapons, the enemy's countermeasures, and the low logistic requirements of the

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Communist forces in the last two years of the war, intensive air interdiction campaigns made the war very costly to the enemy.

It is beyond question that the FEAF interdiction effort in the Korean War had a major effect on the general success of our arms, and upon the ultimate Communist decision to end their attempt to bring all of Korea into the Communist sphere.²⁶

The Air Force historian, Robert F. Futrell, has made a similarly modest claim of success:

During the three years of the Korean war United Nations air-interdiction attacks against the rear of the Communist ground armies undoubtedly had a decisive significance which was secondary in importance only to air-superiority operations. The tactical situation in Korea and the frugal supply requirements of the Reds nevertheless made for some peculiarities which caused interdiction in Korea to vary somewhat from similar activities in earlier wars. Korea's peninsular conformation and its scarcity of good transportation arteries simplified interdiction, but the relatively short distance from the front lines to the Yalu and the modes supply requirements of Red troops hindered the effort. As was the case in World war II, the best time for an interdiction campaign was when the ground situation was fluid, the fighting intense, and the enemy's logistical needs were greatest. Medium and light bombers were more effective against communications arteries in the rear than against transportation capillaries near the front. To be effective, interdiction campaigns needed to be well planned and persistently sustained. In the course of its operations FEAF found a great need for all-weather and round-the-clock interdiction capabilities. During the fluid fighting in Korea rear-area air attacks proved to be extremely destructive of the enemy's personnel and materiel. With its effectiveness magnified by the employment of nuclear weapons, airpower

would likely be a primary and most economical means for resisting massed enemy ground attacks in the future.²⁷

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Army Assessments

In its study of tactical air support, the U.S. Army Command and General Staff College submitted the following summary of the air interdiction campaign in Korea:

Notwithstanding the heavy damage inflicted by UN airpower, the overall air interdiction campaign in Korea had only partial success. The destruction did not succeed in significantly restricting the flow of the enemy's supplies to the frontlines, or in achieving interdiction of the battlefield. The attrition caused by the enemy to triple and retriplate his efforts to supply the frontlines; it laid a costly burden upon his supply organization; it caused him widespread damage and loss. Yet no vital or decisive effect could be observed at the fighting front. Throughout the campaign, the enemy seemed to have ample strength to launch an attack if he wished. His frequent and heavy artillery barrages were evidence that he did not suffer from a shortage of ammunition. Captured prisoners said they had plenty of food, clothing, medical supplies, and ammunition for their small arms.²⁸

General Mark Clark, who was Commander-in-Chief of the United Nations Command during the final year of the Korean War, judged the air interdiction campaign as follows:

The Air Force and the Navy carriers may have kept us from losing the war, but they were denied the opportunity of influencing the outcome decisively in our favor. They gained complete mastery of the skies, gave magnificent support to the infantry, destroyed every worthwhile target in North Korea, and took a costly toll of enemy personnel and supplies. But as in Italy, where we learned the same bitter lesson in the same kind of rugged country, our airpower could not keep a steady stream of enemy suppliers and reinforcements from reaching the battleline. Air could not isolate the front.²⁹

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Navy Evaluations

The Navy historians, Commander Malcolm W. Cagle and Commander Frank A. Manson, drew the following conclusions:

This [interdictory] destruction had undoubtedly slowed the movement of goods and forced the enemy to organize a tremendous resistance. It had

forced him to divert a large share of his manpower and to expend large quantities of repair materials. But the struggle to strangle the enemy's supply lines throughout Korea, by all air forces ... did not isolate the battlefield.

It must be grudgingly admitted that one of the key reasons why isolation of the battlefield could not be achieved in Korea was the surprising tenacity, determination, and ingenuity displayed by the Communists to keep their rail and highway networks in operation. In spite of incessant daylight attacks and nighttime harassment, despite the necessity of working at night, of using old equipment, of having long, exposed, and vulnerable supply lines, the Chinese were able to maintain and even increase the flow of supplies to the battlefield.

In addition to patience and determination, however, the Communists had methods and organization for the maintenance and repair of their road and rail networks.

As a result of damaged tunnels, bridges, roadbed, and track, and with Communist logistical operations confined to nighttime or inclement weather, it was conservatively estimated that the Communists could deliver approximately 500 to 1,500 tons per day to the battle area on the western rail net [in North Korea]. The capacity of the eastern net [in North Korea] was reduced to less than 500 tons per day. ...

Thus even during the period of heaviest attack upon the North Korean rail network by the several UN air forces, the Reds by the regimentation of mass labor to repair bridges and breaks, by shuttling trains between breaks, and by use of the system only at night or in inclement weather, could still transport between 1,000 and 2,000 tons over the entire east and west rail systems every day. In other words, despite an all-out UN air effort by the U.S. Navy, the U.S. Air Force, and the U.S. Marines, and by various UN air units, the Communists could supply approximately half their needs by rail alone.

At no time during the course of the war did either the UN's surface or air interdiction efforts succeed in stopping the flow of enemy supplies from Manchuria to the front to a decisive degree. ... By every index, in fact, the Communists were able to steadily increase

their flow of supplies to the frontlines. ... the enemy was never kept from supplying his needed requirements. At no time—except locally and temporarily—did the enemy limit his combat effort because of supply considerations.³⁰

Vice Admiral J. J. Clark, one Commander of the Seventh Fleet during the war, made the following assessment:

The interdiction program was a failure. It did not interdict. The Communists got the supplies through; and for the kind of a war they were fighting, they not only kept their battleline supplied, but they had enough surplus to spare so that by the end of the war they could even launch an offensive.³¹

Enemy Assessments

While the Communist press and radio are not noted for honest reporting, two statements from enemy sources are perhaps worth considering out of the fact that they are post-war issues. On April 6, 1955, almost two years after the truce in Korea, the Chinese in a broadcast over Peking radio stated that the United Nations "mobilized more than 2,000 military aircraft and still failed to cut off the supply line to tiny North Korea."³²

In 1959, the North Korean government published what was

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called the official North Korean history of the war. This publication included the following summary of the UN air interdiction effort:

The American imperialist aerial insurgents' mad bombardments neither destroyed our front line transportation capability nor did they weaken it. Our military transportation personnel, locomotive and vehicle drivers, under the constant threat of continuous enemy bombardment and strafing, made a great historical war record in transporting supplies to the front under the cover of darkness and complete blackout.

Thus, due to the heroic struggle of the Korean people, the American imperialist 'air power' had come to nothing.³³

Summary

The consensus of the various assessments considered above supports the following conclusions:

1. The air interdiction campaign made a worthwhile contribution to UN accomplishments during the war. It was particularly helpful during the early months of the war in assisting the ground forces to overcome the North Korean Army. It was an effective and costly harassment to enemy forces throughout the war.

2. The air interdiction campaign was not a decisive factor in shaping the course of the war because it could not inflict enough damage on enemy lines of communication and means of transportation to block the flow of enemy personnel and materiel to the front or

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even to reduce the flow below minimum requirements. Principal reasons for the less-than-desired results were (a) the flexibility of the enemy logistical system and the magnitude of the enemy's organized effort to keep lines of communication open, and (2) the absence among UN air units of an adequate nighttime and all-weather attack capability.

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ENDNOTES [PART I]

1. See Robert F. Futrell, *The United States Air Force in Korea*, p. 654.
2. Weyland quoted in Robert P. Futrell, *The United States Air Force in Korea*, pp. 116-17.
3. OCMH Study, Mr. Richard C. Kugler, *Air Force Statistical Data on Missions Flown in Support of the Army* (C), p. 5.
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5. Eighth Army G2 Estimate, July 1952 (S).
6. Cagle and Manson, *The Sea War in Korea*, pp. 231-32.
7. James A. Field, *United States Naval Operations—Korea*, pp., 94-95.
8. DA Pam 30-51, *Handbook on The Chinese Communist Army*, pp. 65-66; Manus[cript], J.A. Huston, *Korean Logistics*, ch. XVII, "Communist Logistics" (S), in OCMH files.
9. Ibid.
10. See OCMH Study, *Air and Naval Interdiction in the Korean War* (S), prepared for DCSOPS in July 1964.
11. Ibid.

12. Ibid.
13. Ibid.
14. Quoted in *FEAF Report on the Korean War (C)*, vol. I, p. II.
15. Quoted in Roy E., Appleman, *South to the Naktong, North to the Yalu*, a volume in the official series, *U.S. ARMY IN THE KOREAN WAR*, p. 477.
16. *FEAF Report on the Korean War (C)*, p. 68.
17. Appleman, *South to the Naktong, North to the Yalu*, pp. 123, 376, 379, 393-94, and 477.
18. OCMH Study, *Air and Naval Interdiction in the Korean War (S)*.
19. *FEAF Report on the Korean War (C)*, vol. I, pp. 85-86.
20. U.S. Army C&GS College, *Effectiveness of Tactical Air Support in World War II and in Korea (C)*, copy in OCMH files.
21. OCMH Study, *Air and Naval Interdiction in the Korean War (S)*.
22. Ibid.; U.S. Army C&GS College, *Effectiveness of Tactical Air Support in World War II and in Korea (C)*; Field, *United States Naval Operations—Korea*, p. 358.
23. *FEAF Report on the Korean War (C)*, vol. I, p. 101.
24. Manus[cript], J. A. Huston, *Korean Logistics*, ch XVII, "Communist Logistics" (S).
25. OCMH Study, *Air and Naval Interdiction in the Korean War (S)*.
26. *FEAF Report on the Korean War (C)*, vol II, p. 99.
27. Futrell, *The United States Air Force in Korea*, p. 658.
28. U.S. Army C&GS College, *Effectiveness of Tactical Air Support in World War II and in Korea (C)*.
29. Gen. Mark Clark, *From the Danube to the Yalu*.
30. Cagle and Manson, *The Sea War in Korea*, pp. 231-32, 257, 270, 278-279, and 372-73.
31. Quoted in Cagle and Manson, *The Sea War in Korea*, p. 270.

32. Quoted in Cagle and Manson, *The Sea War in Korea*, p. 278.

33. *Righteous Liberation War for Freedom of Fatherland and Independence, the Official North Korean History*, 1959, pp. 313-14, translated copy in OCMH files.

PART II

AIR SUPPORT STATISTICS

TOTAL CLOSE SUPPORT AND INTERDICTION SORTIES DURING THE KOREAN WAR

	CLOSE SUPPORT ¹	INTERDICTION ¹	OFFENSIVE ²
USAF	57,665	191,581	
USMC	32,482	47,873	
FRIENDLY FOREIGN ³	6,063	15,359	
USN			104,614
TOTAL	96,210	254,813	104,614

1. FEAF, *Report on the Korean War*, vol I, p. 115.

2. Interpreted from Comdr. Malcolm W. Cagle and Comdr. Frank A. Manson, *The Sea War in Korea*, p. 523. The source did not develop totals for close support and Interdiction sorties but these would be included in the total given for "Offensive" sorties.

3. Friendly foreign air units included a Royal Australian Air Force Squadron, a South African Air Force squadron, and a ROK Air Force fighter wing.

TOTAL PILOT CLAIMS DURING THE KOREAN WAR

	USAF & FRIENDLY FOREIGN	USN & USMC	TOTALS
Enemy Troops killed	145,416	86,265	231,681

Tanks destroyed	988*	249	1,237
Tanks damaged	979		
Guns-Bunkers destroyed	16,104	20,854	36,958
Guns-Bunkers damaged	12,255		
Locomotives destroyed	869	391	1,260
Locomotives damaged	1,085		
Railroad Cars destroyed	14,906	5,896	20,802
Railroad Cars damaged	21,090		
Vehicles destroyed	74,589	7,437	82,026
Vehicles damaged	29,597		
Buildings destroyed	116,839	44,828	161,667
Buildings damaged	77,406		
Aircraft destroyed	951*	97	1,048
Aircraft probably destroyed	191		
Aircraft damaged	1,186		
Bridges destroyed	827	2,005	2,832
Bridges damaged	2,255		
Supply Installations destroyed	**	1,900	
Power Plants destroyed	**	33	
Enemy vessels destroyed		2,464	
Railcuts completed	22,828	13,000***	35,828

Sources: (1) OCMH Study, *Air and Naval Interdiction in the Korean War*; (2) FEAF *Report on the Korean War*, vol I; (3) Cagle and Manson, *The Sea War in Korea*.

Notes:

(1) The USAF totals for starred items (*) probably include land-based Marine pilot claims.

(2) Claims may have been made for targets for which no figures have been inserted. But available sources do not provide them.

(3) Air Force claims for double-starred (**) items probably are included in entries for buildings.

(4) The triple-starred entry (***) is the total given for fast carrier aircraft only.

**USAF CLOSE SUPPORT AND INTERDICTION SORTIES BY PHASE
DURING THE KOREAN WAR**

PHASE	CLOSE SUPPORT	INTERDICTION
PHASE I (25 JUN - 25 NOV 1950)	23,260	18,350
PHASE II (25 NOV 50 - 10 JUL 51)	22,800	54,410
PHASE III (10 JUL 51 - 27 JUL 53)	46,621	154,800
TOTALS	92,681	227,560

Source: FEAF *Report on the Korean War*, vol I, pp. 63, 83, and 97.

USAF COMBAT CLAIMS BY PHASE DURING THE KOREAN WAR

	PHASE I (25 JUN - 25 NOV 1950)	PHASE II (25 NOV 50 - 10 JUL 51)	PHASE III (10 JUL 51 - 27 JUL 53)	TOTALS
Enemy Troops killed	39,000	91,495	14,921	145,416
Tanks destroyed	452	296	89	817
Tanks damaged	405	310	105	820

Guns-Bunkers destroyed	243	266	6,958	7,467
Guns-Bunkers damaged	281	637	5,019	5,937
Locomotives destroyed	228	216	425	869
Locomotives damaged	261	288	536	1,085
Railroad Cars destroyed	3,120	1,458	10,328	14,906
Railroad Cars damaged	7,150	3,879	10,061	21,090
Vehicles destroyed	8,367	6,338	59,884	74,589
Vehicles damaged	6,129	5,118	18,350	29,597
Buildings destroyed	21,733	68,491	26,615	116,839
Buildings damaged	13,151	39,454	24,801	77,406
Aircraft destroyed	104	51	796	951
Aircraft probably destroyed	38	19	134	191
Aircraft damaged	69	108	1,011	1,188
Bridges destroyed	118	161	548	827
Bridges damaged	393	457	1,405	2,255
Railcuts completed	379	587	21,862	22,828

Source: FEAF *Report on the Korean War*, vol I, pp. 62, 82, and 96.

**USN (TF 77) OFFENSIVE AIR SORTIES BY MONTHLY AVERAGE
DURING THE KOREAN WAR**

	MONTHLY AVERAGE
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25 JUN 1950 - 31 DEC 1951 [<i>sic</i>]	2,392
1 JAN 1951 [<i>sic</i>] - 30 JUN 1952	2,716
1 JUL 1952 - 31 JAN 1953	3,228
1 FEB 1953 - 27 JUL 1953	3,777

Source: Developed from Cagle and Manson, The Sea War in Korea, p. 523.