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SOME VIEWS OF THE GREAT POWERS ON THE TACTICAL USE OF AIR POWER IN A FUTURE WAR

E. Cemalovic

Foreign Technology Division
Wright-Patterson Air Force Base, Ohio

25 August 1972

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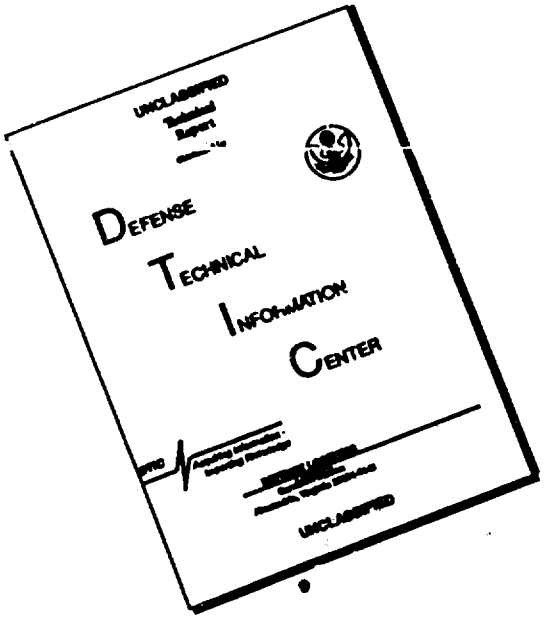

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FTD-HC-23-0627-72

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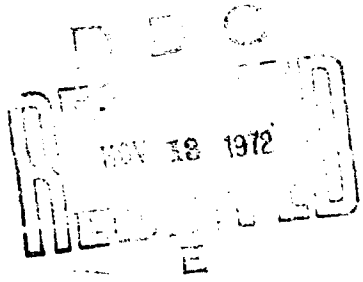

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) Foreign Technology Division Air Force Systems Command U. S. Air Force	2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED 2b. GROUP

3. REPORT TITLE

SOME VIEWS OF THE GREAT POWERS ON THE TACTICAL USE OF AIR POWER IN A FUTURE WAR

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Translation

5. AUTHOR(S) (First name, middle initial, last name)

E. Cemalovic

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
1960	~~12~~ 16	

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. J 206	FTD-HC-23-0627-72
c.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
d.	

10. DISTRIBUTION STATEMENT

Approved for public release; distribution unlimited.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	Foreign Technology Division Wright-Patterson AFB, Ohio

13. ABSTRACT

This article contains the author's views on the tactical use of air forces by the great powers in a future war.

DD FORM 1 NOV 65 1473

I

UNCLASSIFIED
Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Tactical Air Support Naval Tactic Tactical Support Helicopter Ground Defense Tactic						

II

UNEDITED ROUGH DRAFT TRANSLATION

by Joint Publications Research Services

FTD-HC-23-0627-72

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By: E. Comalovic

English pages: 12

Source: Vazduhoplovni Glasnik, (Air Force Herald), Vol. 17, No. 1, 1960, pp. 3-11.

Requester: ESD/INDC

Approved for public release; Distribution unlimited.

PREPARED BY:

TRANSLATION DIVISION
FOREIGN TECHNOLOGY DIVISION
WP-AFB, OHIO.

SOME VIEWS OF THE GREAT POWERS ON THE TACTICAL USE OF AIR POWER IN A FUTURE WAR

/Article by E. Cemalovic; Vazduhoplovni Glasnik, Serbo-Croatian, Vol 17, No 1, 1960, pp 3-11/

The use of tactical air power in a future war is derived from its purpose and the character of a future war. The great powers base all their theoretical considerations of the use and application of overall armed forces in a future war on the following postulates:

a. It will be an atomic war, nuclear weapons, combined with widespread use of conventional weapons, will be used on a large scale and by surprise, and the widespread use of chemical and biological weapons is not excluded.

b. It will be total war in which the entire populace and the entire territory will be involved, and a country's total material wealth will also be involved.

c. It will be very much a war of maneuvers encompassing great breadth and depth, and fronts will very frequently be discontinuous, overlapping, and turned inside out.

This judgment concerning the nature of a future war has opened up broad possibilities for the use of tactical air power, and it has imposed as a basic task the complete coordination of the combat operations of tactical air power with the tasks and goals of ground and naval forces.

At present the great powers are developing their tactical air forces on the basis of experience from World War II and the Korean War, and then on present-day achievements in aviation engineering and in nuclear weapons carried by airplanes in combination with conventional airplane weapons. The great powers have very similar views in their present theoretical considerations concerning the purpose, use, and command of tactical air power in a future war; there are differences in organization and military formation, but they do not affect the essential use of tactical air power.

Given the present level of development and capabilities of means of air offense and defense, the importance of tactical air power has increased enormously; integrated with present-day missile weapons, its purpose is to support and protect the ground forces.

When selecting the tasks and goals of tactical air power, all countries in the world put emphasis on the use of present-day tactical air power to protect and support ground forces and naval forces in joint operations. Tactical air power is integrated with ground and naval forces into a single entity used for a single operational goal, and its command is in the hands of the commander of the front or of the army group.

The great powers describe the use of present-day tactical air power by citing the following basic tasks:

a. to win and maintain air superiority over the entire depth and breadth of the front in order to create conditions for secure operation of one's own ground and naval forces and of all types of aircraft that make up one's tactical air force so as to support ground and naval forces. In present-day operations the tactical air force would carry out this mission according to a single plan that would link its operations with those of the strategic air force, the air defense system, and ground-to-ground missile launching weapons in its possession and in the possession of the ground and naval forces;

b. to ensure every kind of support to ground and naval forces so that they can carry out their missions on land and sea as quickly as possible with a view to securing the joint destruction of enemy forces. Carrier-based aircraft would have the evident role in combined operations of supporting shore landing operations and ground operations along the sea coast; these aircraft would operate according to a single plan governing both the tactical air force and the missile weapons of the ground forces, the naval forces, and the air force. We should mention that this does not exclude the use of the strategic air force to support ground and naval forces in exceptional cases.

The tasks of the tactical air force might be divided into the following:

a. the battle for air superiority;

b. support and protection of ground and naval forces;

c. air reconnaissance, and

d. air transport of troops and materiel.

1. The battle for air superiority is assumed to be the beginning of war operations. Air superiority is achieved through planned, surprise,

large-scale, and simultaneous attack, if possible against all the adversary's means of air offense before they take off or are put into action, i.e., to destroy them on the ground as much as possible. The aim, then, is to carry out an attack with available nuclear and conventional weapons against the enemy's air force, unmanned aircraft, and missile bases, above all those with nuclear missiles.

Within this context, if the tasks are ranked according to importance, it is thought that the air force's first and most important task is to strike the enemy air force on the ground, which primarily means that tactical air force would be pitted against tactical air force and strategic air force against strategic air force, while the remaining air forces should in general be used for the other tasks. The next task of the air force as a whole is to prevent organized defense or the enemy's advance, and only then would it destroy his other war potential, cities, industry, etc.

It is expected that the airfields of the enemy's tactical air force would be struck with a simultaneous attack on a maximum number of airfields in order to destroy the aircraft on the ground, airfield installations, fuel and ammunition depots, command headquarters and communication centers, and then the system of air force observation, reporting, and information and radio-navigation equipment, destroying the enemy without giving him a chance to catch his breath.

Missile sites and their guidance equipment within range of the tactical air force would be paramount targets, as would stockpiles of nuclear weapons of all kinds.

The plan governing the battle for air superiority would include the enemy's air defense system on the front with its active means of defense and command system as a whole, and missile sites for ground-to-air missiles with nuclear warheads would be priority targets for the tactical air force.

The battle of the tactical air force for air superiority would be waged over the entire breadth and depth of the deployment of units of the group or army of the front, and its operations would be reinforced by the operations of tactical guided missiles of the ground and naval forces, and if necessary by the operations of one's own strategic air force, and in this case the division of targets between them would be planned even in peacetime.

It is thought that the principal attention of peacetime command should be concentrated on detecting a possible adversary's forces and means of air offense, on learning their precise deployment, and on assuring a means of destroying them either on the ground or in the air; on this basis targets are divided up in peacetime between the available offensive and defensive air forces: that is, aircraft, missile weapons, and air defense, regardless of the military formation they belong to: the ground forces, the naval forces, or the air force.

The fact that the American strategic air force keeps planes with nuclear bombs constantly in the air over Europe and America indicates its readiness to operate at a moment's notice. It is assumed that these airborne groups and crews on constant duty already know "their" possible target.

One can assume that a portion of the forces of the tactical air force would have its nuclear bombs already in the racks of airplanes on call on the ground and always ready to take off for their target. Another portion of carrier-based air forces would be in constant readiness to take off for "their" targets.

Certain types of missile weapons on launching pads, which are on constant alert even in peacetime, may have all the elements computed for operation against "their" target.

It is thought that 1/3 of all the weapons in the air defense system of the front and territory should always be ready for "surprise," in view of the high speeds of present-day means of air offense.

The present-day air force as a whole, then, both strategic and tactical, as well as carrier-based airplanes in the air defense system, together with missile sites on land and on vessels of the large navies, would keep a portion of their forces constantly on the alert and always ready to go into action.

It follows from what we have said that the battle for air superiority is no longer an independent operation of the air force, but is waged with all the means of air offense of the air force and missile weapons belonging to the ground and naval forces, which is an essential innovation in fighting for air superiority. Consequently, the battle for air superiority, regardless of who wages it and where, and regardless of who has what tasks, is the concern of a unified plan drawn up in advance and governing the participation of all branches of the armed forces with their means of aerial warfare, i.e., the means of air offense and air defense.

According to certain views held by the great powers, it is thought that air superiority will be achieved most effectively through surprise attacks on the enemy, without leaving him the opportunity to take off and put into action all his means of air offense, which essentially means, so far as the importance of air superiority is concerned, that one should be first to start a war when it is judged that war is inevitable. In any case a surprise attack would give enormous advantages to the attacker, who would be able to destroy a large portion of the enemy's armed forces on land, the sea, and in the air, which would create favorable conditions for the attacker's subsequent conduct of the war.

Given the existence of today's means of air offense, it is thought to be impossible to win "absolute air superiority," since the enemy will

always be able to operate with new or surviving means of air offense. However, it is thought that one can and must be stronger in the air than one's adversary throughout the entire war.

The tactical air force's battle for air superiority is a primary task both in offense and also in defensive operations, and other tasks under the head of support acquire their significance as a function of the situation and the place this goal occupies with respect to the course of combat.

2. There are certain innovations in support and protection of the ground forces, and the most important are the following:

a. The "zone" of tactical surprise extends further into the depth of the front because of the higher speeds of offensive airplanes, and the first echelons of the army cannot be protected either in offense or defense by fighters on call at their airfields, which are located about 100 kilometers rearward of the front line. It is thought that ground forces can have air protection against such strikes only if fighter patrols are kept in the air; they would be deployed at varying altitude and depth at the time designated along the main r[illegible] of offense or defense, i.e., over the most important grouping of the [illegible] forces. Execution of this mission means that one must have large fighter forces allocated to operation in the air defense system of the front.

The usual view today is that protection of ground-force units directly at the front should be based primarily on their own protective measures of digging in, camouflage, and the action of their own air defense weapons (antiaircraft artillery and so on). Ground-force units deployed at relatively great depth may be protected by modern fighters on alert at their airfields.

b. It is thought that the arms of the ground forces, reinforced by nuclear artillery and tactical missile weapons, constitutes sufficient power for combat against enemy units in the tactical depth, which eliminates the need for the conventional "assault" operations of the air force, i.e., for direct support. The operation of the air force has been carried over into the depth of the enemy order of battle, i.e., to indirect support. Nevertheless, not a single country is categorically renouncing direct air support of ground forces. The mode of operation of the tactical air force that will be used depends above all on the available fire power of ground-force units and its capabilities, as well as on the general situation at the front. It is the commander being served by the air force who will decide when and to what extent indirect and direct air support of ground-force units will be used.

It is considered worthwhile to organize operational air force groups whose forces constitute a reinforced division or wing of fighter-bombers in order to support a corps or army on an auxiliary route or an army or corps

of the first echelon of the front or group army, whereas the other air forces would operate under the centralized command of a unified plan whose purpose is to support the front or group army as a whole.

c. Just like operations under difficult weather conditions, air support of nighttime operations by front units is regarded as a normal mode of operation by the tactical air force. Special radars exist for guidance to the objective of the action -- the target -- and for control of release of the bombs to bomb the objective -- target -- and the crew of the airplane has no visual contact with this system. It is asserted that operations of this kind are very precise and do not preclude an attack even on the enemy's minor tactical reserves. It is certain that major surface targets in the depth of the enemy's order of battle certainly have priority in nighttime operations of the air force in general and also in air force operations under difficult weather conditions (when the target is concealed by clouds). On nights with good visibility present-day airplane sights make it possible for airplanes to operate from a dive even against pinpoint targets by illuminating the target: a tank, a truck, a high-caliber artillery gun, etc., above all in convoys on the march.

The overall goal of air support in offense is to ensure a rapid pace of advance of one's own ground forces, in combined operations with the ground forces its goal is to destroy the enemy, and in defense its goal is to prevent or hinder the enemy from launching an attack or at least to disrupt his order of battle and force him to regroup his forces before moving to the attack, and to facilitate the conduct of defense as a whole.

Present-day defense, which possesses weapons for mass destruction, can disperse an attacker and even prevent him from carrying out the attack when weapons for mass destruction are skillfully used on a large scale. Modern atomic defense is not relegated exclusively to a subordinate role, i.e., it will strike where the attacker wishes.

Support of ground forces by the tactical air force ought to be massive, timely, and continuous -- day and night. Certain military theorists in the West recommend that on offense the main route of advance of their own ground forces be "plastered" with nuclear strikes; in practice the ground forces would then move behind the atomic mushrooms in order for armored and motorized forces to penetrate as quickly and as deeply through the enemy order of battle, so as to surround and destroy him. Great efforts are being made to create so-called "clean" nuclear bombs whose effect would primarily be manifested in destruction and a minimum of radioactive radiation, which would make it possible for ground forces to take rapid and full advantage of nuclear attacks and thereby to move immediately behind nuclear explosions. In the East consideration is being given to support of ground forces with nuclear weapons used against the main groupings of the enemy at the successive defense positions. Since defense positions are interconnected, this again means "plastering" the road for one's own armored and motorized forces with nuclear weapons along the main route of the strike,

which means that essentially the nuclear weapons are being used in the same way as in the West.

Conventional aircraft weapons are expected to have widespread use for strikes against targets that survive a nuclear attack and against details of the enemy deployment, primarily convoys, artillery, and tanks on the portion of the battlefield pinpointed for a breakthrough. Actions of this kind are therefore envisaged against smaller units in reserve and convoys or columns moving over the battlefield.

Battlefields are to be isolated on the principle of indirect support in order to cut off tactical or operational echelons of ground forces from reinforcements of troops and materiel arriving from the rearward depth of the front. Isolation of battlefields must above all be complete, so that there is no breach or passage, and it must be continuous day and night and independent of weather conditions. The point of isolating a battlefield is to prevent maneuvers toward or along the front by near and remote operational reserves assigned to counterattack and counterstrike. Isolation of the battlefield is supposed to prevent the filling of gaps and the closing of breaches in the enemy deployment that occur because nuclear strikes have destroyed and disabled individual units.

The isolation of the battlefield, along with strikes against reserves where they are stationed, will in practice be combat waged along the communication routes, in addition to attacks on marching columns, this form of combat also assumes atomic strikes against objectives on the routes themselves: railroad stations, crossroads, bridges of all kinds, narrow passes, etc.

Isolation of a battlefield may have tactical or operational importance, depending on the air forces available along a particular operational route.

Selection of the nuclear targets of the tactical air force supporting the ground forces depends first of all on the available number of nuclear bombs, nuclear artillery shells, and nuclear missile weapons, and the targets are divided among these weapons in view of their location, importance, and the payoff promised as compared to the caliber and power of the nuclear weapon of the airplane, missile, or guns.

It is thought that at least 1/3 of all available nuclear power should be kept in reserve for surprises on the battlefield, which will be very frequent. This reserve is primarily intended for pounding airborne landings and fast-moving reserves.

The decision concerning the use of nuclear weapons has supposedly been delegated down to the division commander, though consent must be obtained from the superior officer, unless it is regulated in some other way. One can assume that nuclear weapons of smaller caliber will be used at the

discretion of the division commander, while those of higher caliber will be under the control of commanders at higher levels.

Particularly important to air support of ground forces with nuclear weapons is the combined operation of the air force with its own units on the front in order to protect them, i.e., to secure them against their own nuclear attacks.

3. Air reconnaissance is becoming more and more important, and the demands for it are increasing steadily, as can be seen from the constant increase in the number of reconnaissance planes, which has approximately doubled since World War II. To the increase in the number of reconnaissance airplanes, we should add the increased airplane speed and the greater capability and refinement of camera equipment, which has increased the capability of reconnaissance planes even more. Aerial reconnaissance has gained in importance primarily because of the increased maneuverability of ground forces, the broader use of airborne and marine landings, and the use of nuclear weapons, which have created conditions for exceptionally rapid changes in the situation on the battlefield.

Aerial reconnaissance must be continuous and reliable over the entire breadth and depth of the front, and all types of aircraft are used for this purpose. Specialized reconnaissance units of the air force will carry out general reconnaissance to the depth of the enemy's entire order of battle to serve the army of the front or the group as a whole. Light reconnaissance planes and helicopters belonging to the ground forces will reconnoiter battlefields for their own units.

The task of aerial reconnaissance is to prevent the enemy from doing anything on the front that goes undetected and to see that the data gathered is immediately available for use by the interested commands. One should bear in mind that day and night aerial reconnaissance may be limited by extremely bad weather conditions.

The targets of tactical reconnaissance are facilities and units within the enemy's overall order of battle, particularly nuclear weapons and defense positions, including the structures of their fortifications.

Aerial reconnaissance gathers its data visually, by aerial photography, or by electronic means. The principal vehicle today is still an airplane equipped with a black-and-white, color, and infrared camera, radar, and lighting equipment. The problem of photoreconnaissance with conventional film is that the heat and radiation from nuclear explosions destroy this type of film, and new cameras are being introduced that use the principle of xerophotography for aerial photography. Television is the thing of the near future, and for gathering certain data it is already being introduced as a reconnaissance tool in the armies of the great powers.

It is thought that aerial reconnaissance should always be complemented with other sources of data: radio, radar, intelligence agents, reports of infiltrated and partisan units, etc.

4. Air transport of troops and materiel. The development of modern air transports as to types (light and heavy transport planes and helicopters), number, and capacity, are opening up large opportunities for the use of air maneuvers by troops and for the transport of materiel.

a) Airborne landings, "vertical maneuvers," are now thought to be the way of speeding up advance in a modern operation, and their importance has grown enormously. The airborne landing which has major operational and tactical importance (particularly strategic) is today a very complex operation because of its sensitivity to an atomic strike either in embarkation areas, in flight, or in the landing area. The winning of air superiority and complete secrecy are conditions for the use of sizeable airborne landings.

Sizeable airborne units must be dropped in separate areas, with battalions scattered, so as to achieve maximum safety against nuclear destruction. In addition, separate air routes are envisaged for each landing group in order to shorten the length of the air convoys and to achieve the simultaneous dropping or landing of the airborne group as a whole.

As a transport vehicle for airborne landings, the helicopter has transformed every part of the territory into possible landing area, though the specific features of the terrain determine the strength of the airborne landing force, just as it does the strength of an infantry unit moving on land. Helicopters are limited by their relatively short tactical radius when they are carrying the maximum payload of personnel and materiel, which today is about 25-150 kilometers, which puts a limit on the depth to which helicopter-borne landings can reach.

The enormous advantage of the helicopter is that when used in large numbers it makes it possible for the landing party to take up the envisaged order of battle in the air and immediately after landing. The helicopter-borne landing party is completely ready for combat action immediately after it touches the ground, which is not the case with paratroopers and glider troops because they may be scattered during landing, and this frequently requires that they regroup.

Helicopters can be widely used in every combat operation of ground-force units in order to rapidly advance groups to rescue and secure the advance guard and flank detachments, to advance the advance guards and flank detachments themselves to the appointed site in order to relieve the main force, and then to evacuate guards left to cover withdrawal of the main force, to close certain passages, to carry light artillery and mortars on the battlefield, to advance materiel, to evacuate wounded, etc.

Helicopters are very suitable for infiltrating complete units and commando and scouting groups to the enemy's rear.

As to the fording of rivers, helicopters make it possible to "jump over them" and to gain secure possession of an area on the other side of the river even before the battle begins for the river shore itself.

Helicopters have particular importance in connection with combat operations in mountain terrain, where the use of helicopter units makes it possible to achieve the desired security or supply in impassable and broken terrain in a matter of minutes, whereas normal movement over the terrain would frequently have required several hours. Helicopters will have great importance in connection with the use of combined frontal and partisan warfare.

The airborne landing will normally be used in combination with marine landing, and such a landing party can be carried from land or from ships at sea or from the surface of the sea by helicopters. If the navy is carrying out a landing under the cover of carrier-based airplanes or with the support of the land-based tactical air force, it is expected that atomic strikes will be used against the defender on shore in combination with the conventional airplane armament, and then the landing troops will be carried over by helicopter.

The helicopter-borne landing may be combined with a paratroop landing, depending on the nature of the mission, the terrain, and the enemy defense system.

The transport planes which units regularly have are not sufficient for carrying out a landing of major operational importance, and they therefore must be reinforced with the transport forces of the war zone.

In a future war the transport planes will be the principal means of reliable and rapid movement of air force units from one field to another, and one must have them in order to carry out this task.

Modern transport planes with large capacity and high speed are expected to be used to maneuver forces on one's own territory in order to strengthen certain theaters or regroup forces from one war zone to another or from one front to another.

b) Frequently materiel needed by troops to wage combat will have to be advanced or evacuated by air when major destruction of communication routes could occur because of the use of nuclear weapons. Along with airplanes, helicopters will have a special role; they will be able to drop their cargo without any damage on any point of the terrain, whereas airplanes will drop it with or without parachutes unless there are suitable airfields (grass) for it to land in the drop zone.

High-level commands of all services will have airplanes and helicopters for communication purposes, and they will be particularly important in securing the command process, rapid personal contact between officers, for the delivery of messages, etc., and particular attention is paid them under modern wartime conditions. Light airplanes and helicopters are used for this task, but in exceptional cases all types of airplanes with the weapons of the tactical air force may be used, depending on the importance and necessary speed in carrying out the mission.

The basing of airplanes is the main problem that the command has at all levels in modern nuclear warfare. The enormous destructive power of nuclear weapons and the expected surprise attack against enemy airplanes on the ground before take off have put paramount importance in the battle for air superiority on achieving security of airplanes on the ground, and this means above all the protection of airplanes against atomic weapons.

In the world today it is thought that one regiment can be based on an operational airfield, but a sizeable number of operational airfields are to be built to base as little as one squadron per airfield. Airfield construction will follow three main lines:

a. airfields that would provide base facilities on the basis of underground construction of hangars, garrisons, and depots;

b. airfields with scattered deployment of air force units; each of its elements would constitute a separate nuclear target (the runway, the taxiway, each squadron, the command post, the communications center, the ammunition dump, and the fuel depot);

c. grass airfields, possibly with slight stabilization, which could take airplanes that can operate from such fields, but here again one assumes scattered deployment of units, dumps and depots, and other facilities in order to achieve protection against atomic strikes.

We should emphasize the advantages of present-day jet airplanes in the tactical air force; they are suitable for use from grass airfields, and in this way one achieves greater and more rapid protection of the airplanes on the ground.

One particular difficulty in a future war would be the construction of new airfields and the rebuilding of old ones in the zone where the enemy's tactical air force was operating, since month-long efforts to build airfields may be destroyed by an atomic strike before the airfield is occupied.

In the West great importance is still given to aircraft carriers as floating airfields to reinforce the operations of one's own land-based naval air force and to reinforce the operations of the tactical air force in order to make up for the shortage of airfields as well as for the

independent operations of the navy on the open sea and along the coast for purposes of supporting the ground forces and marine landings.

The problems of basing the tactical air force, which are becoming more complex every day, are beginning to put constant and paramount emphasis on the need for airplane designs in the tactical air force which do not need concrete runways and can be used on grass airfields.