CHAPTER 5

THE PRINCIPLES OF WAR AND OPERATIONAL CONCEPTS

Section I. PRINCIPLES OF WAR

110. General

The principles of war are fundamental truths governing the prosecution of war. Their proper application is essential to the exercise of command and to successful conduct of military operations. These principles are interrelated and, dependent on the circumstances, may tend to reinforce one another or to be in conflict. Consequently, the degree of application of any specific principle will vary with the situation.

111. Principle of the Objective

Every military operation must be directed toward a clearly defined, decisive and attainable objective. The ultimate military objective of war is the destruction of the enemy's armed forces and his will to fight. The objective of each operation must contribute to this ultimate objective. Each intermediate objective must be such that its attainment will most directly, quickly, and economically contribute to the purpose of the operation. The selection of an objective is based upon consideration of the means available, the enemy, and the area of operations. Every commander must understand and clearly define his objective and consider each contemplated action in light thereof.

112. Principle of the Offensive

Offensive action is necessary to achieve decisive results and to maintain freedom of action. It permits the commander to exercise initiative and impose his will upon the enemy; to set the pace and determine the course of battle; to exploit enemy weaknesses and rapidly changing situations, and to meet unexpected developments. The defensive may be forced on the commander, but it should be deliberately adopted only as a temporary expedient while awaiting an opportunity for offensive action or for the purpose of economizing forces on a front where a decision is not sought. Even on the defensive the commander seeks every opportunity to seize the initiative and achieve decisive results by offensive action.

113. Principle of Mass

Superior combat power must be concentrated at the critical time and place for a decisive purpose. Superiority results from the

proper combination of the elements of combat power. Proper application of the principle of mass, in conjunction with the other principles of war, may permit numerically inferior forces to achieve decisive combat superiority.

114. Principle of Economy of Force

Skillful and prudent use of combat power will enable the commander to accomplish the mission with minimum expenditure of resources. This principle is the corollary of the principle of mass. It does not imply husbanding but rather the measured allocation of available combat power to the primary task as well as secondary tasks such as limited attacks, the defense, deception or even retrograde action in order to insure sufficient combat power at the point of decision.

115. Principle of Maneuver

Maneuver is an essential ingredient of combat power. It contributes materially in exploiting successes and in preserving freedom of action and reducing vulnerability. The object of maneuver is to dispose a force in such a manner as to place the enemy at a relative disadvantage and thus achieve results which would otherwise be more costly in men and materiel. Successful maneuver requires flexibility in organization, administrative support, and command and control. It is the antithesis of permanence of location and implies avoidance of stereotyped patterns of operation.

116. Principle of Unity of Command

The decisive application of full combat power requires unity of command. Unity of command obtains unity of effort by the coordinated action of all forces toward a common goal. While coordination may be attained by cooperation, it is best achieved by vesting a single commander with the requisite authority.

117. Principle of Security

Security is essential to the preservation of combat power. Security is achieved by measures taken to prevent surprise, preserve freedom of action, and deny the enemy information of friendly forces. Since risk is inherent in war, application of the principle of security does not imply undue caution and the avoidance of calculated risk. Security frequently is enhanced by bold seizure and retention of the initiative, which denies the enemy the opportunity to interfere.

118. Principle of Surprise

Surprise can decisively shift the balance of combat power. By surprise, success out of proportion to the effort expended may be

obtained. Surprise results from striking an enemy at a time, place, and in a manner for which he is not prepared. It is not essential that the enemy be taken unaware but only that he becomes aware too late to react effectively. Factors contributing to surprise include speed, deception, application of unexpected combat power, effective intelligence and counterintelligences, to include communication and electronic security, and variations in tactics and methods of operation.

119. Principle of Simplicity

Simplicity contributes to successful operations. Direct, simple plans and clear, concise orders minimize misunderstanding and confusion. If other factors are equal, the simplest plan is preferred.

Section II. COMBAT POWER

120. General

a. Combat power is a combination of the physical means available to a commander and the moral strength of his command. It is significant only in relation to the combat power of the opposing forces. In applying the principles of war, the development and application of combat power are essential to decisive results.

b. The development of combat power relates directly to the principles of mass and economy of force. The application of combat power is qualified by the intelligent application of the remaining principles of war.

c. The degree of combat power attained reflects the commander's imaginative planning and leadership and the organization, training and discipline of his forces as well as their morale and esprit. The successful application of combat power requires vigorous execution.

Section III. RELATED FACTORS

121. General

There are certain factors which bear directly on combat power. When properly applied, and in consideration of the principles of war, these factors insure full development and decisive application of combat power.

122. Terrain

a. Terrain is an important factor in the application of combat power. Proper utilization of terrain provides observation while

denying this opportunity to the enemy; it creates favorable opportunities for the employment of weapons to generate maximum combat power; it provides cover and assists in concealing the activities of the friendly force, thereby contributing to its security; it provides the lines of communication essential to decisive maneuver and the support thereof; it assists in the development of mass through economy of force; it provides favorable avenues of approach for offensive operations; it can force the enemy to operate in unfavorable areas. Full utilization of terrain permits the commander to control the battle and to make the enemy fight on his terms.

b. The significance of terrain varies with the echelon of command and the nature of the operation. The commander evaluates the terrain in consideration of his mission and seeks to turn it to his advantage at the expense of the enemy.

c. The control of high ground permits ground observation over the surrounding area and denies such observation to the enemy. It provides favorable positions for line-of-sight weapons and is also significant in view of the line-of-sight characteristics of modern communications and electronic surveillance equipment. The occupation of high ground places the friendly force in a favorable tactical position in relation to the enemy. Control of high ground is not necessarily dependent on its occupation. Under suitable conditions, high ground may be neutralized or denied the enemy by fire or by the employment of screening agents.

d. Major barriers such as rivers, lakes, mountains, forests and swamps exert a significant influence on military operations. Cross compartments interfere with the progress of offensive operations and generally favor the defense. Obstacles, including those artificially created, may form lines of resistance and permit defense with minimum forces, while forcing the attacker to develop greater relative combat power. Conversely, favorable avenues of approach facilitate offensive action and permit the application of combat power through maneuver.

123. Climate and Weather

Climate and weather have a significant effect on all types of military operations. Weather affects observation, trafficability, control, performance of personnel, functioning of materiel, air support and the range and effects of weapons. Both climate and weather may affect logistical requirements. As in the case of terrain, the commander seeks to take advantage of weather in developing and applying combat power in the pursuit of his objectives.

124. Tactical Cover and Deception

a. Tactical cover and deception contribute to security and surprise, and enhance the likelihood of operational success by misleading the enemy, and causing him to react in a manner advantageous to the friendly force. They may be used to compensate for relatively inferior combat power to permit economical use of men, materiel, and time. The commander employs tactical cover and deception to disguise or conceal his true dispositions, capabilities and intentions.

b. Tactical cover and deception plans are an integral part of all operational planning. In developing such plans the commander must visualize and understand the enemy viewpoint and he must take into account the impact on his operations should the deception fail. The plans adopted must be such that if unsuccessful they will not cause the operation to fail. Coordination of tactical cover and deception plans with higher, adjacent and lower units is essential to insure against compromise of other operational or deception plans.

c. For detailed discussion of tactical cover and deception see FM 31–40.

125. Interdiction

a. The purpose of interdiction is to deny or hinder the enemy use of areas or routes. Successful interdiction restricts enemy movement and interferes with the command and control of his forces. It hinders or prevents enemy movement into, out of, or within the commanders area of interest. It contributes to security by preventing sudden and unfavorable changes in relative combat power.

b. Interdiction is accomplished by the use of fires, combat troops, guerrilla forces and by barrier and denial operations. Chemical agents and high yield nuclear weapons provide an area interdiction capability against large, poorly defined, targets.

c. A successful interdiction effort is characterized by thorough and imaginative planning, timely and accurate intelligence and coordinated execution. Continuous surveillance of the area of interdiction must be maintained to assess the effectiveness of the effort and to develop new targets. The enemy may be expected to adopt measures designed to thwart the interdiction effort. The availability of resources and the capability of weapons systems will rarely permit complete interdiction. The application of resources to interdiction must be weighed against the overall requirements of the mission.

d. Interdiction plans must be designed to insure timely contribution to the accomplishment of the mission and must con-

centrate on targets which have a significant effect on the combat power of the enemy forces directly opposing the command concerned. Each successive echelon focuses its interdiction effort at a greater range. Higher echelons integrate and expand the interdiction effect of subordinate elements.

126. Coordination and Control

a. The effective application of combat power requires full coordination of effort throughout all echelons. Coordination is a basic function of command, and is particularly significant in deriving full advantage from fire and maneuver. Coordination of fire support insures the maximum benefit from available firepower resources and enhances the effectiveness of maneuver.

b. Coordination of effort requires adequate means of control. The basic means for control are adequate secure communications, timely orders, and effective command facilities.

c. Communication plans must be flexible and capable of supporting maximum operational requirements. Reliance on a single means of communication must be avoided.

d. Orders must be timely, simple, clear and concise. Mission type orders are used to the greatest practicable extent, but should provide the commanders concept, or intent, to insure that surbordinate commanders, acting on their own initiative, direct their efforts to the attainment of the overall objective. Coordination between units is achieved by prescribing boundaries, limiting points and objectives. Liaison officers are used when required to insure that orders are understood or that coordination is effected.

e. Command posts provide the physical facilities to exercise control and form the nerve centers of all units. Command posts must be mobile, capable of continuous operation and secure from enemy action. The location of command posts must facilitate communication with higher, adjacent, and subordinate headquarters.

127. Vulnerability and Risk

a. Vulnerability is the susceptibility of a force to damage by enemy action. The extensive area of destruction resulting from nuclear weapon attack requires special attention to the reduction of vulnerability. Vulnerability is reduced by measures such as deception, dispersion, cover, concealment, movement and speed of reaction, electronic countermeasures, air defense, and counterbattery fires. However, measures to reduce vulnerability to one form of attack may increase vulnerability to other forms of attack and may detract from the effectiveness of the force. Dispersion increases vulnerability to infiltration. Mobility and the offensive or effective means of reducing vulnerability.

b. Risk is inherent in war and is involved in every mission. Risk also is related to gain; normally, greater gain involves greater risk. Risk is common to both action and inaction. Part of risk is the uncontrollable element of chance. In a nuclear war the destructive power of nuclear weapons and the magnitude of both risk and gain are multiplied and the consequences of mistakes are greater. Although the commander avoids unnecessary risks, the accomplishment of the mission is the most important consideration. Each course of action is carefully evaluated in terms of relative vulnerability and risk. The commander must recognize risks to be assumed by subordinate commanders in accomplishing their missions. If the risk is unacceptable, he must revise the plan.

Section IV. INTELLIGENCE

128. Intelligence Effort

Intelligence is knowledge of an enemy or an area of operations with the conclusions drawn therefrom. It includes current and future enemy capabilities, vulnerabilities, and probable courses of action. The commander's decision is strongly influenced by intelligence. Intelligence and operations must be integrated. The intelligence effort of the command must provide timely intelligence required to make decisions, prepare plans, conduct operations, and avoid surprise. Priority is given in the intelligence effort to those aspects of the situation which represent the greatest prospect of success and the greatest threat to the accomplishment of the mission. Systematic procedures and effective communications are essential for collection and use of intelligence. Intelligence is of importance to all elements of the command and to higher and adjacent commands.

129. Combat Intelligence

Combat intelligence is knowledge of the enemy, the weather, and the geographic features used in the planning and conduct of tactical operations. Combat intelligence seeks to reduce the unknown aspects of the enemy and the area of operations. It contributes to accuracy of evaluation of risks and successful application of combat power. Logical conclusions concerning the area of operations and enemy capabilities and vulnerabilities permit the determination of their probable effect on courses of action.

130. Strategic Intelligence

Strategic intelligence is that knowledge pertaining to the capabilities and vulnerabilities of foreign nations which is required by national planners for an adequate national defense in time of

peace and forms the basis for projected military operations in time of war. Strategic intelligence sources may provide information of particular significance in tactical operations. Strategic intelligence and combat intelligence are closely related; the primary difference being in level of production and utilization. Strategic intelligence is oriented on national objectives and is usually produced slowly by study and assembly of a large volume of detailed information. Combat intelligence usually involves rapid evaluation and interpretation of current information.

131. Counterintelligence and Communication and Electronic Security

Counterintelligence and communication and electronic security are the denial of information to the enemy. They include measures to reduce the effectiveness of the enemy's intelligence collection effort. They are a fundamental requirement for surprise and security. All personnel must be thoroughly trained in the importance of counterintelligence and communication security, and the measures contributing to their effectiveness.

132. Target Acquisition

Acquisition of targets is one of the more important intelligence tasks. All agencies and means are used in coordination to obtain accurate, timely intelligence in sufficient detail to permit target analysis and the effective employment of weapons. A knowledge of enemy doctrine, weapons and practices is particularly valuable in indicating areas for target acquisition effort.

133. Reconnaissance

a. Reconnaissance is the effort of field agencies directed toward obtaining information through observation of the enemy, weather, terrain, and other environmental factors of the area of operations. It is also directed toward locating or verifying the locations of friendly units. Accurate knowledge of the location of all friendly troops operating within the commander's zone of responsibility is necessary for effective employment of complex weapon systems.

b. Most units have reconnaissance capabilities; however, certain elements are specifically organized for reconnaissance operation. To be fully effective, reconnaissance operations require freedom of maneuver and a favorable mobility differential over the enemy. Reconnaissance efforts are directed toward gaining and maintaining contact. Information is obtained by stealth, if possible; however, it is frequently necessary to fight to get information. Reconnaissance operations are facilitated by use of electronic equipment.

c. Division and higher units normally are supported by surveil-

lance units for search, intercept, and monitoring of enemy electronic means. These units extend the depth of observation and contribute significantly to target acquisition.

134. Reconnaissance by Fire or Force

Reconnaissance by fire or in force may be used when stealth is not essential. Reconnaissance by fire is used against suspected enemy locations to destroy camouflage and cause the enemy to reveal himself by movement or by returning the fire; it has the important advantage of speed. Reconnaissance in forces in an attack by a sizable force to discover and test the enemy's strength, dispositions, or composition. The commander directing such an operation must be prepared to exploit success. He must, however, consider that either the reconnaissance in force or by fire may disclose his own dispositions and provoke a strong enemy reaction.

135. Combat Surveillance

Combat surveillance, a part of combat intelligence, involves a continuous, all-weather, day and night, systematic watch over the battle area to provide timely information for tactical ground operations. It involves the systematic observation of air, surface, or subsurface areas by visual, electronic, photographic, or other means for combat intelligence purposes. Combat surveillance is the integration of all available means of battlefield surveillance including air reconnaissance. It is capable of rapid and continuous coverage and is characterized by an immediate responsiveness to the needs of the tactical commander.

136. Air Reconnaissance

Air reconnaissance is the search by day and night for information of military significance by drones, aircraft, and missiles equipped to conduct visual, electronic, and photographic observation. Air reconnaissance is capable of providing rapid coverage of large areas; however, it may be severely limited by enemy defensive measures and weather conditions. An effective intelligence system requires the availability of timely air reconnaissance responsive to the requirement of each echelon.

137. Counterreconnaissance

Counterreconnaissance includes all measures taken to deny or neutralize enemy reconnaissance. Offensive counterreconnaissance seeks out and destroys the enemy reconnaissance forces. Defensive counterreconnaissance denies, by combat if necessary, enemy access to certain areas. Counterreconnaissance forces are echeloned in depth and oriented and adjusted to friendly dispositions.

Section V. SUBSIDIARY AND SUPPORTING OPERATIONS

138. General

There are certain subsidiary operations which are significant in relation to all types of military operations. These subsidiary operations are designed to support the basic operation and to contribute to the development and application of combat power.

139. Psychological Operations

a. General. The military commander employs psychological operations as a coordinated element of strategy for the purpose of influencing the behavior of foreign people in ways which will help accomplish his mission while conforming to and supporting national policies. The lines of persuasion employed must be carefully selected to contribute to the military objective and must be consistant, timely, and credible. Accordingly, they are coordinated with other agencies of government and with related activities of the command, including cover and deception, counterintelligence, communication security, censorship, troop information, character guidance, public information, community relations, and civil affairs. The effects of psychological operations are cumulative and depend on judicious execution in coordination with tactical operations of a carefully planned campaign.

b. Psychological Actions and Propaganda. Psychological operations consist of actions reinforced by propaganda. Psychological actions include specific acts, policies, courses of action, rallies, meetings, or demonstrations and may be taken by any element of the command. Propaganda is prepared and disseminated by propaganda units through loudspeakers, leaflets, periodicals, local radio, television, and educational and entertainment media. Covert propaganda is disseminated through front organizations and agents.

c. Capabilities and Limitations. Psychological operations reduce the morale and combat efficiency of enemy troops and promote dissidence and defection. They support the cover and deception plan. They are employed to abet and coordinate resistance against a hostile regime, to promote cooperation of neutrals, to sustain the morale of allies, and to counter enemy subversion and propaganda. They cannot by their own force accomplish military objectives; they can only support them. Their effect is limited by security requirements, policy restrictions, inadequacies of communication media, language barriers, the prejudices of the audience, and enemy countermeasures. Many of these limitations are overcome by foresighted measures based on effective specialized intelligence and evaluation.

d. Support of the Field Army. Psychological operations in support of the field army are designed primarily to reduce the combat effectiveness of enemy forces and are based on its immediate response to the situation. Operations are mobile and decentralized and provide direct support to tactical units. Opportunities determined through the continuous evaluation of intelligence are quickly exploited. Close cooperation and coordination are required between operations, intelligence, and psychological operations staffs to insure maximum effectiveness.

e. Support of Unconventional Warfare Operations. Psychological operations support all phases of unconventional warfare. Prior to the infiltration of special forces teams they originate outside the planned operational area and are employed to create and develop resistance. Resistance elements are then prepared for integration with special forces teams and are given dignity and status through emphasis of the righteousness and legality of their cause. Following the infiltration of special forces teams these operations are supplemented by the psychological operations of guerrilla forces. Specially trained propaganda teams are infiltrated to assist operations of resistance elements. During exploitation and consolidation, psychological operations insure an orderly transition, culminating in the demobilization of guerrilla forces and the establishment of an acceptable regime.

f. Support of Civil Affairs. Civil affairs are supported by consolidation psychological operations which promote maximum cooperation among the civil populace. In areas subject to enemy subversion, consolidation psychological operations in support of a friendly government are one of the first effective means that the military commander has for maintaining stability. During hostilities they help to prevent espionage, sabotage, and enemy unconventional warfare operations.

g. Situations Short of War. In situations short of war, psychological operations are a primary means for achieving the force objective. Emphasis is placed on the unobtrusive demonstration of military power, efficiency, good will, and sincere interest in mutual security. Psychological operations are undertaken in close coordination with the civilian agencies of government and public information media. Indigenous military forces are trained and assisted in operations designed to counter enemy subversion and gain public support.

140. Electronic Operations

a. Electronic warfare is an integral part of operations. Used offensively, it can reduce the enemy commander's control by impairing or destroying his means of communication at a critical time, and can mislead him by transmitting deceptive data. Used

defensively, electronic warfare reduces effectiveness of enemy communication surveillance means. Electronic warfare should be controlled at a level capable of weighting the benefits derived against the interference with friendly electronic systems. The long-range benefits derived from intelligence obtained by friendly electronic devices may outweigh the immediate tactical advantages of jamming enemy communications. Intimate coordination is required between intelligence and operations.

b. The commander employs electronic warfare to support combat operations by using electronic countermeasures, electronic deception, and electronic counter-countermeasures. Electronic counter-countermeasures facilitate employment of friendly electronic systems and reduce their vulnerability to enemy jamming. Active countermeasures include jamming or deception of electronically controlled guided missiles, electronic fuzes, radio communications, blind bombing radar, countermortar radar, aids to navigation, and other electronic systems. The increasing importance of electronic equipment to military operations requires protection of friendly electronic systems and interference with enemy systems.

141. Barrier and Denial Operations

a. General. A barrier is a coordinated series of obstacles designed to canalize or delay movement of an opposing force. A denial operation is designed to prevent or hinder enemy occupation of or benefit from areas having tactical or strategic value. Barrier and denial plans are incorporated into operations plans.

b. Barriers.

(1) Natural obstacles are used to the maximum extent possible during the conduct of tactical operations. Natural obstacles are augmented by artificial obstacles to increase delay and canalization of the enemy and to produce a favorable mobility differential.

(2) On the battlefield there will seldom be sufficient resources or time to construct massive barrier systems throughout an area of operations. Rather, barrier operations will be directed toward placing obstacles across the most likely enemy avenues of approach and upon certain key terrain to reduce the enemy's mobility and canalize him into areas where his destruction by fire and maneuver will be facilitated.

(3) Mines, engineer equipment, atomic demolition munitions, and chemicals provide an increased capability for rapidly developing and improving obstacles to fit the needs of the commander.

(4) Barriers are integrated with the scheme of maneuver and fire support plans to—

(*a*) Make the most efficient use of available barrier resources in support of the tactical operation.
(*b*) Avoid interference with friendly tactical operations.
(*c*) Cover barriers with fire to make them fully effective.

(5) Barrier construction may require extensive logistical support. Planned barrier must be economical of achievement in terms of manpower, materiels, transportation, and time. Within the rules of land warfare, civilian labor may be used to construct barriers.

(6) Proper use of obstacles may produce a favorable mobility differential.

142. Denial Operations

a. The theater commander establishes policy to govern denial operations to support offensive and defensive operations. Denial operations may vary in scope from "scorched earth" to those effecting a temporary limitation upon enemy use of an area or facility.

b. The theater commander's denial policy is implemented by subordinate commanders. Subordinate units execute assigned denial operations in accordance with and as a part of the theater commander's overall denial plan.

CHAPTER 6
CONDUCT OF BATTLE

Section I. GENERAL

143. Purpose of Battle

a. Battle is fought by a combination of offensive and defensive action with the ultimate purpose of defeating the enemy. In their broadest sense, the terms *offense* and *defense* encompass the entire range of tactical operations in which combat power is employed.

b. The commander selects that combination of offensive and defensive action which will most effectively accomplish his mission. A command may conduct an offensive even though large portions of the force are employed defensively. Conversely, the defense depends for success on the use of a part of the force offensively. Under fluid, dispersed battlefield conditions operations may have both an offensive and defensive purpose.

144. Scope

This chapter presents the fundamentals of both offensive and defensive operations. Paragraphs 143 through 188 deal with nonnuclear operations and operations under intermediate scale use of nuclear weapons (par. 146). Paragraphs 189 through 192 present operational doctrine for the unrestricted scale of use of nuclear weapons.

145. Comparison of Nonnuclear and Nuclear Operations

The conduct of both nuclear and nonnuclear operations is based upon the application of combat power in accordance with the principles of war. Nuclear operations may differ considerably from nonnuclear. The difference arises primarily from the increased combat power provided by nuclear weapons, the sharply increased vulnerability of troops and installations in the nuclear environment and from the measures required to counteract this increased vulnerability to include increased security requirements for nuclear weapons and their associated delivery and support units. In general the difference is reflected in the following areas:

a. Areas of Responsibility and Interest. In order to offset their vulnerability it is imperative that forces operating in a nuclear environment be dispersed to minimize the presentation of remunerative targets susceptible to attack by nuclear weapons. This creates the requirement for the assignment of increased areas of responsibility. In such an environment the increased potency of combat

power, the corresponding vulnerability of the enemy, improved control systems and enhanced mobility permit forces to operate effectively in these increased areas of responsibility. The increased areas of responsibility broaden the areas of interest. In a nonnuclear environment with its attendant reduction in available firepower, the vulnerability of forces is less, the area that can be controlled is smaller, and greater concentration of forces is required. Consequently the areas of responsibility and interest are less.

b. Dispersion. The dispersion of tactical units and control and administrative installations must be governed by the operational environment. The dispersed formations required by the nuclear environment will engender defeat in detail. While dispersion is generally proportional to the level of employment of nuclear weapons, there are limiting factors, which include—

(1) The assigned mission.
(2) Control of subordinate units.
(3) Adequacy of combat intelligence.
(4) Responsiveness of the logistic system.
(5) Weather and terrain.
(6) Mobility of forces.
(7) Nature and disposition of enemy forces.

c. Mobility. In the nuclear environment combat forces must be highly mobile in order to reduce vulnerability, facilitate control of extended areas of responsibility, provide mutual support, maintain freedom of action, and exploit the effects of nuclear fires. The enhanced mobility required by the nuclear environment also has application in the nonnuclear environment, although frequently not to the same degree. The reduced fire power of the latter environment, together with the more restricted areas of responsibility and the greater concentration of forces, may not present the frequent opportunities for deep, exploiting maneuver that characterize the nuclear environment.

d. Fire and Maneuver. In the nonnuclear environment and in nuclear environment wherein nuclear weapons are employed with selectivity and at the lower levels of usage, both fire and maneuver receive equal consideration by the commander in determining the appropriate combat power to be applied. Even though a major portion of the combat power to be exerted may be in the form of nuclear fires, maneuver is required to exploit their effects and insure favorable decision. As the level of employment of nuclear weapons rises, that is to say, as the frequency of employment and the yields selected become greater, the effects of these weapons will begin to saturate the battle area. Close combat elements will then find it increasingly difficult to maneuver decisively without prohibitive losses. Because of the destructiveness involved, situa-

tions of this type will be of relatively short duration. Success will accru to the combatant who can first reconstitute an effective maneuv. and exploitation force.

e. Tempo of Operations. The combination of nuclear firepower and enhanced mobility will significantly accelerate the tempo of operations in the nuclear environment. Engagement of forces will be of shorter duration, characterized by extreme violence. Deep, decisive objectives will be sought, causing the battle to be waged in great depth. In nonnuclear operations the tempo will be more deliberate; engagements that would be decided in a matter of hours in the nuclear environment may require several days.

f. Organization for Combat. The factors of dispersion, mobility, vulnerability, and tempo of operations affect the organization for combat. In the nonnuclear environment greater centralization of control is practicable, particularly the control of fire support and combat support. The commander can exert greater personal direction of the course of battle, giving more deliberate and detailed instructions to his subordinates, both before and during operations. In a nuclear environment the opposite will be true. Combat forces will tend to operate semi-independently under mission-type orders. Direct support type fire units will normally be attached to close combat elements. The control of combat support units will be similarly decentralized to a significant degree. Although modern communication systems will permit the interchange of essential orders and information, the commander must place greater reliance upon the initiative, integrity, courage, and professional ability of his subordinate commanders.

g. Casualties. In operations where nuclear weapons are employed, commanders and staffs at all echelons must anticipate sudden, severe, personnel losses within very short periods of time. These losses may be of such extent as to cause the combat effectiveness of both combatants to be temporarily destroyed. Thus Army forces must be trained and indoctrinated in rapid reorganization and in the treatment of mass casualties with minimal professional medical assistance.

146. Scales of Usage of Nuclear Weapons

To provide a framework for subsequent discussion of the conduct of battle the terms *intermediate scale of use of nuclear weapons* and *unrestricted scale of use of nuclear weapons* are used. These terms are necessarily relative, as there is no sharp differentiation between the two.

a. The term *intermediate scale of use of nuclear weapons* is used to denote a range of operational environments wherein the employment of nuclear weapons, in both quantity and yield, is

selective and wherein the effects therefrom do not reach a level that will materially reduce the ability of combat units to maneuver effectively.

b. The term *unrestricted scale of use of nuclear weapons* is used to depict a level of employment of nuclear weapons that is sufficiently high to degrade appreciably the effectiveness of maneuver by combat units.

147. Toxic Chemical and Biological Munitions

a. The capabilities of chemical and biological munitions and the tactics and techniques of their employment are covered in FM 3–5.

b. Toxic chemical and biological munitions may be effectively employed in either the nonnuclear or nuclear environment. They are an additional means available to the commander in accomplishing his mission.

(1) Biological weapons, primarily because of the delay occurring between employment and effect, have greater applicability against strategic targets than against tactical ones. These delayed effects may be appropriate in tactical operations, however, where the effects can be coordinated with future operations, biological munitions may also be appropriate in retrograde operations.

(2) Toxic chemical munitions, which produce an immediate reaction against unprotected personnel, have considerable applicability in tactical operations. They may permit the seizure of physical facilities intact and without the widespread destruction that results from nuclear and high-explosive fires. These munitions may be of particular applicability in the nuclear environment when it is desired to inflict mass personnel casualties and, at the same time, avoid the obstacles that would be created by nuclear blast and contamination. Persistent chemical concentrations may be effectively employed in barrier and denial operations.

c. Chemical and biological munitions have the greatest effect when their employment is coordinated with the scheme of maneuver, other fires, and special operational plans such as barrier plans. Such employment fosters the full exploitation of the combined effects of fire and maneuver.

d. The employment of chemical and biological munitions introduces additional factors into the planning process.

(1) Local weather conditions, particularly wind speed and direction have considerable bearing upon the decision to employ such munitions.

(2) Troops must be prepared to react promptly in exploitation of the effects of these munitions.
(3) Special intelligence effort and protective measures are required to reduce the effectiveness of enemy chemical and biological attack.
(4) Where protective clothing and equipment is required by troops for long periods of time, their combat effectiveness is lowered.
(5) Airmobile operations are of increasing importance as a means of traversing contaminated areas.

Section II. OFFENSIVE OPERATIONS

148. General

Offensive operations are those undertaken to carry the battle to the enemy; the initiative lies with the attacker. The purpose of offensive operations is to accomplish one or more of the following:

a. Destroy enemy forces.
b. Deprive the enemy of required resources.
c. Seize territory or terrain.
d. Develop enemy dispositions.
e. Divert the enemy's attention from other areas.

149. Considerations Affecting Offensive Operations

a. The commander visualizes offensive operations in terms of time and space. Analysis of the situation indicates the particular combination of these factors offering the highest assurance of success. This analysis also includes an evaluation of the pertinent elements of combat power. In offensive operations, the most decisive results are obtained by strong, mobile exploiting forces. Offensive missions frequently have terrain objectives, although an enemy force may be designated as an objective. To reach an objective, a force goes through, over, or around the enemy.

b. A nuclear environment favors the use of small, highly mobile combat forces moving on the ground, through the air, or both. These forces make every effort to maintain their forward movement. Enemy forces are destroyed by fire, bypassed, contained, or where necessary reduced by close combat. The plan of attack is designed either to divide the enemy force and defeat it in detail or to concentrate it to an extent where it can be destroyed by nuclear weapons. Should it become necessary for the commander to concentrate his force, he does so only at the decisive point, in close proximity to the enemy, and for the shortest practicable time. Under a nonnuclear environment greater concentration of maneuver forces may be acceptable.

c. To insure rapid execution of the attack, the commander exploits fully all means of tactical mobility. He selects the appropriate combination of ground vehicles and aircraft necessary to provide the desired degree of flexibility in his scheme of maneuver.

d. In situations created by opposing, maneuvering forces seeking a tactical advantage, the commander must react with maximum speed. These situations may develop in the advance to contact, the meeting engagement, the reconnaissance in force, and the exploitation. Other operations, such as the attack of an organized or fortified position, permit a more deliberate, planned, and coordinated attack, undertaken after thorough reconnaissance, methodical evaluation of relative combat power, acquisition and development of targets, and analysis of all other factors affecting the situation. Although such deliberate attacks are frequent in nonnuclear warfare, they occur less frequently in nuclear operations because of the vulnerability of the force during the preparatory period.

150. Maneuver in the Offense

In offensive operations the attacking forces are maneuvered to gain an advantage over the enemy and to close with him and to destroy him. The forms of maneuver in the attack are the envelopment, the turning movement, the penetration, and the frontal attack. The attacking force frequently uses a combination of these forms; for example, one echelon of the force may attack frontally while another is making an envelopment.

a. Envelopment. In an envelopment the main effort is directed toward the seizure of an objective in the enemy's rear that will cut his routes of escape and subject him to the risk of destruction in his present location. This is accomplished by striking an assailable flank and by avoiding his main strength en route to the objective. A secondary attack pins down the enemy to prevent his escape and reduce his capability of reacting against the main effort by forcing him to fight in two directions simultaneously. In some situations the secondary attack also deceives the enemy as to the location or existence of the main attack. The envelopment is facilitated by relatively superior mobility and by surprise. Aircraft are particularly valuable in increasing the mobility of the enveloping echelon. The success of an envelopment is dependent to a large extent upon the ability of the secondary attack to fix the enemy. Where the situation permits a choice in the type of maneuver to be employed by the main attack, the envelopment is usually preferable to either the penetration or the frontal attack since it offers a better opportunity of applying combat power to the greatest advantage. A variation of the envelopment is the double envelopment. In this evolution the attacker seeks to pass simultaneously

around both flanks of the enemy. The attacking force must have superior combat power and mobility; precise coordination and timing are required. Deficiency in any of these factors may subject the attacking force to defeat in detail.

b. Turning Movement. In the turning movement the attacking force seeks to pass around the enemy, avoiding his main force, to secure an objective deep in the hostile rear. The purpose of this maneuver is to force the enemy to abandon his position or divert major forces to meet the threat. He is then destroyed at a time and place of the attacker's choosing. As in the case of the envelopment a secondary attack is required to fix the enemy. Since the force executing the turning movement is usually out of supporting distance of other elements of the force, it must be sufficiently mobile and strong to operate independently. Air transport is particularly applicable for movement and initial support of this maneuver. Mobility superior to that of the enemy, as well as secrecy and deception, enhances the opportunity for successful accomplishment of a turning movement.

c. Penetration. In the penetration the main attack passes through the principal defensive position of the enemy. The purpose of the maneuver is to destroy the continuity of the enemy force, divide it, and defeat it in detail. After the enemy position has been ruptured, additional forces are committed as necessary to widen the breach, destroy the defending garrison, and exploit the initial success by seizing vital objectives deep in the hostile rear. A successful penetration requiries the concentration of superior combat power at the point selected for breaching the enemy defenses. It is appropriate where strong fire support is available and where the enemy is over-extended, or when his flanks are unassailable. If sufficient preponderance of combat power is available, a multiple penetration may be launched. In such cases the exploitation forces may converge upon a single, deep objective, or they may seize independent objectives. Where it is impracticable to sustain more than one penetration, the one enjoying the greatest success is exploited.

d. Frontal Attack. The frontal attack strikes the enemy all along his front. It is employed to overrun and destroy a weaker enemy or as a secondary effort in conjunction with other forms of maneuver.

151. Infiltration

a. Infiltration is a technique of movement used in conjunction with the several forms of maneuver. The attacking force moves by individuals or small groups to a previously designated assembly area in the enemy rear. During the movement these individuals

and small groups seek to avoid detection and engagement by the enemy. By this means a strong force may frequently be deployed into the enemy rear without being subjected as an entity to decisive enemy action during movement. Once assembled the force proceeds in the execution of its assigned mission. Infiltration is an important means of achieving surprise.

b. The dispersed pattern of a nuclear battlefield will present frequent opportunities for movement of units by infiltration. In such an environment movement by infiltration is an important technique for reducing the vulnerability of troops to nuclear attack.

152. Night Maneuver

a. Night attacks and night movement are normal operations that offer an excellent opportunity for deception and surprise. The principles of the daylight attack apply; however, maintaining direction and control require special measures. The degree of success attained by night attacks is largely dependent on the training and conditioning of troops, prior reconnaissance, simplicity of the plan, effective control measures, and the enemy's night surveillance capability. Infiltration can be particularly effective in night operations. The objectives for a night attack are generally limited in depth by the difficulty in maintaining control, particularly after the enemy has been alerted. When nuclear weapons are employed, the devastating effect upon enemy defenses may permit the assignment of deeper objectives.

b. Battlefield illumination and surveillance equipment increase the efficiency of units operating at night and facilitate the employment of supporting fires.

c. When friendly nuclear fires are used at night, adequate warning is required to reduce the problems of dazzle and loss of dark adaptation. These fires should be carefully coordinated with the operations of other friendly units. Coordination must be effected to integrate nuclear fires and the scheme of maneuver. This will assist in preventing the creation of obstacles to the maneuvering elements or the alteration of terrain features selected as control measures. Quick-acting toxic chemicals can be used for casualty effect on targets where creation of obstacles by nuclear fires is unacceptable. Enemy use of nuclear weapons during the attack may cause dazzle or loss of night vision by friendly troops.

153. Planning

a. Planning for an attack, like other operations, is initiated by the development of estimates of the situation by the staff. These are followed by the commander's estimate, his concept of operations, and other guidance for the development of the plan.

b. The mission is the governing factor in the preparation of estimates and subsequently the operation plan. All elements of both must be continuously compared with the mission to insure that the details of the operation contribute to its accomplishment. The mission may be to seize an area or to destroy an enemy force. In order to facilitate planning, coordination, and control, it is usually translated into specific terrain objectives, the seizure of which will permit control of the area or facilitate destruction of the enemy force.

c. The objectives selected become the basis for determining the scheme of maneuver. Objectives are considered in relation to the enemy's posture, the terrain, and the anticipated weather conditions. These factors, when compared to the strength, disposition, and capabilities of friendly forces, indicate the various courses of action open. Final selection of the scheme of maneuver is then determined in the light of relative vulnerability, risk, and probability of success.

d. After the objectives and scheme of maneuver have been selected, the available forces, supporting fires, and combat support are allocated. The means available will seldom permit all attacking forces and the reserve to be equally weighted in combat power. Furthermore, it is usually undesirable to expend excessive combat power against main enemy strength when it can be employed elsewhere with more effectiveness and greater economy. For these reasons it is usually desirable to designate a main attack and one or more secondary attacks. The attack anticipated to produce the most decisive result and having the greatest probability of success is designated the main attack. It is weighted with the preponderance of forces, supporting fires, and combat support. Secondary attacks which are employed primarily to fix the enemy and reduce his capability to react against the main attack are allocated the minimum resources required. When nuclear weapons are authorized, a nuclear preparation may reduce the enemy's strength sufficiently to make multiple, equally weighted attacks appropriate.

e. A portion of the combat power of the force is held in reserve to be employed at a decisive time and place to obtain a favorable decision. The reserve is used to exploit the success of the attack, maintain the momentum of the attack, or provide additional security. It is one of the commander's principal means of influencing the action once the operation is underway. The strength and composition of the reserve vary with its contemplated mission, the forces available, the type of maneuver, the terrain, possible hostile reaction, and the clarity of the situation. When the situation is relatively clear and enemy capabilities are limited, the reserve may consist of a small fraction of the force. When the situation is

obscure, the reserve may consist initially of the bulk of the command, prepared for employment at any point. While the reserve should be large enough to obtain a decision when it is committed, the forces allocated to it must not unduly weaken the main attack. It must be provided adequate fire support and combat support, to include the necessary transportation, both air and ground, to achieve the requisite mobility. Once the reserve is committed, a new reserve is immediately reconstituted.

f. Fire support plans must be developed in consonance with the scheme of maneuver. In the nonnuclear environment these plans are normally developed to support the maneuver elements. While this principle is applicable to the nuclear environment, there will also be occasions where the scheme of maneuver is designed to exploit the effects of nuclear fires. The fire support plan provides fire support elements in direct support of the maneuver elements and in general support of the force as a whole. Provision is made for adequate support of the reserve when it is committed. An important consideration is the decision as to whether or not a preparation should be fired. Such a decision is based upon knowledge of the enemy's dispositions, available ammunition, and the results expected considering the loss of surprise. Where nuclear weapons are to be employed, the plan includes the general allocation of nuclear weapons and fires to subordinate units; the use of nuclear weapons in the preparation, if fired; and the numbers and types of weapons to be held in reserve. Retention of nuclear weapons in reserve gives the commander an additional, powerful means of influencing the course of the operation. A series of prearranged fires is prepared for those areas wherein reserve weapons are likely to be employed. Certain areas may be so critical to the success of the operation as to warrant allocation of specific weapons and the establishment of rapid, prearranged procedures for calling for the fires. Where nuclear weapons are to be employed in the preparation, the probability of their effects creating obstacles to the movement of friendly troops must be evaluated.

g. Attack plans include the measures for coordination and control of the various aspects of the operations. As a minimum, objectives and the time of attack are prescribed. Additional measures may include the assignment of zones of action, axes of advance, direction of attack, lines of departure, and phase lines. Undue restriction of the freedom of action of subordinate commanders is avoided. Where the situation is fluid, the minimum restrictions necessary to prevent mutual interference are prescribed.

154. Execution

a. The attack is characterized by fire and maneuver, combined

and controlled to create a preponderance of combat power that culminates in a powerful and violent assault in the decisive area.

b. Once the attack is launched, flexibility and speed in the employment of combat power are paramount. The attack is characterized by a series of rapid advances and assaults by maneuver and fire until the final objective is secured. The attack is executed vigorously and all favorable developments exploited. If the advance lags in any portion of the zone, the weight of the attack should be shifted quickly to another part of the zone offering greater opportunity for success. The attack maintains continuous momentum and is not delayed to preserve the alinement of units or to adhere closely to the preconceived plan of attack. Momentum is maintained by—

(1) The timely employment of reserves, the airlift of combat elements, the redirection of units on intermediate objectives, and the provision of adequate combat and administrative support or combination of these means. In some instances, commitment of a portion of the reserve may be sufficient to accomplish the desired task.

(2) Attacking echelons advancing as rapidly as possible to their objectives. Enemy resistance is bypassed unless it can be quickly overrun or is so strong as to interfere with accomplishment of the mission. The decision to bypass enemy strong points must recognize the danger of subsequent entrapment, as well as the effect the bypassed forces may have upon succeeding phases of the operation.

(3) Timely displacement of fire support elements and providing plans for close-in protective fires and fires to support the continuation of the attack.

c. The commander must keep informed of the progress of the attack, enemy reactions, and the situation confronting subordinate units in order to maneuver forces most effectively and employ fires to gain his objectives. During the attack, control may be increasingly decentralized to subordinate commanders to permit them to react more rapidly to changes in the situation. Through knowledge of the situation and of the higher commander's concept of the operation, the subordinate commander modifies and implements the plan.

d. Between areas of enemy opposition, attacking forces move rapidly by ground and air. When enemy resistance which must be reduced is encountered, the commander's first consideration will be to accomplish this by having his leading elements, supported by fire, rapidly overrun and destroy the enemy. If a more deliberate attack must be made, attacking echelons move within assaulting distance of the hostile position under the protection of supporting

fires and smoke. In a short, violent, and well-coordinated attack the assault force destroys the enemy by maneuver or fires or a combination thereof. Where nuclear weapons are employed, this latter, deliberate attack is usually unnecessary.

e. The commander provides security without sacrificing the momentum of the attack. Plans and procedures should prescribe actions to be taken in event of an enemy counterattack. Bypassed enemy must be contained or kept under surveillance pending subsequent elimination. Covering forces, patrols, flank guards, echeloned reserves and firepower protect exposed flanks and gaps between units. Protection from ground attack may frequently be required for administrative and combat support units when areas in rear of attacking echelons have not been cleared. Halts are kept to the minimum; they permit the enemy to reorganize and may sacrifice the momentum of the attack. In nuclear warfare, especially, the failure to exploit an advantage relentlessly may nullify the success achieved. When units must be rested and resupplied, they are replaced by fresh units or reserves to preserve the impetus of the attack. For those units authorized to halt, orders should include the time and area of the halt, missions and locations of supporting units, and command and control measures. Some units may be diverted into dispersal areas to prevent congestion during the halt. Dispersal areas are planned to provide concealment, to aid defense, to minimize vulnerability to enemy attacks, and to facilitate resumption of the attack. Units in dispersal areas take protective measures to reduce their vulnerability.

f. Minimum forces, making maximum use of supporting fires, secure the objectives. The remainder of the command disperses and reorganizes to continue the attack without delay. Designated combat elements maintain contact and obtain information upon which the commander plans future actions. Continuation of the attack with fresh troops, a new direction of attack, or exploitation of success by the reserve may require a passage of lines. Passage of lines must be executed with great speed under nuclear conditions. Use of the wide zone, characteristic of nuclear warfare, provides gaps between friendly units that can be effectively utilized by the passing forces.

155. Advance to Contact

a. The advance to contact is a tactical operation which occurs frequently in mobile warfare. It is designed to gain contact or to reestablish it. In addition, the objective of friendly forces during the advance is to gain an advantage over the enemy that will facilitate future operations. Maximum advantage of position at the time of contact is achieved by properly organizing the force for combat

and maneuvering the force components. The advance is pushed forward aggressively to gain the objective before the enemy can react. Every intelligence and security agency is used in order that the main force will become engaged under the most favorable conditions. Army air reconnaissance and security units may be effectively employed as intelligence and security agencies in the advance to contact. Tactical aircraft and long-range missile fires may be employed early to achieve fire superiority. The bulk of the combat power of the force should remain uncommitted to permit flexible employment upon contact with the enemy. Execution is decentralized but sufficient control is maintained to permit effective use of long-range supporting fires.

b. The advance is normally made in multiple columns. The command is normally organized into a covering force, a main body, and security forces. Subordinate tactical groupings employ various formations as required by their individual situations and missions.

c. The composition, size, and operations of the covering force may influence the entire course of the battle. The mission assigned the covering force is to develop the enemy situation and prevent unnecessary delay of the main body. Its operations may include attacking to destroy enemy resistance, seizing and holding critical terrain, or containing large enemy units. The covering force is tailored to accomplish its mission well forward of the main body. A highly mobile, well-balanced force is required. Close coordination of the covering force is essential. Normally control is retained by the overall commander of the force advancing to contact. However, widely dispersed operations may favor decentralizing control to column commanders.

d. Units of the main body are organized for combat and positioned to permit maximum flexibility for employment during the advance and after contact is established. Each column of the main body is responsible for its own security. Flank and rear security forces protect the main body from ground observation and surprise attack. Close coordination with reconnaissance, observation and surveillance aviation contributes to the security of the main body. The advance to contact may be frequently made at night or during other periods of reduced visibility. This requires all units to be skilled in night movement.

e. The advance to contact terminates when major enemy resistance necessitates the deployment of the main force.

156. Reconnaissance in Force

A reconnaissance in force is a highly mobile operation, consisting of an attack conducted by all or a sizable part of a force for

the purpose of discovering and testing the enemy's strength, composition, and dispositions. The commander ordering such an operation must be prepared to exploit any unexpected success or to take additional security measures required. The reconnaissance in force is particularly adaptable to the fluid characteristics of the nuclear battlefield and will serve as the basis for many offensive operations.

157. Exploitation

a. The exploitation is an operation which occurs frequently in mobile warfare. It is designed to take full advantage of success in battle. The purpose of the exploitation is to destroy the enemy's ability to reconstitute an organized defense or to engage in an orderly retrograde movement. The psychological effect of exploitation creates confusion and apprehension throughout the enemy command, reduces the enemy capacity to react, and may be decisive.

b. Planning for exploitation should provide for rapid continuous advance, fire support, adequate logistical support, and the selection of decisive objectives. Provision must be made for regrouping of component elements while other elements continue the advance.

c. The missions of exploiting forces include the seizure of deep objectives to cut enemy lines of communication and disrupt enemy command and control facilities. The mission assigned to the exploiting force commander should be sufficiently broad to avoid restricting opportunities to disrupt and destroy the enemy. The commander must realize that troops and their leaders frequently are tired at the time opportunity for exploitation occurs and that aggressive demanding leadership is required.

d. Exploitation is usually initiated when the enemy force is having recognizable difficulty in maintaining his position. This condition is indicated by decisive gains by friendly forces; lessening of enemy resistance, particularly supporting fires; and an increase in the number of prisoners captured and equipment abandoned. Once begun, the exploitation is executed relentlessly to deny the enemy any respite from offensive pressure in the drive to the final objective.

e. Forces in the exploitation normally advance on a wide front depending upon the mobility of the force, road net, and other aspects of the terrain. Only those reserves which are necessary to insure flexibility of operation, momentum in the advance, and minimum essential security are retained. Airmobile and airborne forces are used to seize objectives critical to the advance and to cut enemy lines of escape. Swift raids, thrusts, and envelopments

by ground and airmobile forces delay or prevent enemy reorganization. Actions are characterized by boldness, prompt use of available firepower, and rapid and unhesitating employment of uncommitted units. The exploiting force is committed in the decisive direction.

f. The exploiting force commander must be alert to prevent the dissipation of combat power in achieving minor tactical successes or in reducing small enemy forces. The aim is to reach the objective with the maximum strength as rapidly as possible. Control is vital to prevent overextension of the exploiting force if the enemy is capable of regrouping unexpectedly to attack the command. Nuclear and other fires are employed to destroy enemy forces which cannot be bypassed or contained. Security from enemy nuclear attack is enhanced by rapid advances to keep enemy forces off balance and neutralize the enemy intelligence and surveillance system.

158. Pursuit

a. The pursuit is an operation designed to cut off and annihilate a hostile force attempting to escape. As enemy demoralization begins and enemy forces disintegrate under relentless pressure, an exploitation may develop into a pursuit. A pursuit may also occur in any operation in which the enemy has lost his ability to operate effectively and attempts to disengage. In a pursuit the enemy loses his ability to influence the situation and acts in accordance with the pursuer's actions.

b. In the conduct of a pursuit direct pressure against retreating forces is maintained relentlessly while an enveloping or turning force cuts the enemy lines of retreat. Double envelopments of the retreating main force are executed when conditions permit. Maximum use should be made of airmobile and airborne elements in the enveloping forces.

c. Pursuit operations are conducted aggressively and under decentralized control. Commanders remain well forward to provide impetus to the operation and must take decisive action to overcome any inertia in the command. Pursuit is pushed to the utmost limit of endurance of troops and equipment. Continuity of administrative support is vital to the success of this type of operation.

Section III. DEFENSIVE OPERATIONS

159. Purpose

a. Defensive operations are the employment of all means and methods available to prevent, resist, or destroy an enemy attack. The purpose of a defensive operation may be to—

(1) Develop more favorable conditions for offensive action.
(2) Economize forces in one area in order to apply decisive force elsewhere.
(3) Destroy or trap a hostile force.
(4) Reduce the enemy capacity for offensive action, or
(5) Deny an enemy entry into an area.

b. In the defense the commander seeks to use the area of operations and means available to his advantage and to the enemy's disadvantage.

160. Defensive Considerations

a. In defensive operations the defender seeks to seize and retain a degree of initiative by selecting the area of battle, by forcing the enemy to react in conformity with the defensive plan, and by exploiting enemy weakness and error. Defensive operations may be imposed by an inability to attack. However, the commander, particularly under fluid, nuclear battlefield conditions, may deliberately undertake defensive operations in combination with deception to destroy the enemy.

b. Under nuclear conditions the deliberate shift from offense to defense or vice-versa, may occur rapidly and with considerable frequency. A defensive operation usually is a composite of major and minor actions and engagements. Elements of the command may be holding on position, delaying, attacking, feinting, or delivering fires as part of the defense.

c. An offensive attitude is necessary to seize opportunities to destroy the enemy. Psychological preparation of troops and strong leadership in the defense are essential to maintain high morale, alertness, and aggressive attitude. The troops must understand that an effective defense is an opportunity to destroy the enemy.

d. The conduct of defensive operations under adverse conditions is the supreme test of the field commander. The defender must fully use those advantages which he possesses and can improvise. He must take greater risks and conserve his resources, yet commit them unhesitatingly and decisively at the proper time. He must deal with the serious problems of leading troops without the evident success of offensive combat. The highest order of leadership and tactical skill is demanded.

e. Defensive operations are normally most effective when minimum restrictions are imposed on subordinate commanders. The mission and the area to be defended should be stated in terms which permit the commander to use his means to maximum advantage with minimum restriction on specific terrain features to be held. Defensive operations, however, inherently require restrictions not present in offensive operations. These result from the

need for some degree of centralized control to insure the most effective use of resources, so that an adequate reserve remains for the decisive portion of the action.

161. Organization for Defense

Development of the best overall defense requires careful consideration of the mission, the nature of the terrain, and the degree to which specific terrain must be held, the depth of the defensive area, the relative combat power of opposing forces, the relative air and nuclear situations, and relative mobility.

162. Forms of Defense

a. Mobile Defense. The mobile defense is the method of defense in which minimum forces are deployed forward to warn of impending attack, canalize the attacking forces into less favorable terrain, and impede, harass, and disorganize them. The bulk of the defending force is employed in vigorous offensive action to destroy the enemy at a decisive time and place. In general the forward forces employ the principles of the delaying action, while the remainder of the force utilizes the principles of offensive combat. In nonnuclear operations the mobile defense is applicable to highly moblie warfare and situations where broad frontages must be covered by minimum forces. This type of defense is of prime importance in the nuclear environment, since the defending forces are able to retain their mobility and freedom of action. In both environments, the mobile defense offers an opportunity to destroy the attacking force and regain the initiative. Set patterns of action are avoided. The defending commander must retain freedom of action to choose the decisive time and place to launch his counterblow. This form of defense requires that the defending force have mobility comparable or superior to that of the enemy.

b. Area Defense. This is a defense based on retention of specific terrain.

(1) When retention of specific terrain is mandatory, the commander places primary reliance on the ability of fires and forces deployed on position to stop and repulse the attacker. The force may or may not be physically on the key terrain or its approaches prior to the enemy attack with his close combat units, particularly under nuclear conditions. In retaining specific terrain the commander must use sufficient forces in the forward area to create the necessary combat power on or to dominate the terrain to be defended. The forward area normally has a higher priority for forces than does the reserve. The reserve is employed to block and destroy the enemy, to

eliminate penetrations if they occur, or to reinforce threatened areas. The defensive concept requires detailed fire plans, organization of the area to exploit the natural defensive strength of the terrain, and plans for the maneuver of the reserve.

(2) The area defense normally takes maximum advantage of existing obstacles, reduces the danger of attack at night or by infiltration, and forces the attacker to employ maximum combat power to effect a penetration.

(3) Since the troops conducting an area defense are apt to be quite vulnerable to nuclear attack due to their relatively fixed positions, this type of operation is more suitable to the nonnuclear environment, although it may be adapted to a low-level nuclear environment. When it becomes necessary to employ the area defense in a nuclear environment, caution must be exercised in organizing the ground to reduce the vulnerability of the defending units to nuclear fires and to avoid creation of dangerous vulnerabilities to other forms of attack.

c. Variations in Defensive Operations.

(1) The area defense and the mobile defense lie at opposite ends of a scale of wide variations in the form of defensive operations. Frequently, neither of these basic patterns will be suitable to a given situation and mission. In such cases a variation incorporating applicable portions of each must be devised.

(2) Within a larger force conducting the defense, the operations of the various component units may encompass both defensive patterns and delaying operations as well, with certain units being assigned primarily an offensive role.

63. Maneuver in the Defense

a. Maneuver by combat elements in the defense includes the poiling attack, the counterattack, the counteroffensive, and the elaying action. Offensive maneuver is important in all forms of efense and is of particular significance in the mobile defense.)ffensive maneuver is undertaken to exploit the results of attack y nuclear and other weapons, to destroy a penetrating force at a ime and place of the defender's choosing, to strike the enemy 'hen he is unprepared and thus achieve significant results, or to ssist in disengaging a force. The delaying action is employed to ermit units to move to other positions from which they can exeute either offensive or defensive missions or to gain space for emloyment of nuclear weapons.

b. A spoiling attack is an offensive operation launched by a defender against enemy formations outside the defended area. Its purpose may be to destroy a portion of the enemy force, to throw the enemy off balance, to seize terrain from which to launch an attack, or to deny the enemy ground observation and surveillance of the defended area.

164. Defensive Echelons

a. The defensive echelons are the security zone, forward defense area, and reserve. Forces and fires of the command are allocated to these echelons in accordance with the defensive plan. The general scheme of maneuver of defensive organization of each of these elements is prescribed in sufficient detail to permit intelligent execution of the plan.

b. Forces of the security zone furnish information of the enemy, deceive him, and provide a counterreconnaissance screen. Within their capability they delay the enemy and reduce his combat power. Under active nuclear conditions an important additional mission is locating and developing nuclear targets. Elements of the security force may be designated to stay behind advancing enemy elements. The composition and support of the security force includes long-range reconnaissance and observation means, both ground and air; strong firepower; a high degree of mobility; and excellent secure communications.

c. The composition of forward area defensive forces varies with the defensive purpose.

(1) When the defense is based on the retention of specific key terrain, major forces are used to organize the ground. Because of the inability to develop an impregnable defense, a reserve is required to maintain the continuity of the defense.

(2) The forces allocated to the forward defensive area in a mobile defense, while not as strong as those in the area defense, must be capable of forcing the enemy to deploy. They require long-range fire capabilities and normally a mobility equal to or greater than that of the enemy.

d. The forces of the reserve are the primary means by which the defender regains the initiative. Retention of a relatively large reserve, consistent with the requirement for forces in other echelons, permits offensive action both within and forward of the battle area. Where the mobile defense is employed, the reserve is the largest and most decisive element of the force. While it may be required to perform defensive actions, its primary mission is to defeat the enemy by offensive combat. The combat power allocated the reserve includes fires as well as close combat elements. When

nuclear fires are authorized, their ability to concentrate overwhelming combat power quickly in a given area greatly increases the offensive capabilities of the reserve. In addition the reserve provides flexibility and may be used to—

(1) Reinforce hard-pressed forward units.
(2) Occupy positions.
(3) Insure retention of key terrain.
(4) Assist in disengagement of units.
(5) Replace forward units.
(6) Extend flanks, or
(7) Counterguerrilla, infiltration, and airborne operations.

165. Planning

a. Development of the best overall defense plan requires consideration of—

(1) The mission.
(2) The nature of the terrain and the degree to which specific terrain must be held.
(3) Relative mobility.
(4) The depth of the defensive area.
(5) The relative combat power of opposing forces.
(6) The relative air and nuclear situations.
(7) Reserves available at higher echelons.

b. The means available to the commander in planning defensive operations include forces deployed in defensive positions, fires responsive to the commander, and units maneuvering in conformance with the defensive plan. Each of these means depends upon the others for maximum effect. The defender's task is to combine these means in proper proportion to accomplish the defensive mission. Considerations are—

(1) Facilitating the use of these means by exploiting the natural defensive strength of the terrain. The natural strength of the area can be increased by the aggressive, offensive-minded use of fortifications and barriers and by the development of detailed fire and maneuver plans. Normally, the defender can select and reconnoiter the defended area prior to its organization and thus influence the attacker to conform to the defensive plan.
(2) Holding or controlling specific terrain as indicated by the mission. The terrain is analyzed to determine the relative criticality of avenues of approach into the defensive area, existing or potential obstacles, which, if developed, will strengthen the defense, and areas suitable for offensive action.

c. Fires are planned to destroy the enemy force or to permit ex-

ploitation by maneuvering elements to complete his destruction. As the level of usage of nuclear weapons increases, the relative importance of fires in defensive operations increases. Fires are planned to permit engaging the enemy force early, although in some instances fire may be withheld to develop maximum surprise and shock. The decision to fire at long range or to withhold fires is a critical one, made by the commander in each case. Thus plans must be sufficiently flexible to permit this latitude. Fires are planned against all elements of enemy combat power, such as enemy fire delivery means, reserves, command and support installations, and units in contact.

d. Effective combat intelligence is critical and normally difficult to obtain because the defender lacks the initiative and is frequently inferior in combat power and reconnaissance means. Thus the defender must make the most effective use of the means available. His detailed knowledge of the area of operations, plus the increased susceptibility to detection of the attacker on the move, permits him to concentrate his effort on likely assembly areas, critical defiles, and other areas the enemy is likely to use.

e. The counterattack is a basic element of the defense. Its function varies in accordance with the type of defense being conducted. Although there are occasions wherein the counterattack is made by fire alone, more decisive results usually accrue from a combination of fire and maneuver. The principles of offensive combat are applicable to the conduct of the counterattack. Plans for the defense include counterattack plans in those areas wherein they are most likely to be required.

(1) In the area defense the function of the counterattack is to destroy or eject the penetrating force and thus regain control of the battle area.

(2) In the mobile defense the counterattack is the decisive element by which the commander accomplishes his mission. The objective is the destruction of the enemy force and the exploitation of the ensuing opportunity to regain the initiative, to include operations within the enemy's rear area.

f. The employment of chemical and biological weapons is planned for defensive operations. Use of persistent chemical concentrations may increase the effectiveness of fires against known enemy weapons positions and enemy reserves not suitable for nuclear attack. Persistent chemical concentrations are also used to contaminate barriers, obstacles created by demolitions, and defiles as an aid in impeding enemy movement and canalizing his advance. Nonpersistent chemical concentrations may be employed against targets of opportunity and against concentrations of

troops in the attack. Chemical minefields are included in barrier plans.

g. Barrier plans are developed concurrently with other plans. It is necessary to take maximum advantage of natural obstacles and to improve them. The effectiveness of obstacles is increased considerably when they are covered by observation and fire. Lanes and gaps are required for the necessary movement of reserves and other forces within the battle area. Barrier plans establish the location of barriers, responsibility for construction, and priority in completion. The barrier plan is developed concurrently with antitank and fire plans and must be carefully coordinated with counterattack plans.

166. Defense against Armor

a. Effective operations against an enemy possessing a significant armor capability require antitank defenses throughout the area of operation. Such defenses are planned to cover those avenues of approach presenting the greatest threat to the command.

b. Armor is attacked most effectively in assembly areas; therefore, early detection of tank formations is essential. Warning systems are established to insure that all antitank weapons can be brought to bear on enemy armor and destroy it outside the area of friendly troop dispositions.

c. Maximum use is made of natural obstacles and antitank minefields, facilitating the destruction of enemy armor by canalizing it into the fields of fire of antitank weapons. The entire antitank weapons system is used. This includes individual antitank weapons, mines, tanks, artillery, and nuclear weapons. The antitank defense is established in depth throughout the defended area. Artillery fires, including chemical agents, may be used on tanks to destroy the crews and separate or destroy accompanying infantry.

d. If the enemy armor succeeds in overrunning forward areas, antitank weapons located in depth seek to stop this advance. Forces in the forward areas must remain in position to prevent enemy infantry from accompanying its armor as well as contributing to the destruction of the penetrating tanks. Reserve forces heavy in armor are then committed to destroy the penetration.

167. Execution

a. In the defense a continuous aggressive intelligence collection effort, including the use of air and guerrillas, is essential in determining the probable strength, composition, direction, and time of the enemy attack.

b. The action of close combat units on position may vary from

delay to defense at all costs. Combat units employed in defensive positions accomplish their mission by destroying the enemy with fires and by impeding his advance to an extent that he can be destroyed by fire and maneuver. Close combat units may disengage and shift rapidly from defensive to offensive maneuvers.

c. Unless surprise offers a greater opportunity for success, the attacking forces are taken under fire as early as possible by aircraft and long-range artillery. As the enemy advances he is taken under fire by elements in the security zone. Security forces warn, deceive, develop intelligence, and, if part of the mission, execute maximum delay without becoming decisively engaged. They attempt to inflict maximum casualties on the advancing enemy and force him to deploy. As a means of collecting target information, security elements may remain in the area after passage by the enemy.

d. The attacker's disposition forward of the defensive area may favor a spoiling attack. When considering such an attack, the commander must evaluate the risks involved in terms of their effects upon the accomplishment of his mission.

e. As the attacker approaches the forward defensive area, he is taken under fire by all weapons within effective range, unless fires are deliberately to be withheld as a surprise measure. Previously selected target areas are kept under close surveillance. For maximum effect on fleeting targets, fires must be readily responsive to the commander.

f. In the conduct of the mobile defense, the forward elements conduct their portion of the action essentially as a delaying action. Such operations may extend over considerable depth within the battle area. They must, however, be prepared to stop and hold terrain on short notice to assist the success of the decisive counterattack. The mobile defense is based on the counterattack as the decisive element. Therefore, the counterattack is launched when the offensive power of the defender relative to the attacker is at a maximum. Criteria for determining when the counterattack should be launched are primarily those for assessing offensive maneuver. Among the significant considerations are the degree to which the forward area forces have succeeded in weakening the attacker and the potential remaining for further reducing his effectiveness. It is desirable that the enemy be stopped or slowed down and that he be disorganized, but these are not requirements and should not inhibit initiative in launching the counterattack.

(1) The counterattacking capability is not dissipated against minor enemy success. When the counterattack is launched, it is given the full means to accomplish the

mission. Piecemeal commitment of counterattacking forces jeopardizes the success of the operation. The counterattack is carried out rapidly and violently, employing all the combat power necessary to insure success.

(2) On occasions it may be necessary to launch separate counterattacks against two or more enemy forces. The more effective method is the elimination of enemy forces in order of the seriousness of their threat. Simultaneous counterattacks by elements of the reserve divide the available combat power and should be avoided, but such action may be required in some situations.

(3) Although plans for the counterattack are prepared in advance, it may be launched before or after the times planned and in an entirely different area than anticipated. The probability of successful accomplishment of the mission is the controlling factor.

(4) Local counterattacks on a small scale may be used to assist in disengagement of a force or to cause the enemy to change his plans. Small-scale attacks conducted with skill and determination may have an effect on the enemy out of proportion to the actual combat power involved.

g. The area defense is conducted in recognition of the fact that the battle area has been organized to halt the enemy, or if he penetrates, to canalize and delay him and force him into areas favoring the counterattack. The counterattack is the principal means for eliminating the penetration. The time to launch it is one of the most difficult decisions required of the commander. It should be launched at the time when the attacking force is most vulnerable. It may, however, be launched as a result of an inability to cause the enemy to react to the defensive plan. Following penetration of the forward defensive area, there is a period during which the momentum of the attack may be slowed, the attacking force somewhat disorganized, or the attacker's combat power dissipated to the extent that he is vulnerable to attack. Considerations in selecting the time and place for the counterattack are similar to those of the mobile defense. Additional considerations peculiar to the area defense are: dissipation of fires and reserves against minor penetrations may leave the defender without means to react against major penetrations; penetrations may be allowed to develop to great depths in accordance with a deliberate plan to destroy the enemy force by nuclear-supported counterattack; or, if the penetration achieves such success that a counterattack would be ineffective, it may be necessary to use the reserves in a blocking role and depend upon higher echelons to conduct the counterattack.

Section IV. RETROGRADE MOVEMENTS

168. Types

A retrograde movement is any movement of a command to the rear or away from the enemy. Retrograde movements are further classified into withdrawal, delaying action, and retirement. They may be forced by enemy action or may be made voluntarily. A force executes a retrograde operation voluntarily only when a distinct advantage is to be gained. In either event such an action must be approved by the higher commander. To be successful it must be executed according to well organized plans. A disorganized retrograde operation in the face of enemy strength invites disaster.

a. Withdrawal. A withdrawal is an operation by which all or part of a deployed force disengages from the enemy.

b. Delaying Action. A delaying action is an action in which a unit trades space for time and inflicts maximum punishment on the enemy without becoming decisively involved in combat.

c. Retirement. A retirement is an operation in which a force not in contact moves away from the enemy.

d. Combination of Types. Within a large command which is in contact with the enemy a combination of these types usually is necessary, either simultaneously by adjacent units, or by one developing into the other. For instance, a retirement is frequently preceded by a withdrawal. A retirement may be covered by a force executing a delaying action.

169. Purpose

a. Forced or voluntary retrograde movements are conducted to accomplish one or more of the following:

(1) To harass, exhaust, and inflict punishment on the enemy.
(2) To draw the enemy into an unfavorable situation.
(3) To permit employment of the command or a portion thereof elsewhere.
(4) To avoid combat under undesirable conditions.
(5) To gain time without fighting a decisive engagement.
(6) To disengage from battle.
(7) To conform to movements of friendly troops.

b. Retrograde operations by a defender may permit him with the lesser portion of his force to reduce the combat effectiveness of an attacker so that these two forces approach parity. Nuclear fires enhance the effect of a delaying force. The resulting situation permits the defender to seize the initiative with offensive action by his reserve elements. Skillful use of terrain to slow down and confuse and deceive the enemy is exploited by firepower, demoli-

tions, and raids to make the enemy pay a high price in casualties for the ground he gains.

c. The underlying reason for all retrograde action is to gain by the sacrifice of terrain the time in which to reduce the enemy's combat effectiveness, to bring up additional forces, to allow for a buildup elsewhere for an attack, to prepare stronger defensive positions to the rear, or to maneuver the enemy into areas for destruction by fire and maneuver.

170. Withdrawal

a. Local withdrawals are normal in defensive operations. Combat units may frequently make withdrawals in order to move to perform other missions. These withdrawals may involve disengagement by the attacking force. Under certain circumstances it may be necessary for the defending force, or an element thereof, to execute a general withdrawal. A general withdrawal may be part of a plan, as in a delaying action. A withdrawal may be executed either under pressure or not under pressure.

b. A withdrawal when not under enemy pressure requires the use of effective countermeasures against visual and electronic detection and depends primarily on speed of execution and deception. It may be accomplished by stealth or in conjunction with a nuclear or ground attack to divert the enemy's attention. Plans must include provisions for the eventuality of detection and interference with the attempted operation. Successful withdrawals of this type will normally be limited to periods of darkness of poor visibility, or to close terrain under conditions of friendly air superiority. Poor visibility and close terrain also complicate friendly control. The use of smoke and concealed routes assist in reducing the enemy capability to observe friendly movements. Enemy interference by use of airborne or airmobile troops must be anticipated.

c. A withdrawal when under enemy pressure depends on maneuver, firepower, and control. Nuclear and other fires against enemy forward elements and fire support agencies may be used to facilitate withdrawal of closely engaged forces. Forward units move to the rear by aggressively employing small unit delaying tactics. The rearward movement must be coordinated.

d. When simultaneous withdrawal is not practicable, the commander must determine the order of withdrawal. Withdrawing the most heavily engaged units first from the areas of greatest enemy pressure may subject major elements of the command to encirclement and destruction. Withdrawing the least heavily engaged units first may result in loss of all or a major portion of the most heavily engaged units. The decision must be based on

determining which plan best preserves the integrity of the force and which best contributes to the accomplishment of the mission.

e. Reserves are deployed well forward to assist in the withdrawal by fire or ground attack. When withdrawing under pressure, the reserve frequently will launch spoiling attacks to disorganize, disrupt, and delay the enemy attack. Reserves may also be used to cover the withdrawal by blocking enemy routes.

f. A withdrawal may not always involve disengagement, and sometimes planned disengagements are not accomplished by a withdrawing force. When, however, a withdrawing force does break contact, its continued retrograde movement becomes a retirement (par. 172).

171. Delaying Action

a. The delaying action is a defensive operation in which a force inflicts maximum delay and damage upon an attacker without becoming decisively engaged. This is the type of action normally fought by the forward echelons of the mobile defense, although these forces may have some additional restriction on their maneuver and area of operation. Entrapments may also be facilitated by a delaying force.

b. In the delaying action most of the combat power of the force conducting the operation is disposed in forward areas. Fires are decentralized. Reserves are employed primarily to assist in the disengagement of forward elements.

c. A delaying action may be accomplished on a single position, on successive positions, on alternate positions, or by suitable combinations of these. Delaying positions are organized in limited depth, since full reliance is placed on long-range fires to facilitate the delay. Close combat is avoided.

d. The integration of a delaying action into the mobile defense is covered in paragraph 162*a*. It is employed in a similar manner in operations designed to entrap an enemy force.

e. In the conduct of a delaying action, forces engage the enemy at long ranges to cause casualties and to force him to execute time-consuming deployments. In some situations, however, long-range fires may be deliberately withheld for deception purposes. Delaying forces strive to offer sufficient resistance to prevent infiltration and to force the enemy to concentrate for deliberate attacks. A concentrating enemy is attacked and destroyed by fire and, where appropriate, exploited by maneuver. If the operation is not designed to deceive or entrap, the commander of the delaying force subjects the advancing enemy column to repeated flank attacks by aggressive mobile forces, inflicting maximum destruction consistent with avoiding decisive engagement. The availa-

bility of low-yield nuclear weapons and precision delivery systems will assist disengagement and may permit the command to accept closer engagement than would otherwise be practicable.

172. Retirement

a. A retirement normally will be covered by security forces which may execute delaying operations. The retiring force may be subjected to guerrilla attacks, airborne raids, long-range fires, and enemy psychological warfare operations. Movement may also be impeded by refugees.

b. Security is an important consideration when executing a retirement. Movement by night is emphasized; day movement may be possible only by infiltration of small groups. Maximum advantage is taken of air mobility. In the initial phases of the retirement elements of the command may separate and move in dispersed groups to designated assembly areas. The retiring force fights only as required by its mission. Maximum use is made of communication security measures, especially radio silence.

Section V. SPECIAL DEFENSIVE CONSIDERATIONS

173. General

a. The enemy capability for airborne, guerrilla, or infiltration operations presents a continuous threat to the rear areas of a command. Successful employment of these capabilities by an enemy can have a demoralizing and decisive effect on an unprepared force and can disrupt its administrative support.

b. Plans to secure the rear area must be prepared to counter this enemy threat. The composition and strength of combat forces assigned the mission of rear area security must be based upon the evaluation of the primary mission of the overall force and enemy capability to make such attacks. Further, such plans integrate all means to include service troops, friendly partisans, militia, civil defense troops, and TOE unit replacements awaiting assignment.

c. Forces committed to rear area security should be adequate to counter the most likely enemy threat or combination of threats. Units located in the rear area must be fully utilized to contribute to the defense. Effective rear area security requires that each installation plan, prepare, and rehearse for its own defense and its part in the rear area security plan. The nature of the threat will frequently require locating or organizing highly mobile combat forces in rear areas. Positive command authority and staff areas of responsibility must be established, as well as adequate secure communication and warning nets. Locating and fixing

the enemy is one of the major problems in rear area security. Frequently, this may best be accomplished by controlling areas logical for enemy attack until the enemy reveals his location and permits the launching of operations to destroy him.

d. Plans must provide for the defense of critical areas or installations. First priority must be given to the use of administrative support troops for security of their own installations. A security force may also have to be disposed in dispersed locations where elements can move to block enemy threats. When the enemy is located, those elements of the security force not engaged in blocking are assembled rapidly for decisive action to destroy the enemy. Units may act on their own initiative; however, control must be established to insure coordinated action as the nature of the threat is clarified.

174. Defense against Airborne and Airmobile Attack

a. Defense against airborne attack includes air defense measures, a warning system, troops disposed or available to defend likely airborne objectives, and a mobile reserve. Every effort is made to isolate and prevent reinforcement of the airborne forces. If local forces are not able to defeat the attacker, they form a base for counterattack by stronger, mobile reserves. Armor is effective against airborne forces when available and when the terrain permits its use.

b. A major problem is to obtain accurate information of the location and extent of the landings. This problem is caused by exaggeration in reports, scattered landings, and communication breakdowns in the affected areas. All means of observation and communication are used. Unless ground vehicles are air transported in large numbers, airborne forces are relatively immobile after landing. This usually requires that airborne forces land on or near their objectives. This fact can be used to advantage by the commander in planning his defense. It assists in deciding where to deploy forces in anticipation of airborne attack, and how to employ them during the attack. Consistent with troop safety, nuclear weapons are used against enemy formations in the air and during landing or on their assembly areas where they can be located.

c. When a major airborne threat justifies the expenditure of resources, and when time permits, antiairborne obstacles and barriers are improved or constructed in likely drop and landing zones and in exits toward logical airborne objectives. Frequently, obstacles and barriers will be of limited effectiveness. Inundation, prepositioned nuclear demolitions and chemical agents should be considered in antiairborne defense.

175. Defense against Infiltration

a. Defense against infiltration becomes increasingly important as dispersion on the battlefield increases. Enemy forces may infiltrate to assemble in rear areas for attack. An infiltrated enemy force constitutes an enemy target acquisition agency that can call down accurate, long-range fires. Early detection and elimination of these forces are essential.

b. Measures that aid in controlling infiltration include extensive counterreconnaissance, combat patrols, antipersonnel obstacles, warning devices, and electronic surveillance devices. If the enemy succeeds in infiltrating, he is located and destroyed. When the enemy attempts to infiltrate entire units, every effort is made to identify likely enemy assembly areas in rear of friendly forces. Priority is given to destroying the enemy in these areas before he can reorganize and launch his attack.

176. Defense against Guerrillas

a. All units and installations in an area of guerrilla operations are subject to attack. Effective local security is essential to the defense against these attacks. Special provisions are made for—

(1) Ground and aerial reconnaissance of rear areas.
(2) Mutual assistance by adjacent units.
(3) Defense of installations and critical areas.
(4) Armed escorts.
(5) Use of friendly civilians as guides, agents, or antiguerrilla units.
(6) Mobile combat forces to take offensive action against guerrillas.

b. Intelligence is required on areas suitable for hideouts, identity of guerrilla leaders and civilian supporters, communication facilities, and sources of supply. Guerrilla effectiveness depends in great measure on current information. Thus, care must be taken to prevent their securing information of operations, installations, and troop movements. Particular attention must be given to communication security, especially transmission security measures.

c. The political, administrative, and economic aspects of the area are considered in defense planning. Special attention should be given to measures to deny logistical support to the guerrilla force. Guerrilla forces cannot operate effectively unless supported in some degree by the local populace. Continuous effort must be placed upon gaining support by the local populace for counterguerrilla operations. Planning is coordinated with overall rear area security and rear area damage control planning.

Section VI. BATTLE UNDER SPECIAL CONDITIONS

177. General

Battle under special conditions encompasses those operations in which the natural and man-made characteristics of the area, or the nature of the operations, or the unique conditions under which the operations may be conducted, or a combination of these, may require specially trained troops, techniques, tactics, or materiel. All Army forces are capable of operations under these conditions, but special training and equipment may be required.

178. Fortified Areas

a. A fortified area is characterized by numerous mutually supporting defensive works and localities, organized in width and depth. Seldom will the fortified area be a single strongly organized locality. Fortified areas provide the defender with maximum protection and permit economy of force. Defensive works may consist of permanent-type fortifications and extensively developed field fortifications located within an extensive barrier system. Additional characteristics of a fortified area include a strong outpost system which, in itself, may be fortified; a well-developed road and signal net; and a highly mobile reserve centrally located and provided with an extensive network of covered approaches.

b. In offensive operations enemy fortified areas are normally contained by minimum forces while the main force bypasses and continues the advance to more distant and decisive objectives. Action to reduce a fortified area may include a siege or an attack from the rear. Nuclear, chemical, and biological munitions facilitate the destruction and neutralization of fortified areas. The ability of chemical and biological agents to penetrate structures and fortifications lessens the effectiveness of cover. Surface and subsurface nuclear bursts may be employed to create gaps in the fortified area or to isolate sections of it. If such nuclear bursts are used, they must be carefully coordinated with adjacent forces and evaluated as to possible interference with friendly maneuver.

c. A primary purpose for the defense of a fortified area is to involve the enemy in the task of reducing fortified positions to the end that he dissipates his power and becomes vulnerable to counterattacking forces. Such a defense permits economy of force in forward areas, thus making available proportionately larger reserves for a counterattack. The reserve must be highly mobile and aggressively employed to insure the successful defense of a fortified area.

179. Built-Up Areas

a. Built-up areas containing solid masonry or concrete and steel

structures modified for defense purposes resemble fortified areas. They consist primarily of cities containing blocklike construction or those areas consisting of large complexes of industrial structures. Such areas are conspicuous topographical features for which details are usually available. They offer cover and concealment for troops and weapons. Built-up areas may be untenable because of their susceptibility to neutralization or destruction by conventional or nuclear munitions. These areas are also vulnerable to neutralization by chemical or biological munitions. Extensive subterranean systems may provide the defender with additional protection. Built-up areas reduced to rubble retain their defensive characteristics and restrict the use of motorized or mechanized forces. Fighting in built-up areas is characterized by close combat, limited fields of fire and observation, canalization of vehicular movement, and difficulty in control of troops. In employing nuclear weapons, the effect on the civilian population must be considered and plans made for their control and evacuation.

b. When practicable built-up areas are bypassed and isolated. If they must be reduced, methods applicable to reduction of fortified areas are employed. Terrain dominating the approaches is seized to isolate the area. Mobile forces are best utilized in the enveloping role. Objectives within the built-up area are selected to divide the enemy defense. In the nuclear environment the advantages gained through the use of nuclear weapons must be weighed against the creation of obstacles to the assault force.

c. The defense of a built-up area should be organized around key features whose retention preserves the integrity of the defense and permits the defender to move readily. Plans should provide for using subterranean systems as a means of defense against nuclear attack. A built-up area is primarily an obstacle to the attacker but may also be an obstacle to the defender in counterattack operations. Consequently, consideration should be given to defending outside the built-up area. Defense of a built-up area must provide for a reserve of maneuver elements and fire support to counter enemy action within the built-up area and on the dominating terrain outside the area.

180. River Lines

a. Wide, unfordable rivers impose restrictions on movement and maneuver. They constitute obstacles to the attacker and form natural lines of resistance for the defender. An attack across an unfordable river requires tactical and technical preparations proportionate to the size of the river and the relative strength of opposing forces. Other requirements for the attack of a river line are special types of intelligence, specialized training, close coor-

dination of all forces, crossing equipment, and adequate means for control during the crossing. The timely use of airmobile and airborne forces facilitates river crossings and should be fully exploited.

b. As a result of the planning initiated during the advance to the river, the commander deploys forces in a manner that insures that essential crossing means are readily available when the river is reached. The advance to an unfordable river is made with great speed on a broad front. Speed and violence in the attack, plus the confusion of battle, may create an opportunity to seize bridges before the enemy destroys them. The actual crossing of a river is a phase in an overall operation and not the primary objective. Supporting fires, particularly nuclear or chemical, may be used to seize a bridge intact by neutralizing the personnel defending the bridge. The advantage gained by capturing a bridge must be exploited. A bridgehead must be promptly established to secure the bridge and permit crossing of the remainder of the command.

c. In a nuclear environment the capability of the defender to employ nuclear weapons amplifies the requirement for multiple crossings on extended frontages. Continuous movement, without delay for buildup, is essential. Assault forces mounted in amphibious armored vehicles speed the crossing and reduce the dependence on bridges.

d. Defense of a river line is facilitated by the organization for defense which best exploits the natural terrain features and the resources available. Only screening forces may be at the river line when the defense is being conducted primarily by nuclear fires.

181. Jungle

a. Jungles are areas of tropical rain forest and secondary growth varying in locale from mountains to low-lying swampy plains. They are further defined as lacking industrial or cultural development and fully developed lines of communications. Jungle terrain and climate limit movement, observation, fields of fire, communications, and control. Because of these limitations, the difficulties of jungle operations increase in proportion to the size of the force involved. Cover and concealment are excellent in this type of terrain, thus increasing the possibility of achieving surprise. As a result, both the attacker and defender commit large portions of available forces to security missions. Critical terrain features in jungles include trails, navigable rivers, high ground, and communication centers. These features are difficult to identify because of inferior maps and limited visibility. The value of high ground may be reduced by restrictions on observation and fields of fire. An additional characteristic of jungle operations is the

reduced capability to acquire targets. Heavy forests have characteristics similar to those of jungles.

b. In the offensive, security elements are essential to prevent surprise and to protect the command. In jungles, successful security force operations are dependent on proper training and conditioning of troops in off-trail movement. Airmobile and airborne units and air lines of supply facilitate jungle operations. Since the size of offensive operations is often limited by the capability to resupply the force, bases of supply are profitable targets for attack.

c. The critical aspect of a defense in jungles is the communication net. To guard against surprise, the defense must be organized in depth, provide all-around defense, and contain well-organized security forces both for the defended area and for supply routes. Provision must be made for a mobile reserve. Chemical and biological agents are particularly effective in jungle operations because of the nature of the terrain and atmospheric conditions. If nuclear weapons are being employed, they can be used to strengthen natural obstacles by blast and contamination.

182. Desert

a. Deserts are semiarid and arid regions containing a wide variety of soils in a varying relief. Deserts have one common characteristic—a lack of precipitation and a resultant limited water supply. However, flash floods will occur in these regions. Because of the shortage of water, vegetation is scarce. In these areas military operations depend on control of sources of water. Depending on the terrain relief and the trafficability of the soil, the lack of roads may or may not canalize operations. A greater freedom of movement exists in these regions than in other areas. Highly mobile forces may play a dominant role in operations in semiarid and arid regions. Freedom of maneuver and the vastness of these regions favor a fluid type of warfare characterized by dispersed formations on extended frontages with considerable depth and increased problems of control. Additional characteristics include limited concealment, difficulty in determining location and maintaining direction, increased logistical support and equipment maintenance problems, and a requirement for specialized training and acclimation of all personnel. Ground reconaissance forces, provided with armor and air defense means, and air reconnaissance elements are essential to prevent surprise. Air superiority is extremely important to successful desert operations.

b. During offensive operations in semiarid and arid regions, wide envelopments by armored, mechanized or motorized forces are favored because of freedom of maneuver. Because of limited

concealment, surprise must be attained by deception, appropriate communications security measures, and rapid movement. Periods of limited visibility should be exploited. Objectives for the attack include enemy troops, communication centers, supply bases, and water sources. The influence of climate and terrain in arid regions must be considered in planning the use of nuclear weapons. Likely nuclear targets include logistical and air installations.

c. Defensive operations in these regions emphasize mobility and flexibility. Provision should be made for direct fire weapons, a high degree of mobility, and adequate secure communications. The organization of the defense should emphasize measures against air and armor attack.

183. Mountains

a. Mountains cause compartmentation of military operations. Their rugged characteristics limit road nets. Vegetation may vary from jungle to bare slopes. The weather is characterized by rapid, extreme changes in temperature accompanied by mist, rain, or snow. Operations in mountains frequently require special equipment and training. Mountainous terrain retards and restricts mobility, reduces the effect of firepower, and makes communications and supply difficult. Critical terrain features include heights which dominate lines of communication, mountain passes, roads, and railroads. Within altitude capabilities, helicopters are valuable for moving both equipment and personnel. Nuclear weapons and chemical munitions can be used in mountain operations to restrict movement. Increased reliance must be placed on weapons having a high angle of fire. Aerial reconnaissance and observation facilitate mountain operations.

b. In mountain operations, direct attack of an enemy position is avoided whenever possible. Envelopment of enemy positions is facilitated by the crossing of difficult terrain employing specially trained and organized forces. Air-transported forces are ideally suited for envelopments. Although centrally planned, the execution of attacks is normally decentralized because the capability for control is limited by terrain. The use of armor in the maneuver force will be reduced, but its direct fire capabilities are used when possible. Flanks, defiles, road nets, and communication centers must be secured. When nuclear weapons are available to support the attack, small yield weapons may be favored to avoid blocking restricted avenues of approach.

c. Control of dominating terrain protecting road nets or passes normally is the key to the organization of a defense in mountainous areas. Security forces are required to prevent surprise, particularly of observation posts and patrols. Air reconnaissance is use-

ful as a security means. Although counterattacks are difficult to plan and execute, their execution can be decisive if timed properly. Nuclear weapons and chemical munitions can canalize the enemy or augment barrier plans.

184. Deep Snow and Extreme Cold Operations

a. Deep snow and extreme cold are found in the arctic, subarctic, and temperate zones, and at high altitude in all zones. The areas in which these conditions exist vary from forested to relatively barren regions and vary extensively in population. The subarctic and arctic regions of the world constitute the largest areas of deep snow and extreme cold. An additional characteristic of these areas is the obstacles to movement created by thaws.

b. The conduct of operations in such areas will require the application of special techniques and equipment and will be affected by the following factors:

(1) During the winter cold, snow, frozen waterways, permafrost, and short periods of daylight prevail. These factors create problems, such as constant need for shelter and heat, increased dependence of tactical operations on close administrative support, difficulties in the construction of field fortifications, and need for special winter equipment and clothing. Deep snow does not necessarily reduce the mobility of properly trained and equipped troops. In certain terrain it may enhance their mobility. Use of aircraft may be facilitated by using frozen lakes and rivers for landing areas.

(2) During the summer the area is characterized by numerous, extensive swamps, lakes, and rivers; abundant insects; and at times continuous daylight. Special equipment, such as boats and low ground pressure tracked vehicles, are needed. The extensive daylight requires special skill in movements.

(3) During the spring breakup sudden thaws weaken the ice on waterways and swamps and make existing roads almost impassable. The ground thaws to a depth varying from a few inches to several feet depending on the geographical location of the area. These factors will hamper extensive overland movement.

(4) During the fall freezeup ground and waterways frequently freeze before heavy snow falls. Prior to such snowfall, troops and vehicles can move crosscountry with ease; however, in some cases early snowfall will insulate the ground and prevent its freezing until late in winter. This condition impedes cross-country mobility.

(5) During all seasons the lack or scarcity of roads affects large-scale operations, particularly administrative support, which points up the requirement for increased engineer support. Limited map coverage adds importance to effective navigation and control measures. Extensive forests or barren land above the tree line complicate all types of operations.

b. Offensive and defensive operations in these areas are conducted as in other climates. Since roadbound troops are extremely vulnerable to all types of enemy action, the capability to move crosscountry is requisite to successful operations. The control of land routes of communication is vital in both offensive and defensive operations. Typical nuclear targets include logistical installations and communication centers.

c. For details, see FM 31–70 and FM 31–71.

Section VII. RELIEF OF COMBAT UNITS

185. General

a. When tactical operations continue for a prolonged period, conservation of fighting power, maintenance of effectiveness, and the requirements of the tactical plan may necessitate the periodic relief of units. Such reliefs will be effected by a relief in place, passage through friendly positions, or withdrawal through a rearward position.

b. The congestion inherent in each of these operations requires detailed consideration of measures to reduce vulnerability and risk of enemy attack. Close cooperation and coordination of plans among the units involved are essential. The appearance of normal activity should be maintained during these operations. Maximum use is made of periods of darkness and poor visibility. Secrecy, deception, and speed of execution are emphasized. Arrangements must provide for the transfer of command between the commanders involved. Under nuclear conditions, the relief in place and passage of lines are highly vulnerable operations which, when required, must be conducted with speed and secrecy. Particular attention must be given to communication security measures.

186. Relief in Place

a. A relief in place is an operation in which all or part of a unit is replaced by the incoming unit. The responsibilities of the replaced elements, which may involve attack or defense, are transferred to the incoming unit. The incoming unit may be assigned a new mission upon completion of the relief.

b. The commander of a unit being relieved is responsible for

the defense of his assigned sector until the passage of command. The time of passage of command is determined by mutual agreement of the affected comanders unless it has been specified by higher headquarters. This passage normally occurs when the forward area commanders have assumed area responsibility and the incoming force commander has established necessary communications to control the entire sector.

c. In a relief in place for continuation of the defense, the incoming unit must conform to the general defense plan of the outgoing unit until passage of command. Every effort must be made to effect the relief without weakening the tactical integrity of the position. Combat support units should normally not be relieved at the same time as close combat elements.

187. Passage of Lines

A passage of lines is an operation in which a unit attacks through a unit which is in contact with the enemy. Units of the force being passed through normally remain in position until their fires have been masked, at which time they may undertake another mission. In this operation, the unit being passed through provides maximum assistance, including fire support, to the attacking unit. The passing unit normally is given priority in the use of facilities. The passage is made as rapidly as possible to reduce vulnerability to attack.

188. Withdrawal Through a Rearward Position

A withdrawal through a rearward position is an operation in which a unit withdraws through a unit occupying a defensive position. The unit in position provides maximum assistance to the withdrawing unit and maintains the defense after the passage has been completed. The withdrawing unit is given priority on roads and facilities, provided it does not interfere with the defense. The defensive plan must be considered in selecting points for the passage. The points and routes should be kept to a minimum, consistent with the need to minimize vulnerability and to avoid occupied defensive positions. Measures should be adopted for mutual recognition of the affected units and notification of the defending force when the withdrawal is complete.

Section VIII. OPERATIONS DURING UNRESTRICTED SCALE OF USE OF NUCLEAR WEAPONS

189. General

a. This section is devoted to the operational employment of Army forces during periods of unrestricted scale of use of nuclear weapons as defined in paragraph 146*b*.

b. The environment visualized herein is one in which nuclear weapons are employed in both quantity and yield to such an extent that their efforts will saturate the battle area. As a result the ability of ground forces to maneuver decisively will temporarily be drastically reduced. While larger forces will normally be unable to maneuver without prohibitive losses, small units up to company size will frequently be able to move with sufficient freedom to permit them to continue effective operations. Furthermore, there will be local variations in the level of effects that will allow forces of substantial size to continue their assigned missions without being unduly restricted in their ability to maneuver.

c. Because a prolonged, intensive exchange of nuclear fires is extremely devastating and results in widespread destruction of both military forces and the civilian population, such operations can be expected to be of relatively short duration.

d. Decisive results will accrue to the combat force which can gain nuclear fire superiority in the exchange and at the same time preserve sufficient maneuver elements to exploit the fire ascendancy when achieved.

e. The full capabilities of nuclear weapons delivery systems are employed to achieve fire superiority. High priority targets include enemy nuclear delivery sites and associated control systems, weapons stockpiles, and command and communication facilities. Intelligence efforts are focused upon the development of these targets.

f. The major consideration is the reduction of the nuclear effects level to an extent that will permit combat forces to resume effective maneuver. It is to this end that fire superiority over the opposing force is sought, even though the efforts in this behalf may temporarily raise the level of nuclear effects. Once the enemy's nuclear delivery capability has been reduced to a significant degree, the nuclear effects level can be permitted to subside, and combat forces can again employ maneuver decisively.

g. During periods of unrestricted scale of use of nuclear weapons Army forces will participate in the efforts to gain nuclear fire superiority, conduct limited offensive and defensive operations, and preserve force integrity for the subsequent exploitation phase.

h. Small, close-combat units, in addition to performing reconnaissance and security missions, are employed in limited offensive and defensive operations. Appropriate offensive tasks include infiltration of enemy-controlled areas to seize key terrain and destroy important installations. Defensively, these units are employed to counter similar attacks by the enemy. Offensive efforts should not be permitted to compromise the integrity and effectiveness of the major force through a series of unprofitable actions.

i. Guerrilla forces may be used to obtain information, conduct interdiction operations, and attack enemy communications, control facilities, and other critical installations.

j. Deception operations are initiated to mislead the enemy as to the location of friendly troops and critical installations and to cause him to expend his nuclear weapons on unprofitable targets. Electronic warfare operations (including communications and electronic security measures) are integrated into the deception plan. Additionally, active electronic countermeasures are taken against enemy aircraft and missile delivery systems and communication and control circuits.

190. Force Integrity

Those forces which cannot be profitably employed in the efforts to gain fire superiority must be preserved for the exploitation phase that follows. Normally, a significant amount of the close-combat and maneuver elements of a force will fall into this category. These forces are dispersed and concealed in protected positions in a defensive posture. Their primary mission is retention of operational integrity and survival.

191. Support Elements

Support forces which can contribute to the efforts to gain fire ascendancy are so employed. Other supporting forces devote their efforts to the preservation of their resources for the exploitation phase and to survival.

192. Exploitation

Following the nuclear exchange, the maneuver, fire support, and combat support elements must be reconstituted rapidly to resume or initiate mobile operations. Since both combatants will undoubtedly suffer severe damage during the nuclear fire fight, even a small, highly mobile exploitation force may achieve decisive results when employed aggressively and in a timely manner. Additional forces are reconstituted, refitted, and committed to action as resources permit.

CHAPTER 7

AIRBORNE AND AIRMOBILE OPERATIONS

Section I. GENERAL

193. General

The advent of nuclear weapons and the improvement of other weapons has weighted the fire-maneuver balance in favor of fire. This imbalance can be corrected only by a substantial increase in mobility. The use of aircraft adds new dimension to the land battle by permitting maneuver through the air. Aircraft utilized in land force operations permit the rapid movement of combat power to and within the battlefield with minimum regard for terrain barriers and trafficability. A significant increase in mobility and maneuverability required to complement increased firepower is thus provided.

194. Scope

This chapter deals with the special considerations involved in the entry and sustenance of land forces in combat by means of aircraft. Consideration is given, in other portions of this manual, to the use of aircraft in performing the functions of reconnaissance, fire support, supply, troop movement and evacuation.

195. Types of Operations

a. Airborne operations involve the movement and delivery by air of combat forces and their logistical support into an objective area for the execution of either a tactical or strategic mission. Such operations may be conducted for extended periods of time and over great distances. Airborne operations are joint in nature and are conducted by combat forces of the Army and Air Force or Navy, employing forces organized, equipped and trained for this purpose. A variety of combinations of airborne and air-transportable units with assault, troop-carrier and transport aircraft units permits the fashioning of an airborne force to meet the requirements of the particular mission.

b. Airmobile operations involve the movement of land combat elements and their equipment about the battlefield by means of aircraft organic or attached to the land combat force for the execution of a tactical mission. These operations are unilateral in nature and are normally characterized by a limited mission and range and consequently are of relatively short duration.

Section II. BASIC CONSIDERATIONS

196. Concepts of Employment

a. The flexibility of airborne and airmobile forces permits wide latitude in selecting the route of approach and the area in which they are committed.

b. The ability of such forces to move rapidly and to land on or near their objectives enhances the achievement of surprise and facilitates the massing of combat power.

c. The presence of such forces constitutes a threat which affects the enemy's capabilities by compelling him to deploy his combat power to protect vital installations in his rear areas as well as in the combat zone.

d. The primary prerequisites to success in such operations are the capability to move forces to an objective area without incurring unacceptable losses and the capability to provide them with required combat and logistical suport.

197. Nuclear Environment

a. The nature of an airborne operation is such that the forces involved are vulnerable to enemy nuclear attack. Consequently, the enemy nuclear capability and the manner in which it may be employed must be carefully evaluated.

b. Reduction of the vulnerability of the force can be accomplished by minimizing the time spent in execution of each phase of the operation and strict observance of appropriate communication security measures during the planning and execution phases of operation. Additional considerations, contributory to the lessening of vulnerability, are dispersed marshalling areas, multiple air columns and small serials, and a large airhead complex.

c. Small, airmobile operations are difficult nuclear targets because of their fleeting nature. For this reason such operations are less vulnerable to nuclear attack.

198. Influence of Enemy Armor

Consideration must be given to the threat presented by enemy armor. When an enemy armored threat exists, weapons capable of defeating armor must accompany the assault forces. In counteracting enemy armor, the airborne force employs fires, exploits terrain which limits armor employment and concentrates antitank means along avenues of approach. Organic fires, antitank weapon systems, barriers, and air support facilitate destruction of enemy armor.

199. Weather Considerations

Airborne operations, and to a lesser extent airmobile operations,

are especially sensitive to weather conditions. Means of providing current weather information at departure sites, along approach routes and in the objective area are essential. A weather minimum must be prescribed for each operation.

200. Support Requirements

The capacity and availability of aircraft limit the equipment which can be moved to the objective area. Ground mobility in airborne operations is reduced by the shortage of organic vehicles. While airmobile units have few ground vehicles, they retain considerable mobility through employment of the helicopter for delivery and pickup of ground elements in the vicinity of their objective. Long-range fire support for airborne operations and subsequent operations in the battle area is provided primarily by tactical air and missiles.

Section III. AIRBORNE OPERATIONS

201. Strategic Considerations

Land forces located in the United States or overseas are maintained as part of strategic mobile Army forces capable of rapid deployment to any part of the world. The rapid commitment of these forces is facilitated by deployment to advance bases and areas. Execution of the strategic airborne capability is directly dependent upon availability of long-range transport aircraft. Strategic airborne forces are organized and equipped as highly mobile, completely air-transportable units. Movement by long-range aircraft allows timely intertheater, as well as intratheater, deployment of such forces to execute military operations. These forces may be moved directly to the area of employment or may be moved to forward bases from which they can be relifted by medium and assault transport aircraft to conduct airborne assault operations. Stockpiling supplies and aerial delivery equipment near areas of anticipated employment increases strategic mobility by reducing the requirement for long-range aircraft.

202. Characteristics

Airborne operations combine the speed and flexibility of high speed medium and heavy transport aircraft with the land combat capability of Army forces. Airborne forces are organized, trained and equipped to capitalize on the advantages of movement by modern air transport means.

203. Concepts

Due to concentration in mass and speed of landing, assault

forces are normally stronger than enemy forces in an objective area during and for a period after landing. Such forces have the advantage of initiative, surprise, and shock effect. In addition, assault forces will frequently be at full strength and will have the advantage of special training and, when feasible, operational rehearsals. Large-scale airborne operations require multiple dispersed airfields in the departure area and suitable landing zones in the objective area if air-landings are planned.

204. Effects of Nuclear Weapons

a. In a nuclear environment, the use of large airborne forces may become difficult, due to the ease with which air movements are detected and the effect of nuclear weapons against large air formations. For these reasons, en route air columns and tactical forces in the objective area are dispersed to the maximum extent consistent with missions and control capabilities.

b. The battalion may be the basic unit is an airhead. A division airborne operation may really be a series of coordinated but separate operations. Corps airborne operations in which the bulk of the combat forces are parachuted into the objective area may become rare.

c. Nuclear attack in the objective area may facilitate its seizure by airborne forces. However, the reduced ground mobility of airborne units increases their vulnerability to enemy nuclear attack once they have landed.

d. The success of airborne operations in a nuclear war will depend upon the ability of reinforced battle group sized units to conduct semi-independent operations effectively.

205. Classification

a. Airborne operations are classified by type as either short duration or long duration operations.

b. Short duration operations normally will be conducted with minimum reinforcement and air-delivered followup supply. Only essential administrative support is provided in the objective area. The operation terminates with the early link-up, relief, withdrawal, or relift of the force for subsequent operations.

c. Long duration operations require reinforcement of airborne units by combat, combat support, and administrative support units and include substantial use of nonairborne units in an air-landing and followup role. The forces employed are usually committed to sustained ground combat. Long duration operations involve a substantial buildup of troops, supplies, and equipment by air.

206. Operational Phases

Airborne operations normally are initiated by an assault consisting of the landing and seizure of initial objectives. The force then consolidates the objectives and defends the airhead area, conducts further offensive operations, links up with other forces, or is relifted or withdrawn to engage in subsequent operations. Offensive operations may be conducted concurrently with the consolidation to seize additional objectives to facilitate the defense or future operations. The offensive phase, if undertaken, is initiated as soon after the assault as possible.

207. Coordination with Other Forces

All participating forces in an airborne operation must be completely integrated and under a single command. Operations must be thoroughly coordinated with other forces operating in close proximity to or whose weapons are within range of the objective area.

208. Command, Control, and Functions

The command relationships for the component forces in joint airborne operations are specified by the commander exercising control and supervision over the operation. Factors considered in determining command relationships include the mission and duration of the operation, the functions and capabilities of the units involved, the nature and size of the forces to be furnished by each Service, the organization of the area, geographical location of the operations, and the strength and capabilities of friendly and enemy forces.

209. Organization of Airborne Forces

The theater commander may establish a unified airborne command for planning and executing airborne operations on a continuing basis. Such a command would include all airborne units in the theater except those temporarily assigned to other forces. The airborne command plans and executes operations employing the major portion of the theater airborne units and establishes subordinate joint airborne task forces for the execution of operations which employ lesser portions of the theater forces. If a unified airborne command subordinate to theater is not established, the theater commander may establish a joint airborne task force for a specific operation. If a unified command or joint airborne task force is not established, the theater commander may direct that an airborne operation involving elements of two or more Services be conducted by attachment of elements of one Service to another for operational control. The authority directing attach-

ment will specify the purpose or mision, effective date and duration of attachment, and extent of authority to be exercised by the commander of the unit to which other forces are attached.

210. Responsibility for Planning

The unified or joint task force commander directs the planning for the operation. He assigns responsibility for planning, preparation, and execution of the ground phase of the airborne operation to the Army component commander. He assigns responsibility for planning, preparation, and execution of the air movement and certain related activities to the commander of the Air Force component. The theater commander allocates means to support the approved missions.

211. Airborne Corps

a. A corps headquarters should be designated or established to control operations involving two or more divisions. A corps headquarters properly augmented with qualified airborne staff personnel is able to conduct large airborne operations. An airborne corps headquarters should be organized, trained and equipped when frequent large scale airborne operations are to be conducted.

b. Any corps can supervise the conduct of airborne operations by one or more of its subordinate elements when the corps, as a whole, is not employed in the airborne operation. The size and complexity of the airborne operation are the basis for determining whether or not such a corps headquarters requires staff augmentation by qualified airborne planners. Normally, in a division-size joint airborne operation, an airborne division can accomplish its own planning as well as supply a limited number of airborne planners to the corps staff.

212. Airborne Divisions

Airborne divisions are the largest units of combined arms and services organized primarily for the execution of airborne assaults. They are specially trained to enter combat by parachute and are capable of landing in unprepared and defended areas to engage the enemy immediately and effectively.

213. Infantry Divisions

Infantry divisions can be employed in airborne operations in air-landed roles to assist in expanding an airhead, to assume responsibility for a portion of the airhead, to act as an exploitation force or part of such a force, or to become a reserve.

Section IV. AIRMOBILE OPERATIONS

214. General

Airmobile operations are characterized by rapid shifts of com-

bat forces within the combat zone with little regard to intervening obstacles. Airmobile operations normally employ aviation, infantry, artillery, cavalry, and reconnaissance units organic to the field army. Airmobile operations present fewer command and control problems than airborne operations, and airmobile operations are immediately responsive to the desires of the force commander.

215. Army Aircraft

a. Characteristics of Army aircraft minimize the requirement for airfields and improved air-landing facilities. Fixed wing aircraft require landing areas free from obstacles. Such an area is also desirable for helicopters; however, the helicopter can overcome many obstacles by its ability to hover a short distance above the ground and deliver its load without actually landing.

b. When employed tactically, Army aircraft fly at those altitudes best calculated to avoid detection and escape enemy fires. Flight routes are planned to take advantage of any protection afforded by valleys, forests, and other terrain features. Known enemy locations are avoided when possible. Enemy occupied areas that cannot be avoided are neutralized by supporting fires.

216. Concepts of Employment

a. Airmobile operations can be employed to seize critical, lightly held or unoccupied objectives; exploit the effects of weapons; outflank enemy positions; conduct reconnaissance, security and screening missions; and conduct raids. During offensive operations, troops and their fire support may be shifted rapidly to gain a tactical advantage or to counter an enemy attack. To reduce vulnerability to nuclear weapons, aircraft are used to effect required concentration of forces from dispersed locations just prior to employment, to disperse forces rapidly, to shift forces, and to move reserves.

b. In the defense, forces required for forward defensive areas may be reduced by organizing strong airmobile reserves in dispersed areas for timely delivery to critical areas.

c. Limited offensive and defensive airmobile operations may be conducted during periods of limited visibility by using low-level flight techniques.

217. Composition of Airmobile Forces

Airmobile forces, although normally composed of close combat elements and their organic support, may be specifically organized to include fire support elements or other nonorganic combat support elements. Infantry close combat elements are the most adaptable to airmobile operations because they are readily transportable by all types of aircraft.

218. Control of Aviation Units

a. Aircraft for Army airmobile operations conducted by divisions are normally provided from organic means or by attaching or placing corps or field army aviation units in support. Aviation control personnel and equipment are provided concurrently.

b. Operational control of aviation units to include control of air movement is normally assigned to the echelon responsible for the overall operation. Aviation attached to the division for airmobile operations may be reattached to or placed in support of subordinate elements of the division as required.

c. Independent airmobile operations may be conducted under corps control.

d. Certain specialized units may be specifically organized as airmobile to include necessary organic equipment. These units are designated as "aerial" units and are principally organized for reconnaissance and security missions.

Section V. PLANNING AND CONDUCT OF AIRMOBILE AND AIRBORNE OPERATIONS

219. Procedures

a. Planning procedures for airmobile and airborne operations are similar. However, airmobile operations require less time and detail in planning because of their size, simplified command structure, and scope, and are conducted frequently throughout the battle area.

b. Despite their differences in scope, both types of operations require data on the availability of airlift, departure areas special measures required to safeguard the security of the operation (par. 251), and combat intelligence particularly on the enemy in the objective area, landing areas, and the weather. In both types of operations, planning is continuous until the operation is executed or canceled.

220. Planning Responsibility and Coordination

a. A senior headquarters considers numerous airborne operations and assigns planning responsibility for certain of these to subordinate headquarters. To assist participating and planning headquarters to develop plans concurrently, to reduce planning time, and to insure coordination, the senior headquarters issues planning directives which contain operational information, intelligence, weather information, and necessary administrative support information. The detailed plans are developed by the command charged with the execution of the specific operation.

Aircraft requirements and the availability of aircraft must be determined at the earliest practicable time to include communication security measures to be observed.

b. Plans for airmobile operations are normally developed at lower echelons than for airborne operations. Overall planning is normally accomplished at division or corps level.

c. In airborne operations inter-Service coordination must provide a clear understanding of marshalling procedures, the concept of operations in the objective area, and supply by air. Coordination between Army forces and units providing the airlift must be initiated early in the planning phase and must be continuous.

221. The Tactical Plan

a. Planning is conducted in a backward sequence starting with mission analysis. The tactical plan forms the basis for all other plans. The assigned mission is translated into objectives whose early seizure, destruction, or neutralization are required to accomplish the mission.

b. In an airborne operation there may be multiple airheads in the objective area. In selecting the airhead or objective area, consideration is given to enemy capabilities, particularly his nuclear capability and the probability of its use.

c. The tactical plan includes a determination of the strength, composition and deployment of the forces required to accomplish early seizure and defense of the airhead. The tactical plan must be logistically feasible.

d. Based on the tactical plan, the force commander prescribes priority of movement and phasing of units into the objective area.

222. The Landing Plan

Based on the requirements of the tactical plan, the landing plan is developed to indicate the sequence, time, and place of arrival of troops and materiel in the objective area. Landing areas should be of sufficient number and size to accommodate the forces involved, reduce their vulnerability, and position them to implement the tactical plan.

223. Air Movement Plan

a. The air movement plan phases the force into the objective area. The plan prescribes the use and allocation of aircraft and related facilities to meet the requirements of the force commander within technical and tactical limitations.

b. In airborne operations, the air movement plan is prepared jointly by the Army and Air Force elements of the joint airborne force and is approved by the joint force commander.

224. The Marshalling Plan

a. The marshalling plan in airborne operations or loading plan in airmobile operations is based on the air movement plan.

b. In airborne operations the marshalling plan schedules the movement of units of the force to departure airfields or air-landing facilities. The plan delineates responsibility for providing facilities and services while units are marshalling in dispersed areas and includes plans for loading aircraft and briefing troops for the forthcoming operations.

c. In airmobile operations the amount of detail required in the loading plan varies with the size and composition of the airmobile force, the experience of participating personnel, the availability of suitable loading areas, and the complexity of the air movement plan.

225. Subsequent Operation Planning

Plans should include the action to be taken after seizure of the initial objective. Although many airmobile operations are of relatively short duration and terminate in an early link-up or relift, major airborne operations may phase troops and supplies into the objective area to support operations out of the airhead in accordance with the overall mission of the force.

226. The Assault

Airborne and airmobile operations are normally initiated by an assault phase during which units are landed under decentralized control to seize initial objectives, interdict areas, and prepare for the landing of followup elements. Depending on the terrain and the enemy situation, the assault in airborne operations is normally conducted by airborne units delivered into the objective area by parachute and assault aircraft; in airmobile operations, air-landed elements may be preceded by small forces landing by parachute or combat air vehicles. Normally, air-landings, as opposed to assault landings, are conducted in protected areas or areas free of the enemy.

227. Seizure and Organization of Objectives

The seizure of assault objectives, organization of the airhead, offensive operations in the objective area, and establishment of security are initiated during the early part of the assault phase to capitalize on the elements of surprise and shock action inherent in the air-delivered assault. The degree to which the airhead is occupied and organized for defense is determined by the mission, the type airborne or airmobile operation being conducted, enemy capabilities, and the characteristics of the area of operations. The

buildup within the airhead proceeds concurrently with its seizure and organization. Both airmobile and airborne operations may be entirely offensive in nature, and may require no seizure or defense of an airhead. The successful conduct of purely offensive operations requires a high degree of both air and ground mobility.

228. Dispositions Within Airheads

a. Airborne forces within an airhead normally are disposed for defense of key terrain and are dispersed to minimize vulnerability to nuclear attack. Multiple defensive positions are organized covering the main routes of approach. Avenues of approach and gaps between defensive positions are covered by nuclear and other fires, small ground and aerial combat detachments, and antitank weapons. Natural obstacles are exploited in the defense. Air reconnaissance and airmobile reconnaissance patrols provide information of enemy operations. Reserves are held in readiness in central locations to facilitate their rapid movement within the airhead. The reserve may be reinforced by units from forces not heavily engaged.

b. Missile and air support are used to execute long-range interdiction missions to destroy or delay enemy reinforcements. Air support immediately responsive to the requirements of the force must be provided. Reconnaissance air support is employed to detect and report enemy activities which may affect the forces in the airhead.

229. Withdrawal

Withdrawal from an objective area may be preplanned or may be forced by the enemy; a forced withdrawal is a difficult operation. The force may be withdrawn by air, land, sea, or a combination thereof. Alternate plans for withdrawal must be prepared before initiating the operation.

230. Link-Up

a. When a link-up between airborne forces and other friendly forces is planned, detailed coordination between the forces is essential. Provision must be made for link-up points, command and staff liaison, assumption of command, a system of mutual recognition and identification, early radio contact to establish forward positions, fire coordination measures, and actions following link-up.

b. Command of the Army element of an airborne force normally will pass to the senior commander in whose zone it is operating when he is able to control, suport, or influence the action of the airborne force.

Section VI. AIR TRAFFIC REGULATION

231. Control

The joint force commander controls all friendly aircraft operating within his area through a joint air traffic control agency established within the objective area. In airmobile operations, air traffic regulation remains with the commander responsible for the operation.

232. Regulation

Air traffic regulation procedures, suitable for all flight conditions, should be developed by the joint force commander early in the planning phase of each airborne operation. Procedures should be developed in coordination with the Army, Air Force, and Navy commanders concerned and should permit maximum freedom of operation of all aircraft consistent with safety and other requirements.