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**THE TRANSFORMATION IN AIR POWER IN THE  
AFTERMATH OF THE KOREAN WAR**

**By**

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## **About the Author**

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## INTRODUCTION

The Korean War marked one of the two or three most dangerous periods in the history of the Cold War. It was dangerous not merely because it represented the first open conflict between the two emergent blocs, both equipped with atomic weapons, but because it was fought in large part with the assumptions of the pre-atomic era. Coming so closely after the end of the Second World War, which had been waged on a total basis and to complete victory ('unconditional surrender'), the Korean War was fought with mostly Second World War technology and doctrine, and under the leadership of men who had held senior command positions in the war against Germany and Japan.

Strategically the Korean War may be divided into two phases, that from June 1950 to July 1951, during which time the war was conducted on the basis that the complete overthrow of the enemy was both possible and desirable, and that from July 1951 to July 1953, characterised by the seemingly interminable truce talks first at Kaesong and then Panmunjom and during which far more limited ends were pursued. Driven by inappropriate analogies with Hitler and the recent memory of the successful application of American military might, US leaders in both Washington and Tokyo sought a rapid and total conquest of North Korea as both an appropriate and indeed necessary outcome to the war. The lesson of the limitations of power was an uncomfortable one for American leaders at all levels.

The final year of the Second World War had seen the overwhelming application of allied airpower as an essential element in allied victory. After hesitant, sometimes disastrous, starts in close air support, so-called strategic bombing, and the application of aircraft in the maritime environment, the allied (which is to say largely British and American) air forces had swept the skies of their opponents and whilst falling short always of the more grandiloquent claims of the pre-war advocates, had made a major contribution to victory in the other two dimensions. The contrast at every level with the situation in 1939, or even 1941, could not have been greater.

Major advances in the application of the air weapon had been in the areas of close air support, air interdiction, logistic support and naval aviation, and these were to be key areas in the air war in Korea. In all cases, the US Air Force, and their naval and Marine Corps counterparts, went into the Korean War with much the same doctrine and the same equipment as had emerged by 1945. They also entered the war with many of the same attitudes regarding the proper application of airpower in their particular service environment and, with the Army, held various grievances and prejudices concerning each other, all of which were rooted firmly in recent historical experience.

Korea was in some ways a fortunate war for the US services. First and foremost, it demonstrated once again the continuing utility of conventional forces. During his tenure of office beginning in March 1949, the Secretary of Defence, Louis A. Johnson, had savagely reduced many of the forces' capabilities because they were not, in his view, relevant to the projected combat needs of the United States, in a climate furthermore in which it was already suggested that possession of atomic weapons rendered nugatory the need for traditional armed forces (and, incidentally, denied the utility of military history). Secondly, and of almost equal importance, it largely ended

the internecine bickering over roles and missions which had characterised defence policy and inter-service relations in the late 1940s, especially between the US Navy and the US Air Force over the future of naval aviation and carriers in the CVA-58 dispute and the cancellation of the B-36. Its legacies were certainly not all positive, but the Korean War deserves to be recognised as a pivotal military episode.

USAF thinking on the conduct of air operations in Korea was governed by thinking which had been codified in the middle of the Second World War. In FM 100-20, 'The Command and Employment of Air Power' (July 1943), adopted incidentally without the concurrence of the Army's organisation and training agency to whom the USAF (as it then was) was answerable, FM 100-20 set out the kind of air warfare which American air officers favoured: strategic bombing, air superiority operations, interdiction, and close air support. In the realm of tactical aviation the Army itself produced FM 31-35, 'Air-Ground Operations', (1946) which in 1949 was subjected to a review of its procedures which had not been completed by the time the Korean War broke out. Joint tactical air exercises conducted in the United States between 1947-1950 gave few grounds for confidence, and one student of the subject has suggested indeed that by 1949 most senior Army commanders 'appear to have regarded close air support as a lost cause after the Air Force became a separate service'.<sup>1</sup> The problem in this area may be summarised in the following form: the Air Force was concerned at any perceived threat to its control over mission priorities, while the Army sought to extend power over tactical air support to the commanders on the ground.

The other factor which needs to be borne in mind is that enemy air power rarely made an appearance over the battlefield. Major air battles were fought elsewhere, and the Chinese and North Korean effort was sustained to a considerable extent by Soviet airlift capabilities, but the focus of action was always on the ground. Coupled with this, after the crises of the first six months or so the war became a stalemate. In such circumstances, the various air services were able to fight two subsidiary wars in addition to that against the agreed common enemy: against each other in the interests of testing the lessons and assumptions which had emerged from the war and the post-war disagreements, and for influence with the theatre commander (successively MacArthur, Ridgway and Clark) who had ideas of their own about the applications of air power. (Clark, for example, was known to oppose the view set out in FM 100-20 that 'land power and air power are coequal and interdependent forces; neither is an auxiliary of the other'.)

There were three air forces in Korea: the Fifth Air Force, commanded by Far East Air Force (FEAF), the 1<sup>st</sup> Marine Air Wing, and the air groups on board the carriers, both under the command of Naval Forces Far East (NavFE). Their principal client, and principal critic, was the US Eighth Army, commanded by Army Forces Far East (AFFE). The command of all three was united in the person of the Commander-in-Chief, Far East (CINCFE) who was also the Commander-in-Chief, United Nations Command (CINCUNC) and the Supreme Commander for the Allied Powers (SCAP) with responsibilities in occupied Japan. This was the first problem; for most of the war there was no joint staff at FEC headquarters. When the Korean War broke out, MacArthur had merely added the new designations and responsibilities for the

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<sup>1</sup> Millett, Allan R., 'Korea, 1950-1953' in Benjamin Franklin Cooling (ed.), *Case Studies in the Development of Close Air Support*, Washington DC, Office of Air Force History, 1990, p 349.

fighting in Korea to his existing organisation in Japan, and it was not changed until the beginning of 1953. The USAF official historian suggested later that 'in the absence of the joint headquarters staff, the full force of United Nations airpower was seldom effectively applied against hostile target systems in Korea',<sup>2</sup> but this smacks of special pleading. At the tactical level and to control close air support missions a Joint Operations Center was created in July 1950, but this was hampered by the lack of a joint doctrine and poor communications between the Air Force and the Navy, each of whom meant different things by the term 'close air support'. This situation was made more complex still when Marine aviation units entered the fighting in August.

The primary missions from the air force point of view were air superiority and interdiction, and Korea was held up as providing 'one more historical justification for the overriding priority which USAF doctrine accords to the air superiority mission'.<sup>3</sup> The air superiority mission had two phases, and two features, not necessarily parallel. In the opening weeks of the war, UNC aircraft destroyed the relatively small North Korean air force with ease, in the air and on the ground. UN ground forces were able thus to operate in general without fear of enemy air attack, which given their manifold other problems at that stage was just as well. After November 1950 when the Chinese entered the war, and did so equipped with MiG 15 jet aircraft, the nature of the struggle changed. In general, the enemy operated aircraft from bases inside Manchuria, which meant that these were inviolate because of strict orders not to enter Chinese (or Soviet) airspace. On occasions the Chinese attempted to rebuild airfields inside North Korea, but the airfield neutralisation programme employed to counter it proved highly effective. It should be added here, however, that towards the war's end the Chinese created a sophisticated ground-controlled air defence system over northwestern Korea, which had a significant impact on American bombing raids, and had they been willing to use, or the Soviets to supply, electronics-equipped all-weather fighter aircraft there seems little doubt that the older B-29 aircraft, which provide the 'heavy punch' in terms of bomb loads, would have found it difficult to continue operations, especially at night (which was when the airfield neutralisation missions were flown). Although the Chinese, North Koreans and Soviets who flew against the UNC lost 810 aircraft against 139, their planes were good and some of the pilots skilful; aerial combat in MiG Alley had its hazards. But it is important to recognise as well that the enemy did not employ their full resources in the contest for control of the air, and that the absence of enemy aircraft over the UNC's lines was a conscious imposition of limitations on the part of the Chinese, just as the decision not to attack UNC ships prevented the war from getting dangerously out of hand. In the view of some in the United States Air Force, this was not an unmixed blessing. General William Momyer, one of the fathers of American tactical airpower and later commanding general of the 7<sup>th</sup> Air Force during the Vietnam War, observed much later that:

... one of the things that comes out of the Korean War – unfortunately it's a terrible thing to say, but I feel we would be in a much stronger position today with regard to the importance of air superiority if the enemy had been able to penetrate and bomb some of our airfields and had been able to bomb the front

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<sup>2</sup> Futrell, Robert F., *The United States Air Force in Korea 1950-1953*, Washington DC, Office of Air Force History, revised edition, 1983, p 693.

<sup>3</sup> *ibid.*, p 694.

lines periodically. It would have brought home to our ground forces and other people the importance of air superiority ... So air superiority has remained almost a philosophical thing.<sup>4</sup>

There was no strategic air campaign as such until relatively late in the Korean War, but strategic bombers – specifically the B-29 – were used in a tactical application in the interdiction role and against industrial and infrastructure targets within North Korea. Of interdiction two American students of the subject have suggested that:

... one of the most important conclusions to be drawn from an unbiased examination of interdiction experience is that the outcomes seldom came close to the expectations of the interdiction planners. Even when an interdiction effort has been judged successful, the achievement has not infrequently been quite different from the original objective. Misperceptions as to what was feasible, misunderstandings about the appropriate payoffs to be sought, differences of opinion as to the most suitable targets, and misevaluations about what was actually being accomplished were common in past interdiction campaigns.<sup>5</sup>

Interdiction was one area, at least, where the failure to create a joint headquarters staff shoed itself clearly in the early days of the war, and it was only after heated arguments between Weyland and MacArthur's staff that FEAF was permitted to mount an interdiction campaign, beginning in August 1950.

North Korean industrial targets posed little problem, although the destruction of the North Korean industrial base made virtually no difference to the enemy's ability to maintain his military effort. There were two reasons for this: the enemy demonstrated consistently that he was able to operate on a much slimmer logistical 'tail' than the UNC, and hence the assumptions of air planning staff concerning the necessary minimum supply rates were usually wide of the mark; secondly, the North Korean industrial heartland lay not inside North Korea, nor even in Manchuria, but in the Soviet Union. By dint of an aerial logistic support effort the dimensions of which we are only just beginning to appreciate, a Soviet air group provided a vital link between the Chinese and North Korean armies in the field and their principal resupply sources to the rear, all the while protected by the sanctuary status which operating out of Manchurian bases provided. This measure of Stalin's support had been given hesitantly; it was not until a month after Chinese intervention in the war that the Soviet air force began its major supply lift effort, and the fact of that delay was to feed the growing Sino-Soviet split which surfaced eventually in 1959, but whose origins lay in the history of relations between the Chinese and Soviet Communist Parties before the CCP's victory in the civil war in 1949, and which events in Korea were to exacerbate. It was a lesson, at one level, which was ignored a decade later in Vietnam, when the industrial heartland of the North Vietnamese effort lay neither in Vietnam nor even in China again, but in Czechoslovakia. Mining Haiphong was all very well, and bombing the Ho Chi Minh Trail had its uses, but the real source of resupply for the enemy forces south of the Central Highlands was through the Cambodian port of Sihanoukville.

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<sup>4</sup> Kohn, Richard H. and Harahan, Joseph P., (eds.), *Air Superiority in World War II and Korea*, Washington DC, Office of Air Force History, 1983, p 74.

<sup>5</sup> Dews, Edmund and Kozaczka, Felix, *Air Interdiction: Lessons from Past Campaigns*, Santa Monica, Rand Corporation, 1981, p v.

What then of the interdiction effort in Korea? It certainly lacked nothing in intensity, interdiction sorties totalling some 320,000 for the duration of the war, some 9,000 per month on average, or some 48% of combat sorties overall. The results of this effort need to be looked at closely, however, and under a number of headings.

Overall, as in the Second World War, damage claimed was probably in excess of damage actually inflicted. But that level was real enough nonetheless. FEAF aircraft expended nearly 220,000 tons of bombs and 3800 tons of napalm on interdiction missions alone, and these figures do not include Navy and Marine Corps sorties. The major target of interdiction missions was the enemy's supply system and transportation infrastructure; enormous damage was done to bridges, rail lines, roadways, locomotives, rail cars and road transport. The effort was at its most effective in the crisis period leading up to the UNC breakout from the Pusan perimeter in September 1950, but thereafter its overall effectiveness declined. Operation STRANGLE I, the air interdiction effort aimed at roadways and trucks in the spring and early summer of 1951 was a disappointment, and although high expectations were maintained for STRANGLE II, a rail interdiction programme beginning in August 1951, these expectations remained unfulfilled as well. (SATURATE, mounted in early 1952 against rail lines likewise failed to justify the optimistic evaluations made of it.) Communist countermeasures proved sufficient to break the railway blockade of Pyongyang, for example, by the end of 1951. The objectives of SATURATE in 1952 became the much more modest intention to 'interfere with and disrupt' enemy efforts, but even this fell some way short of realisation. In July 1951 the Chinese/North Korean forces were firing about 8000 artillery and mortar rounds a month; in May 1952 after 10 months of transport interdiction they fired over 100,000 rounds. Not only that, but the enemy's capacity to mount and sustain an offensive actually increased, demonstrated by the ferocious attacks against the ROK positions in April and July 1953.

The other major area of activity, that which produced the most friction between the services, and which was most closely related to the conduct of the war on the ground, was close air support. Of the more than one million sorties flown during the war by UNC aircraft, between 10-15% were close air support missions, with Navy and Marine Corps aircraft probably flying more such missions than FEAF. The cost of such support is difficult to quantify, since the forces did not delineate between aircraft lost to ground fire on close air support as opposed to interdiction sorties. Nor do the number of sorties flown or the tonnages dropped necessarily produce damage equivalent to the effort expended.

The worth of close air support ultimately must be assessed in terms of its impact on the ground war. Especially during the early months of the war, air strikes in support of ground troops gave them a combat edge over the North Koreans, and this edge was extended against the Chinese during the fluid phase of the war, which ended in late 1951. Thereafter, the enemy had to pay extra attention to concealment and dispersion, tasks with which the UNC forces did not need to bother. But there were serious tensions evident within the system. The Air Force insisted on centralisation of control of air support, and declined to provide either additional forward air controllers or ground FACs, as the Army requested. The request itself was born of observation of Marine Air Wing support for the 1<sup>st</sup> Marine Division and the detached X<sup>th</sup> Corps operations in late 1950 and invidious, and not always fair, comparisons were drawn

between that and Air Force operations. The Marine system was good, in that every battalion had an FAC attached, but the reasons for this needed to be understood. Marine formations were much lighter than Army ones, especially in terms of organic supporting arms; the Marine Air Wing was intended to compensate for the lack of Marine artillery. The Army, on the other hand, usually preferred to engage enemy targets within the first 1000 yards of their own front with artillery fire, since a divisional fire was to be equated with 1800 air sorties with 500 pound bombs.<sup>6</sup> Air sorties within that range were usually only demanded when artillery could not be brought to bear. The Marines, on the other hand, insisted on routine close air support within that range.

Although the USAF official history claims that Korean experience validated the existing joint air-ground procedures<sup>7</sup> more recent analysis has been less kind. For various reasons, Army dissatisfaction with the joint system was not pushed during the war, other than by the X<sup>th</sup> Corps Commander, Major General Edward M. Almond. In exercises immediately following the war, however, many of the same problems which surfaced in Korea reappeared in the exercise evaluations. The air-ground operations system which the Air Force agreed to was usually undermanned because the Air Force would not supply sufficient personnel of the appropriate rank and experience even when the Army agreed to furnish the equipment and enlisted personnel for the tactical air control parties, while the Air Force continued to insist that all traffic be handled in this highly centralised manner. The Air Force claimed that Army use of air support was profligate and wasteful, while the Army looked at the Marine Corps experience and drew the appropriate conclusions. In 1955, the Air Force instructed that all joint service boards charged with writing doctrine should be abolished; 1953 saw the publication of Air Force Manual 1-2, 'Basic Doctrine', which restated the primacy of centralised air war. A further demonstration of the Air Force view was provided by the 'Air Pressure' strategy embarked upon in the spring of 1952 and designed to provide an independent role for air power after a period of being 'tied down' to supporting the ground forces. Intended to put pressure on the negotiations at Panmunjom, it involved the bombing first of the North Korean hydroelectric power system and of the capital, Pyongyang, and then, when the talks apparently reached an impasse once again in April-May 1953, the bombing of the dams system which controlled irrigation for the North Korean rice crop. The first phase exhausted the target list with little apparent impact on the Communist negotiating position, while the signing of the armistice in July 1953 owed as much if not more to political factors, although some in air force circles claimed it as a victory for the air pressure strategy.

What broad conclusions may be drawn from the application of airpower in the Korean War? There were two major technological breakthroughs which were first tested in combat during the Korean War, jet aircraft and helicopters. The new generation of jet technology more than proved itself in Korea, and the tactics developed were tested and validated in a variety of roles. Helicopter technology was still too primitive for more than an indicative result to be returned, but the possibilities for tactical movement and medical evacuation were to be worked on for the rest of the decade and to result in the deliberations of the Howze Board in 1961 which resulted in turn in the formulation of the airmobile divisional concept.

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<sup>6</sup> Futrell, *The United States Air Force in Korea 1950-1953*, p 704.

<sup>7</sup> *ibid.*, p 707.



The USAF official history once again takes a very sanguine view of the war's impact on the Air Force, claiming that it demonstrated acceptance of the predominance of airpower among America's armed force capabilities.<sup>8</sup> After a fashion, he is correct, but since the Korean War was followed by the disastrous years of Eisenhower's 'New Look' policy in defence, in which conventional military force was run-down while 'massive retaliation' was emphasised and the chimera of airpower as a war-winner in its own right was pursued once again, too much perhaps should not be made of this. But the Korean experience also gave renewed impetus to the growth and development of Army aviation and further stimulated Army-Air Force rivalry: the helicopter was the vehicle (literally and figuratively) through which the Army rebuilt the air force which it had lost in 1947, until by the Vietnam War Army aviation constituted the fourth largest air force in the world, one whose armed helicopters alone flew more than 36 million sorties between 1966-1971.

In what sense then, if any, can we speak of a transformation of airpower during the Korean War? At one level Korea was a transitional period in the development of airpower. There were no technological breakthroughs, no dramatic new applications (if we leave aside the spurious claims about germ warfare advanced by the Communists), and as we have seen, no resolution of the serious doctrinal disagreements between the Army and the Air Force. Organisationally the US Air Force was transformed, however, with the Korean War providing the necessary incentive for the rapid expansion of the Air Force in peacetime to a size without previous parallel. In the evolution of national security policy during the 1950s the USAF likewise enjoyed a greatly increased role, in part at least at the expense of the Army, although with later consequences noted above. And the damaging row with the Navy over the future roles and capabilities of Navy and Marine aviation were resolved, by legislation, by the war's close.

Operationally the results were much less reassuring. The interdiction campaign was in most respects an expensive failure; the art of close air support had been lost by the Air Force, while the Navy/Marine application was never utilised efficiently on a theatre-wide system. The air superiority campaign was a success, but since there is evidence that the enemy operated under self-imposed limitations, possibly an unnecessary one. As two British analysts have noted, Korea emphasised once again 'the unsurprising fact that aircraft alone are not enough'.<sup>9</sup> As another British student of the subject, Air Chief Marshal Sir John Slessor, commented:

The idea that superior air power can in some way be a substitute for hard slogging and professional skill on the ground in this sort of war is beguiling but illusory ... all this is cold comfort for anyone who hopes that air power will provide some kind of short cut to victory.

The lesson of American military policy in the 1950s, however, suggests that American planners believed exactly that.

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<sup>8</sup> *ibid.*, p 710.

<sup>9</sup> Armitage, M.J. and Mason, R.A., *Air Power in the Nuclear Age, 1945-82*, London, Macmillan, 1983, p 43.