

of war, the AAF did not record now for the American people the lessons learned both before and during this period which have required and also made possible the air superiority which has been established. It is impossible to set forth all of these lessons in detail. New ones are being learned every day. But certain basic principles underlying our air power needs and on which our air superiority rests must be known and understood by every American. It is on these principles that the AAF's planning and operations have been conducted in this war and its responsibilities will be sustained until the day of Axis collapse. It is also in full recognition and application of these principals in a fast changing world that the long-time security of our country and the peace of the world must rest.

1. Air power is the weapon with which the aggressor in this war first struck and with which future aggressors will strike. The range, speed, and destructive capacity of a powerful air force is such that, given sufficient air superiority, the aggressor can by sudden action disrupt the life of the attacked nation and make difficult the taking of defense measures. Moreover, in this field which the present war has shown to be subject to revolutionary advances, we can only dimly visualize the possibilities of such sudden action in the future.

2. We must recognize that the only certain protection against such aggression is the ability to meet and overcome it before the aggressor can strike the first blow. In the past such blows were waterborne; traditional naval power was our first line of defense. From now on successful aggression must come by air. The defense lies in adequate air power with all its manifestations, and our first line of defense must be in the air.

3. The foregoing principles can mean only one thing to the United States. In two world wars, the aggressor has moved first against other peace-loving nations, hoping that the United States would remain aloof, or that other nations could be defeated before this country's power on land, sea, and air could be brought to bear against him. Luckily, in each war there has been time for the mobilization of such power, and the United States has been the determining factor in the defense of civilization. The lesson is too plain for the next aggressor to miss: The United States will be his first target. There will be no opportunity for our gradual mobilization—no chance to rely on the efforts of others.

It is of the utmost importance that our first line of defense, in the air, must be ably manned and fully supplied with modern equipment. We must be able to provide time for other parts of the national defense machine to mobilize and go into high gear. The United States must be the world's first power in military aviation.

4. Air power and air supremacy are terms which require careful definition. Their full significance must be understood by the American people. The Nation must also understand that, due to the revolutionary developments of science and the world's inventive genius, they may have entirely different meanings for successive generations or within any short span of years. In 1918 air power was built around the Spad, the Handley Page, the Gotha, and the Caproni. In 1944 Allied air power was built around the Spitfire, the P-51, the P-47, the Hurricane, the P-38, the C-47, the B-17, the Lancaster, the B-24, the B-29, and others. In 1945 or 1946 it may mean other as yet undisclosed types. In 1952 it may mean far different equipment with destructive power and accuracy of which man has not yet dreamed.

5. Thus, the first essential of the air power necessary for our

national security is preeminence in research. The imagination and inventive genius of our people in industry, in the universities, in the armed services, and throughout the Nation, must have free play, incentive, and every encouragement. American air superiority in this war has resulted in large measure from the mobilization and constant application of our scientific resources.

Comprehensive research, both within and without the air services, must be expressed in inclusive and continuing programs. Only in this way can our air forces reflect at all times the rapid advances in aerodynamics, physics, chemistry, electronics, the sciences basic to rockets, jet propulsion, radar, and revolutionary developments as yet unconceived.

6. It must also be fully understood that scientific research and development will not of themselves keep the United States in the lead. Scientific and tactical advances must go forward hand in hand and be reflected in the aircraft, armament, equipment, and weapons actually being used by our air forces. All of our present aircraft, our power plants, and many items of essential equipment are in a sense "obsolete" in that they are or may shortly be surpassed in utility or performance by other equipment in the blueprint or mock-up stage, but not yet in production. Unless our air forces can continually improve the equipment in use—we will find ourselves subject to attack by others with no answer except to "take it on the chin" until we have created modern equipment through overtime methods. That is a very expensive practice.

The American people must never again assume as after the last war and as the French did up to the break-through in 1940—that numbers of aircraft and quantities of equipment make an air force. A second-rate air force is worse than none because it gives rise to a false sense of security—which bombs may quickly demolish.

7. Even an up-to-date air force in being may not constitute air power. Preeminence in the air implies maximum ability to maintain and expand existing establishments. There must be a strong and healthy aviation industry, building thoroughly modern aircraft and equipment, and developing, testing, and experimenting with advanced designs for tomorrow. Segments of industry must be capable of and ready for rapid conversion to quantity production, and certain Government-owned plants and production equipment not subject to rapid obsolescence should be kept in stand-by as a war reserve against the potential aggressor.

The importance of a progressive aviation industry cannot be overstated. One way to keep it progressive after final victory is promptly to sell, salvage, or scrap excess or obsolete planes so that they will not hang over the Air Force and the aviation industry retarding development. This happened after the last war, but must not happen again. The AAF is already taking steps to meet this situation by declaring planes and equipment surplus as they are currently worn out or no longer useful, and turning them over to the Surplus Property Board for appropriate disposal.

8. Air power must be employed from large, fully equipped, strategically located bases. Our air forces must be able to meet and overpower the aggressor's air threat as near as possible to its source. It is obvious that air operations are already global. Our air forces have learned in the stress of war to operate in all climates and under all conditions.

These lessons must not be forgotten. Air power in the future will depend on the possession by our air forces of the knowledge and experience required for immediate and continuing world-wide operation.