present be obviated only by co-ordinated planning between the air and land forces. If this principle were lost sight of, there would be a serious risk of the misuse of heavy bombers in a tactical role, and bombing on a large scale might be expended in profitless destruction which would add little, if anything, to the progress of a land battle. From the operational point of view, the need for unified planning stands out all the more prominently when it is realised that the strategical forces which contributed so much and so directly to the land battle in France were in themselves equivalent in fire power to vast ground forces. It is only through integrated ground and air planning that the air forces can serve usefully in a tactical role.

533. Although the tactical operations in which heavy bombers were used in Normandy were initiated by the ground force commander, there may also be times when the air force commander with his better appreciation of the effects which air effort can achieve, might in future suggest to the Army rich opportunities for a combined air and land operation.

## Command and Control.

534. The relationship of Air Forces to the Army and Naval Forces and to the Supreme Command from the point of view of Command and Control is well worth touching upon in view of the great importance of this question in future Combined Operations of the scope of "Overlord". It raises interesting though naturally somewhat controversial problems.

535. In the early days of planning and preparation for Operation "Overlord" there was a Commander-in-Chief of all Air Forces and a Commander-in-Chief of all Naval Forces each having the necessary integrated operational staffs and Headquarters but separate from those of the allied operational forces. The Commanders-in-Chief and their staffs were also service advisers to COSSAC and later to yourself as Supreme Commander. The organisation was, however, different in respect of the land forces, the direction and control of these operations in the field being undertaken by the Army staff of COSSAC itself.

536. In February, 1944, you appointed the Commander-in-Chief, 21st Army Group to coordinate the planning and execution for the assault for both the United States and British Army Groups and thereby raised the Commander-in-Chief, 21st Army Group to the level of Commander-in-Chief of the Land Forces. He naturally used his own staff for both these functions but the Army staff of Supreme Headquarters Allied Expeditionary Force still continued to exercise direction of the land operations from the point of view of general policy and to co-ordinate the activities of all three Services on the high level.

537. The Air Commander-in-Chief and the staff of Allied Expeditionary Air Force were, in consequence, required to work on two levels with two large Army staffs. On the one hand, they had, as your Air advisers, to contribute to the directives and numerous operational and administrative memoranda produced by Supreme Headquarters Allied Expeditionary Force and on the other, and this time on the Commanders-in-Chief operational level to plan,

prepare for and execute the assault in coordination with 21st Army Group. Further, it was inevitable in these circumstances that the closest contact had also to be maintained with the Commanding General of the American land forces.

538. This arrangement severely taxed the staffs of Allied Expeditionary Air Force and inevitably led to overlapping and complications and at times interference with the planning of the tactical air forces and their opposite Army and Navy formations. The two staffs were, in fact, the same as those with which Allied Expeditionary Air Force itself was, at the same time, planning on a high level.

539. In the post assault period when 21st Army Group reverted to its normal position the situation was greatly eased but certain difficulties still remained in that the Army staff at Supreme Headquarters Allied Expeditionary Force retained a dual function in certain respects.

540. In spite of its inherent difficulties the organisation of Command and Control as developed through the various phases, undoubtedly worked, but I suggest that the creation of a separate Commander-in-Chief of all Allied Land Forces on the level with, and having similar functions to, the Air and Naval Commanders-in-Chief would have facilitated the execution of the responsibilities of the Air Commander-in-Chief and the Allied Air Force commanders, and no doubt also of the other service Commanders-in-Chief and staffs.

541. The geographical relationship of the Commanders-in-Chief and staffs of the Air, Army and Naval forces and the Supreme Commander and his Headquarters also has a direct bearing on the question of Command and Control.

542. In the first period of planning the Commanders-in-Chief and appropriate portions of their staffs, were housed mainly in one building in London and this arrangement naturally worked excellently.

543. Shortly after the formation of Supreme Headquarters Allied Expeditionary Force itself, part of its general staff moved out of London to Bushy Park. This inevitably led to a splitting and to some extent further duplication of my staff, part of which had to move to Bushy Park, part had to remain at Norfolk House to plan with ANCXF and the remainder of SHAEF, and part had to remain at Stanmore for the planning and control of preliminary air operations for "Neptune"—the latter being a function and responsibility which the Army and Naval Commanders-in-Chief had not to undertake prior to the assault. I was forced to keep my main staff at Stanmore if only because of communication facilities which were adequate for the control of air operations at no other Headquarters or centre.

544. A further dispersal of the Combined and Joint Planners of the operational staff resulted from the necessity to work with the Headquarters staff of 21st Army Group, whose location was at St. Pauls School, for the detailed planning of the assault.

545. The situation became even more complicated from the air point of view when, for the execution of the initial stages of the invasion, 21st Army Group and ANCXF, with a