

**PROCEEDINGS  
OF THE ROYAL AIR FORCE HISTORICAL SOCIETY**

**Issue No 4 – September 1988**

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## FUTURE PROGRAMME

All the following events will be held at the  
Royal Aeronautical Society, 4, Hamilton Place, London, W.1.

**31 October 1988.** 1730 for 1800. Ending 2000.

RAF support for clandestine operations in North-West Europe.

*Setting the scene* – Professor Michael Foot, formerly professor of modern history at Manchester University, and author of *SOE in France*.

*The build-up of RAF operations* – W/C Ron Hockley, formerly Officer Commanding No 138 Squadron.

*Parachute operations* – ACM Sir Lewis Hodges, formerly Officer Commanding No 161 Squadron.

*Pick-up operations* – G/C Hugh Verity, formerly Officer Commanding Lysander Flight and author of *We landed by moonlight*.

*The view from the field* – Tony Brooks, who worked first with a French escape line and later with SOE in central and southern France.

The following information is provisional at this stage and will be updated and expanded in Proceedings 5.

**13 March, 1989.** 1730 for 1800. Ending 2000.

Annual General Meeting.

Portal, Harris and the Bomber Offensive.

**14 June, 1989.** 1430 for 1500. Ending 1900.

The Berlin Airlift.

## EDITOR'S NOTES

### Membership Secretary

Group Captain Neubroch has retired from the post of Membership Secretary due to the pressure of other commitments. Fortunately, Peter Montgomery has stepped into the breach. Accordingly, correspondence on membership matters should be addressed to:-

Commander P.O. Montgomery VRD and Bar, RNR  
28 Shirley Drive  
WORTHING, West Sussex,  
BN14 9AY

### Vacancy for Editor

This post will become vacant at the next Annual General Meeting (or earlier by arrangement). It is important that a successor be found without delay, in order to ensure the continued production of Proceedings. Anyone who would like further details should contact:-

P C Rolfe  
9 Westfields  
ST. ALBANS, Herts  
AL3 4LR                      Tel: 0727 55542

### Membership

It is pleasing to note that a number of members have responded to the Chairman's message in Proceedings 3 and have renewed their membership. The current membership stands at 438 and the cost of membership remains at £10 per annum.

### Charitable status

The Society has completed another of its formative stages by becoming registered, on 25th April 1988, as a charity – No 299029. The Treasurer is now negotiating with the Inland Revenue to obtain repayment of the income tax which is deemed to have been deducted from covenanted subscriptions before payment. **Can we appeal again** to members who have not covenanted their subscriptions to do so forthwith and thus provide the Society with much-needed funds at no cost to themselves?

## **RAF Banff Strike Wing Memorial Trust**

This Trust hopes to erect a memorial to those who died serving with the Banff Strike Wing in World War II. Further details may be obtained from:-

Group Captain A A McIntosh,  
14 Regis Court  
Barnton  
EDINBURGH, EH4 6RG

## **The history of the Royal Australian Air Force**

Mr C D Coulthard-Clark MA has been commissioned to produce a history of the RAAF from its inception in 1921 to the start of World War II.

He is aware of the records held in the U.K. by the P.R.O., A .H.B., and Hendon Museum, but is anxious to know whether there are any other significant holdings of records, especially collections of private papers, which might be of use in this work. If any reader is able to help, the address to write to is:-

C D Coulthard-Clark Esq MA  
Chief of the Air Staff Historian  
Department of Defence (Air Force Office)  
Russell Offices  
CANBERRA, ACT 2600  
Australia

## **United Kingdom Radar**

Mr L A Thomas is researching the history of UK radar and is presently working on the period 1955-58. He would be grateful to hear from anybody who has any knowledge of CEW, GCI and CHEL sites on the west coast of England, Wales and Scotland. If you can help please write to:-

L A Thomas Esq  
267 Peniel Green Road  
Llansamlet  
SWANSEA, SA7 9BJ

## **Spitfire prints for sale**

A limited number of copies of a colour print of the first flight of the Supermarine Spitfire has been donated to the Society. The print is 17½" by 12¼" in size and was commissioned by Vickers Design and Projects (England) on the occasion of the 50th anniversary of the first Spitfire flight on 5 March 1936.

The prints will be on sale to members at the meeting on 31 October at £1 each. UK members who cannot be at the meeting may obtain copies by post from the Membership Secretary for £2 (to include postage and packing). The price to overseas members is £2.50 in view of the additional postage costs.

Members ordering by post should pay by cheque, in sterling currency, made out to 'The Royal Air Force Historical Society'. Overseas members should be aware that the cost of converting foreign currency cheques exceeds the cost of the print!

## **Print style**

Thanks go to those members who have written on this point. With the help of one or two donations we have been able to revert to the original print style in this issue. The Committee is most grateful to those who have helped in this way. The style of Proceedings 5 will depend upon the foreseeable state of the Society's finances when going to press early in 1989. As new subscriptions are due on 1 January 1989 it will help considerably in this context if subscriptions are renewed promptly. Please bear in mind that there is no distinguishable difference between the intention to renew and a lapsed membership!

## **Address by Cecil James on 14 March 1988**

In the course of his introductory remarks, the Chairman for the evening, Air Chief Marshal Sir David Lee said:-

‘... I was Secretary to the Chiefs of Staff during part of the period we are considering this evening and relations between the Chiefs of Staff and Mr Sandys were, not to put too fine a point on it, uneasy. He did not like having to deal with a number of important, powerful, military officers. He wanted to talk to one person and it was simply the Chief of the Defence Staff. The three Service Chiefs still had immense responsibilities and he did not like having to deal with this very powerful committee and so, during that period, there was a bit of wishful thinking and a whispering campaign was going around the corridors of power which said the time of Sandys was running out!

Now we are very fortunate this evening to be able to have this talk from Mr Cecil James whom I have known personally for something like thirty years or more. He has had a long and distinguished career in the Civil Service, most if not all of which has been in connection with the Royal Air Force, either in the old Air Ministry, the Ministry of Defence, or in the Far East. Since retiring, Cecil James has written a book which is entitled *Defence Policy and the Royal Air Force 1956-1963*. Unfortunately for most of us it is a classified document and presumably will remain so for some time to come but I mention it because it does illustrate what a very deep knowledge of this particular period in Defence Policy he has, and I think we can now look forward to a most interesting and accurate account of the very controversial events of those days. Without further ado, may I introduce Mr Cecil James.’

### **THE IMPACT OF THE SANDYS DEFENCE POLICY ON THE ROYAL AIR FORCE by T C G James CMG MA**

No Defence White Paper has been more eagerly awaited than that which Mr Duncan Sandys presented to Parliament in April 1957. The threat from nuclear weapons, which the White Paper described in apocalyptic terms yet with an insistence that these nevertheless offered the best hope of avoiding global war, led to intense public



debate on the morality as well as the merits of what was seen as a new deterrent policy. How far this policy was new is one of our themes. What was certainly new was the intention to abolish National Service, which meant that the manpower strength of the Services would be virtually halved over the next five years. This was not all that significant for the Royal Navy; on the other hand, the future role of the Navy was less than clearly defined in the White Paper. The army faced major reductions in its fighting strength and thus the difficult task of disbanding or amalgamating units with long and proud histories. Its commitments in Europe and outside remained; but it was going to have less with which to meet them. The Royal Air Force was the most curiously placed. On the face of it, it was not undervalued. The Prime Minister, Sir Anthony Eden, who had just departed the scene, had appointed Sir William Dickson the first Chairman of the Chiefs of Staff Committee because, he said, 'the RAF must play an increasingly important part in our military scheme of things in future.' The 1957 White Paper confirmed the RAF as the custodian of the key component of the deterrent policy. Such argument as Ministers allowed themselves was about the size and equipment of the V-bomber force, not about the need for it. On the other hand, the logic of nuclear deterrence, coupled with foreseeable developments of both offensive and defensive missiles, was widely construed as the beginning of the end of the military aeroplane.

So the 1957 White Paper was a major event. But the shadows had been cast before. How far back they had begun to loom is arguable. It is said that a day or two after Sir Winston Churchill returned to office in October 1951 he was being driven along Horseguards Avenue on a Sunday. The massive doors at the north end of what is now the MOD Main Building were shut. Sir Winston glowered at these new, and no doubt expensive, structures and said to his Private Secretary: 'This is what we have come into power to stop, Socialist extravagance.'

Whatever hopes the Services might have had that they would be generously treated by the new government were soon disappointed. The chill wind of economy blew from the beginning. We certainly felt it in the Air Ministry where Lord de L'Isle and Dudley took over as Secretary of State. One distinguished air marshal, very

distinguished indeed, is said to have thumped the table and said that he was not going to be told how to run the Air Force by a guardee peer, only to be reminded by the Permanent Under-Secretary that the guardee peer was also a chartered accountant. The need to achieve a better match between defence expenditure and economic capabilities was recognised in successive Defence White Papers up to and including that of 1956. The 1956 White Paper came out a few months after the appointment of a new Minister of Defence, Sir Walter Monckton, whose brief according to his biographer 'was to devise a method by which the figure of £1,500M spent annually on defence could be substantially reduced.' We can regard this White Paper as the beginning of a political process which led directly to the 1957 White Paper and which had important consequences for NATO as well as for British policy. It set out the roles of the Services like this:-

- a. They must make a contribution to the Allied deterrent commensurate with our standing as a World Power. This means not only building up and maintaining a nuclear stockpile and the means of delivery, but also contributing to the maintenance of NATO's defensive effort by land, sea and air.
- b. They must play their part in the Cold War. By their mere presence they can contribute to the stability of the free world and the security of overseas territories whose peaceful development may be threatened by subversion whether overtly Communist or masquerading as nationalism.
- c. They must be capable of dealing with outbreaks of limited war should they occur.
- d. They must also be capable of playing their part effectively in global war should it break out. They will have to include support to the civil authorities.

It is clear from the White Paper and elsewhere that these roles were to be understood as an order of priority. It is also clear that preparations against a global war, including substantial investment in civil defence, even though these were the lowest priority were having an important and expensive influence on the Services' programmes. This is not to say that separate ranges of equipment were regarded as

necessary for the separate roles; some capabilities were obviously relevant to more than one role. But it was no less obvious to the Ministers who mattered most – the Prime Minister, the Chancellor (Mr Macmillan) and the Minister of Defence – that the budgetary and economic implications, if the Services continued at anything like their present size and shape, were unacceptable. Defence was getting too big a share – of money, production, scientists and engineers, and manpower in general. A key date in this pre-Sandys period is 20 March 1956 when Macmillan and Monckton sent a joint minute to the Prime Minister. They expressed their concern at expenditure on defence measures that were ‘little more than a facade’. They called for ‘a reappraisal at the highest level of the whole basis on which our defence policy should rest.’ They posed a number of basic questions, the thrust of which was to minimise expenditure on fighting a major war in favour of a policy of nuclear deterrence. As the National Service Act would expire in 1958 there was no time to be lost.

Ministers eventually got down to the task in June when they were presented with a far-reaching memorandum on ‘The Future of the United Kingdom in World Affairs’, to quote its title: not one, we must note, produced by the Chiefs of Staff even though it had been triggered by doubts about defence policy. It was the work of a small group of senior officials, commissioned by Sir Norman Brook, the Secretary of the Cabinet. He seems not to have told the Chiefs about it. At any rate, Mountbatten wrote to Monckton some time after the group had begun its work. He said the Chiefs had heard that ‘some form of committee is being set up to advise the Government on the general policy to be followed in future ... such a wide survey of policy must include the defence aspect and we are gravely disturbed that our constitutional responsibilities to advise the Government are being by-passed.’ Monckton gave him very little change: Ministers alone would consider broad aspects of policy before more detailed areas such as defence were addressed. Norman Brook might have given him even less change. Even on the broader issues of defence, let alone national policy, he was wary of leaving the initiative to the Chiefs of Staff. When a Future Policy Committee was set up a year or so later, Brook deliberately designed its framework of studies in

such a way that, as he put it, ‘the Chiefs of Staff could not take the bone away and gnaw it in a corner by themselves.’

Copies of the report by Brook’s group of officials landed on the desks of the Chiefs of Staff on 6 June. It was scarcely a coincidence that the first meeting of the Policy Review Committee that the Prime Minister had set up, in response to the pressure from Macmillan and Monckton, was held that same day. The Brook group paper was the only one considered by the committee; and the Chiefs of Staff were not present. It all seems to have been carefully contrived to ensure that it would be Ministers only who had the first gnaw at the bone.

Not that the bone was all that appetising. The memorandum was a notably perceptive appreciation of the national condition. It identified the two main factors that called for a thoroughgoing review of policy and identified both the policy objectives and a programme of studies designed to produce answers to questions of defence as well as the civil sector. The two factors were put like this:-

a. The external situation confronting us has changed. The hydrogen bomb has transformed the military situation. It has made full-scale war with Russia or China unlikely. And conventional forces, though still of great importance in some situations, have become a relatively less important factor in world affairs. The Russians have recognised this change, and they are adapting their actions to it. While their objectives may remain unaltered their methods of attaining them are changing. We must modify our own tactics accordingly.

b. It is clear that ever since the end of the war we have tried to do too much – with the result that we have only rarely been free from the danger of economic crisis. This provides no stable basis for policy in any field. Unless we make substantial reductions in the Government’s claims on the national economy we shall endanger our capacity to play an effective role in world affairs. Only thus shall we be able to find the means to place our economy on a stable basis and to counter the new forms of attack with which we are being confronted.

Of the defence imperatives in the memorandum, first and foremost was the need to apply the logic of nuclear deterrence to

NATO policy, which meant that the British conventional forces in Europe should and could be substantially reduced. The overseas situation outside NATO called for different treatment but there too garrison forces and contributions to the Baghdad Pact and SEATO could be reduced; improved air transport was the key to economy. Another emphasis we should note was on home defence; was the United Kingdom defensible in any real sense? At a meeting of senior Ministers even before the Policy Review began Mr Macmillan said that the sensible, though difficult, decision for the government was the abolition of Fighter Command. This could not be done immediately but in his view the Hunter and Javelin should be the last aircraft for UK defence; the case for a more advanced fighter should rest on overseas needs and those of the Navy.

The Prime Minister was anxious to move quickly. Numerous papers were commissioned by the Policy Review Committee, on all aspects of defence as well as on the economic situation, with the aim of completing its work by the end of July. The Committee was hard at it in June and July; nine meetings in some seven weeks. It was due to hold its tenth meeting on 27 July but on the 26th Nasser announced the nationalisation of the Suez Canal and the meeting was cancelled. The Policy Review Committee did not meet again until December. So Suez had two consequences affecting the 1956 Review. It meant that much of the earlier impetus was lost and that the case for radically revising defence policy was even stronger. But the main issues were identified.

The first was the need to persuade NATO Allies of the overriding importance of nuclear deterrence, which called for a new NATO strategic concept: 'one' said the Brook official group, 'that can be interpreted in terms of lower but militarily definable force levels, and a planned and coherent Allied effort ... it might perhaps be based mainly on the idea of a 'plate-glass window' or 'trip-wire'.' Is then this memorandum the origin of 'trip-wire' both the term and the strategy? Whether or not this is so, the fact is that a diplomatic offensive was launched in the last few months of 1956 to persuade first the United States and Canada and then the other NATO Allies to adopt a new strategic concept.

And it was successful, up to a point. A new NATO directive was agreed at the NATO Council in December 1956, ambivalent in some

respects, not wholly accepted in all its possible implications, positively disliked by SACEUR and SACLANT ('as of now I hate the British', said General Gruenther on one occasion), but nevertheless providing British Ministers with the rationale they needed for making major cuts in BAOR and 2TAF. It was to provide later a rationale for a determined attack on Air Staff plans for air defence of the UK. Even the British nuclear deterrent force was not to be sacrosanct. Sign, visible though it was, of the government's convictions, it was already in some danger. Macmillan, as Chancellor, thought it larger than necessary. The current plan was for a front-line of some 200 V-bombers; he thought 120, or even 100, would be enough. And neither Mountbatten nor Sir Gerald Templar, the CIGS, were at all convinced by either the concept of the new strategy or its consequences for conventional forces. They thought that the government had got the priorities the wrong way round. The first thing to settle was the size and shape of conventional forces for commitments within and outside Europe; only what might be afforded, after that had been done, should be allotted to nuclear forces. Moreover, they were concerned about the risk of conventional war in Europe once Russia had achieved nuclear parity with the West. CAS, Sir Dermot Boyle, totally disagreed and this disagreement among the Chiefs had to be exposed to the Defence Committee during the 1956 Policy Review. The view of CAS prevailed, as it did when the issue was again put to ministers in 1957 and 1958. Unfortunately, to win is not necessarily to be popular. Teacher's pet tends to get beaten up in the playground; and I feel bound to give you my personal impression that the extremely rough ride the RAF was to be given during the rest of the fifties can be ascribed in part to a feeling in some quarters that the junior Service had been getting too big a share of the cake.

The last question before we get on to the impact of the Sandys policy itself, is – how did the Air Council respond to the turbulence of the last six months of 1956? This has to be done to reach a judgement on how far Mr Sandys was innovator as well as architect. The Air Staff warmly welcomed the memorandum of the Brook official group, especially the case it made for a new strategic concept. The Air Council was in fact ahead of the game; it had put in hand a study of the future Air Force early in 1956. This was

discussed by the Air Council in June 1956. It might well have startled the Air Force at large. As compared with the existing plan for a V-bomber front-line of 200, the study saw this falling to 100 as the BLUE STREAK missile came into service and did not rule out eventual replacement of bombers by ballistic missiles. Fighter Command would come down from currently some 500 aircraft to 200 in phase with the introduction of SAM missiles, and after the middle sixties SAM would be the predominant weapon for air defence. The Command was perceived as primarily a contribution to the nuclear deterrent. But another fighter beyond the Lightning was envisaged, as indeed was a successor to the V-bombers to ensure against slippage in the ballistic missile programme. No role was allotted to the air defence fighter in Europe. Nothing emphasises more clearly the extent to which the Air Council was convinced that most of the eggs should go into the deterrent basket than what was in mind for 2TAF: a cut of two-thirds in its existing strength of some 400 aircraft, with the residue entirely devoted to strike and reconnaissance: no fighters, no helicopters for army support. This disbelief in preparations for a serious conventional phase was reflected as well in the outline plan for Coastal Command, which the Air Council saw coming down from some 70 aircraft to 36 – six squadrons. Overseas, Middle East Air Force would remain at its present strength but Far East Air Force would be little more than a token presence. Reinforcement from the UK would be part of the answer if there was serious trouble overseas; another part – interesting in view of later developments – would be a mobile striking force based on carriers. The Secretary of State for Air, Nigel Birch, is recorded as expressing ‘considerable apprehensions’ at this particular notion. Logically, this view of policy for the Air Force overseas demanded a bigger Transport Command. The first orders for the Britannia had been placed in January 1956 and a substantial force was planned. The last point to stress, and we must remember that all this was before the 1956 Policy Review Committee began its work, was that the Air Council assumed that National Service would be abolished.

In broad terms, and in many details as well, these Air Council discussions in the summer of 1956 were in harmony with what finally emerged at the end of the year from deliberations of the

Policy Review Committee. Mr Antony Head (who had replaced Sir Walter Monckton) proposed as follows:-

- Fighter Command and 2TAF to be halved.
- Bomber Command restricted to 184 V-bombers.
- What was described as a 'small force of MR aircraft in Coastal Command or overseas'.
- A stronger Transport Command.
- Small tactical air forces as contributions to the Baghdad Pact and SEATO.
- A smaller fleet, with no more than two fleet carriers and a light carrier; the South Atlantic, American and West Indies stations abandoned.
- A smaller army, with BAOR coming down from over 80,000 to 55,000 and possibly less.

The manpower allocations were 90,000 to the Navy, 200,000 to the Army, 155,000 to the RAF: some 450,000 in all, with National Service assumed to continue on the basis – so Antony Head proposed – of a ballot. All this was sufficiently accepted for Ministers to tell their American colleagues and SACEUR and SACLANT of what they had in mind. But no final commitment had been made, certainly none to Parliament and the general public, before Sir Anthony Eden resigned. Eden himself had wanted to get rid of National Service; and much work had been done during 1956 on the maximum strength of forces that could be sustained by all-regular recruitment. About 350,000 seemed to be the best guess, compared with the 450,000 in Head's final proposals.

Comprehensive national service produced larger drafts than would be required to meet this gap of 100,000. So the question of a selective draft had to be addressed. The problem for Eden was that he saw great political difficulty in providing a method which the country at large would regard as fair. A Premium Bond Lottery was one thing; a ballot to decide who should or should not be called up was a different proposition.

National Service was thus the first issue that had to be settled when Mr Macmillan became Prime Minister in January 1957; to



embark on size and shape exercises for the front-line strengths of the Services would otherwise be pointless. Amongst the first actions of Mr Macmillan, having selected Mr Sandys as his Minister of Defence, was to give him a directive requiring him as his first task 'to formulate in the light of present strategic needs a new defence policy which will secure a substantial reduction in expenditure and manpower.'

What we shall now be dealing with is, first, the National Service question; secondly, strategic deterrence and the associated force plans; air defence; Coastal Command; and finally the air transport force against the background of the government's attitude to overseas commitments outside the NATO area. There will not be time to deal with the RAF's administrative problems, severe though they were.

Defence White Papers are usually published in February; the Sandys White Paper came out in April. Difficulties over National Service explain some of the delay. Collectively the Chiefs of Staff believed that the Services would not be able to meet the current commitments to NATO, or maintain adequate garrisons, with manpower of less than 450,000. Mr Sandys was quite unimpressed. The Navy, under the 450,000 scheme, was claiming a four-carrier group force, bigger than Mr Head had proposed. The Army would have to reduce BAOR by one division but it was with at least this kind of reduction in mind that Ministers had painfully negotiated the new NATO policy directive. The Air Force component assumed that 2TAF would be halved in little more than a year but the Air Council itself envisaged further reductions later on. In any case, taking the view as he did that it would take five years to achieve all-regular forces, Mr Sandys reasonably doubted whether there would be any significant difference between a 450,000 force including national servicemen and all-regular and more efficient Services of around 370,000. So, in mid-February he told the Chiefs of Staff to examine the implications of a force of that size. This was a rebuff for the less radical members of the government. Lord Salisbury had submitted a paper to the Cabinet in January advising that a limited National Service intake would be required until at least 1965. I have found no record of it ever being discussed in Cabinet. Indeed, the unhappily strained relations that developed between Mr Sandys and the Chiefs

were as much the result of the way defence business was being conducted as of differences over policy. At what was a crucial meeting of the Defence Committee on 27 February the Chiefs of Staff's memorandum arguing the case for 450,000 manpower was not presented; the Committee at Mr Macmillan's direction considered only the aim of achieving all-regular forces by the end of 1962. After that meeting the Defence Committee, which usually met every two weeks, was not to meet again until July.

There is no doubt that the Chiefs of Staff were deeply disturbed by what seemed to them a failure to use the normal procedures for their relations with and access to Ministers collectively. They continued to maintain that 450,000 was the lowest acceptable strength and they formally represented that a serious constitutional issue would arise if the White Paper gave the impression that the economies were justified on military and strategic grounds and were therefore acceptable to the Chiefs. Yet in the view of the Air Staff the case made for a 450,000 force was itself flawed: 'not a logically concerted paper which first establishes the essential strategic commitments and then estimates the forces needed to meet them.' This reflected a concern that an essentially deterrent policy might not be thought through and applied as rigorously as it should be: misgivings that were not misplaced.

So it was against their advice that the Chiefs were required to structure the Services within manpower of some 380,000: 80,000 to the Navy, 165,000 Army, 135,000 RAF. Compared with the 450,000 figure the Navy would have to reduce from 150 to 130 fighting ships, including three rather than four carrier groups; the Army from 136 to 118 major units. RAF force plans showed little change. The Air Council felt that it had already proposed a minimum force and that it would somehow have to use its reduced manpower more efficiently. They could be excused from thinking that the Air Force was less vulnerable to pressure since their views on the deterrent concept and its implications were similar to those of Mr Sandys. The most vivid expression of that concept is to be found in the 1957 White Paper: 'the overriding consideration in all military planning must be to prevent war rather than prepare for it.' The Chief of the Defence Staff tried to persuade Sandys to leave it out because it was liable to be misunderstood in NATO. Sandys left it in precisely because it was

the crux of the case for cutting back in Europe. His convictions about nuclear deterrence were argued with typical obstinacy, against opposition at home as well as in NATO. He would not be moved on the concept and he must have been disappointed that he was not wholly successful in persuading others, particularly in NATO, to attach less importance to conventional defences. This was why the first tranche of BAOR reductions was no more than 20,000; a second and later reduction brought the force down to 55,000. It has stayed there or thereabouts although the 1957 intention was to bring it down to 45,000, possibly even less: 2TAF, in contrast, was very rapidly reduced: to just over two hundred aircraft by March 1958. The Air Council's plan to come down to a smaller strike/recce force was scheduled for completion in 1961. That in the event a fighter component was retained, although the intention to remove it was declared to NATO in 1958, is a story that lies outside the period. None of this was at all easy to negotiate; German Ministers were particularly concerned at the reductions. Sir Frank Roberts, the Ambassador to NATO, put his finger on the root difficulty in his annual report for 1957: 'NATO is mainly interested in our presence in Europe and not so much in our responsibilities in the Middle East or Asia, nor even in our possession of the major deterrent ... the United States contribution to the deterrent is generally considered to be enough for the Alliance as a whole.' Sandys was unshaken. He delivered a stern lecture to the NATO Council in December 1958. Britain was spending more on defence than any of the European allies, partly because of its commitments outside Europe. These, however, had the same purpose as NATO itself in containing Russia. 'It is essential', he said, 'to ensure that our flank in the Middle East and beyond is not turned.' As for the ultimate sanction, this would remain valid even when Soviet nuclear capabilities matched those of the West. But there were two conditions: the deterrent should be so organised that it could not be destroyed in a first strike, and the Russians should not come to think that the West no longer had the courage to use it. And the British were determined to be involved; he said that most of the aircraft in an initial retaliation would be British.

The V-bomber force was, it seemed, to have priority; and it did, despite the protests of Mountbatten and Templer. Yet Mr Sandys could not wholly defend the frontline of 184 aircraft which was

called for in the latest Air Council plans. What he secured at a meeting of the Defence Committee in August 1957 was a frontline of 144, most of which – 102 – would be Mk 2 Vulcans and Victors. The Air Staff were not too disappointed. The Mk 2 V-bombers were the crucial element. With BLUE STEEL Mk 1 already under development, to be succeeded by the much more capable Mk 2, a credible airborne deterrent could be poised until well into the 1960s. Moreover, by 1957 the advent of a missile component in the deterrent had come much closer. Whereas nobody expected the British BLUE STREAK to be in service until some time in the '60s, the American Thor was just over the horizon.

The possibility of deploying Thor in Britain had emerged in 1956. Ministers were in favour from the outset; the Air Staff were not so convinced, mainly because they thought they were being rushed into accepting what even the Americans regarded as an interim, first-strike weapon and one whose technical provenance left something to be desired. Nevertheless, President Eisenhower and Mr Macmillan reached agreement in principle at the Bermuda Conference in March 1957 and from then on things moved quickly: first to an intergovernmental agreement in February 1958 which settled the number of missiles to be deployed – sixty. A training and deployment programme was successfully completed before the end of the decade; an extraordinary achievement by the two Air Forces and especially by Bomber Command. We have to leave it there. The opportunity to hear much more about the history of the nuclear deterrent will come in next year's Society programme. But a final point: as Thor came closer to deployment the possibility was discussed of substituting it for BLUE STREAK. Give it a British warhead, emplace it underground and the Americans might then give up operational control of the weapon and we would still have an independent deterrent and save the expense of developing BLUE STREAK. The detail of this episode and the history of the demise of BLUE STREAK must be left till another occasion.

A diversified deterrent – manned aircraft with air-to-surface weapons and ballistic missiles – was in prospect. But it was not cheap, particularly if BLUE STREAK remained in the programme and also if what Sandys had told NATO was essential for effective deterrence was taken seriously: the operational credibility of the

deterrent force. Sandys certainly took this seriously, as did Bomber Command; hence the expensive scheme for widespread dispersal airfields, overseas as well as at home, and the quick reaction procedures which Bomber Command perfected and demonstrated in training and exercises. Sandys was determined that the deterrent should be seen to be effective as well as politically independent.

But now to air defence, where his attitude to RAF plans was very different. Nobody, the Air Staff included, was in any doubt that Fighter Command's 1956 strength was insupportable. But even when, as the Air Staff planned, this was reduced to twenty squadrons, plus three overseas, there was formidable opposition on both conceptual and financial grounds. As early as March 1957 Mr Sandys cancelled all work on OR329 – the all-weather interceptor to succeed the Lightning. Not that this meant that the Lightning as a weapon system was unthreatened. Orders for the Lightning Mk 1 had now been placed but it was the Mk 3, with first Firestreak and then RED TOP air-to-air missiles, that the Air Staff had in mind for the twenty-squadron force. Doubts about the extent of investment in UK air defence had been voiced, as you have heard, in 1956. What we can regard as beginning an exhaustive and exhausting review was a minute from Mr Macmillan to Sandys in August 1957: What is the threat over the next ten years, the plans for meeting it and the military arguments on which they are based? – these were his questions.

First, the threat as the Air Staff and the Joint Intelligence Committee assessed it: up to 1960, from nearly 300 Badger medium bombers backed by a large nuclear stockpile: from 1960 a similar weapon to BLUE STEEL Mk 1 would come into service and so would ballistic missiles with the range to reach Britain but probably not with the accuracy to eliminate missile sites. These could well be targets still allotted to bombers. Sometime in the mid-1960s a new Soviet strategic bomber could come into service: quite an aeroplane – combat radius with flight refuelling of 3,500 miles, cruising at 1.7 Mach, 200 mile dash capability of Mach 2 at 60,000 feet. No hard evidence, I suspect: a hypothetical aircraft which I doubt has materialised even now. But a belief in a continuing threat from the manned bomber to the UK-based deterrent forces was one reason for the Air Ministry's persistent defence of a substantial force of air

defence fighters.

Next, the plans for meeting the threat: twenty squadrons, SAM defences – at their peak amounting to 700 launchers, over one hundred with nuclear warheads on a developed Bloodhound Mk 2 – and air-to-air weapons which included the nuclear-tipped Genie to be obtained from the Americans; and, underpinning fighters and missiles, a modernised control and reporting system. A costly programme, estimated to be more in the period from 1957 to 1962 than would be spent on Bomber Command. ‘It can be justified,’ said Mr George Ward the Secretary of State for Air, ‘only if we can show that it makes all the difference to the success of the deterrent.’

And the military arguments: these were as much psychological and political as military. There was a real difficulty. The size of a deterrent force could be quantified by reference to whatever criterion of damage to an aggressor was selected. It was much more difficult to demonstrate that a particular scale of air defence was necessary to implant doubt in an aggressor’s mind about his ability to neutralise the nuclear strike forces. And that was the object: doubt, not effective defence against an actual attack.

It was not until 1960 that the size and equipment of UK air defence was determined, at any rate for the next ten years: five squadrons only and no SAM units. The catalyst at that time was a report by the Joint Planning Staff (JPS): Sir Fred Rosier, who is here this evening, was the JPS Chairman. The views of the JPS were much the same as Mr Sandys had argued in 1957, with support from other Ministers. Mr Watkinson, Mr Sandys’ successor, was at least as determined to economise in air defence. From the beginning of this lengthy debate Mr Sandys doubted whether fighters were needed to protect the V-bomber airfields. He argued that the Soviet Union would not mount an attack against this country until it could simultaneously destroy nuclear bases in the United States. If ever that was possible, it would certainly not be until well into the sixties, and the weapons would be ICBMs to which fighters were irrelevant. As for SAM defences, ministerial opinions oscillated in the late fifties. Sandys himself doubted their value, as he did, and others beside, the practicability of effective ABM defences. Just before one of the numerous Defence Committee meetings at which air defence was on the agenda the *Daily Express* printed an article by Chapman

Pincher which questioned the value of SAM. It was noted in the Air Ministry that he and Mr Sandys had lunched together the previous day. What mattered most to Sandys was V-bomber dispersal and QRA; and BLUE STREAK emplaced underground as well. He continued to argue for BLUE STREAK even after the Air Staff had accepted defeat, and the Chiefs of Staff had unanimously and categorically disowned it as being only a first-strike weapon. This view is arguable but not perhaps tonight.

The Air Ministry fought a good fight for a bigger fighter force than the government was prepared to concede. Closely argued papers were produced on both sides of the debate; rightly so, but what was hard to bear was the absence of what Sir Dermot Boyle called 'the same thoroughness, the same objectivity' in analysing the programmes and policies of the other Services. Which leads us to look next at the maritime scene and Coastal Command.

To begin with, Mr Sandys accepted his predecessor's proposals for a smaller Navy: three carriers only and manpower limited to 80,000. The 1957 White Paper showed uncertainty about the Navy's NATO role, though it stressed its value for limited war outside the NATO area and in peacetime emergencies. For the Air Ministry, Coastal Command came last in its priorities and it planned to reduce it to six squadrons. The battle then commenced; and after intense lobbying the issues were presented to the Defence Committee in November 1957. An Admiralty paper scarcely troubled to conceal its distaste for a nuclear deterrent policy and argued for a four-carrier group fleet. Yet in drawing attention to losses at sea during 1943, inflicted by a German submarine fleet substantially smaller than the Russians could deploy, it might well in objective terms have destroyed the naval case for a bigger North Atlantic presence. It seemed nonsensical to the Air Ministry to get excited about the need to protect convoys; if this was to be taken seriously it postulated a conventional campaign, in which case strong air defences would be needed to protect the ports and anchorages for the convoys. And strong air defences were unlikely to be conceded. Nevertheless, Mr Sandys shifted his position towards the Navy. He agreed to a fourth carrier group, with an emphasis on ASW capability in the Atlantic, and allowed the Navy extra manpower above the original White Paper allocation – 88,000 instead of 80,000. And even before the

meeting of the Defence Committee was held he had arbitrarily instructed the Air Ministry to plan on the basis of eight and not six Coastal Command squadrons. The Air Ministry protested: 'such an increase would be inconsistent with approved strategic priorities, and it would not be militarily significant, bearing in mind the size of the long-range maritime forces which it was necessary during the war to deploy against a submarine threat nowhere approaching in numbers or in quality the threat which confronts us today.' It did no good; the instruction to plan for eight squadrons was soon turned into an order actually to maintain that number.

This was only the first phase of the battle. The second was even more worrying for the Air Ministry. In the first half of 1958 speculation began about the transfer of Coastal Command to the Admiralty: speculation in the Press, questions in Parliament. When this had last been discussed – in 1954, when the decision was to leave well alone – Mr Sandys had been in favour of transfer; and he put a re-examination in hand in November 1958. This second-phase battle lasted until the following July. It should never have been started; with all the turbulence in the Services, there could not have been a worse time for an inter-Service row. However, Mr Sandys made a mistake which was to prove crucial; he seems to have omitted to tell the Prime Minister. For some weeks he appeared to be getting his way. The Chiefs of Staff were evenly split; CDS and CAS were against change; Mountbatten was naturally in favour; CIGS – Field Marshal Festing – reluctantly supported Mountbatten, with some reservations. One reason for the CDS appointment was to have an adjudicator when the Service Chiefs could not agree; and having set out the reasons for making no drastic changes Sir William Dickson offered Sandys a way out. This was to revise the existing arrangements for control of maritime aircraft, placing CinC Coastal Command and his group commanders under the operational command of their Naval counterparts as deputies and not co-equals. But Sandys would not be put off. A report concluding that a case on merits had been made for transfer was considered by the Defence Board. From the minutes of the meeting one would think that the Air Force was on the point of losing. Mr Sandys could have claimed the support of the majority but his own summary at the end of the meeting was that while the case had been made he had been



impressed by the effect of a transfer on the morale of the Royal Air Force. He had previously seemed impervious to precisely this consideration. Why did he change his mind? Sir Richard Powell, his Permanent Secretary, may have influenced him. What is certain is that the Prime Minister some time before had sent Mr Sandys a private minute to the effect – according to one account that this was not an appropriate time to change the status of Coastal Command, or more precisely – according to another – that he did not wish the issue to be dealt with before a General Election (which took place in October 1959). It is no less certain that before the Defence Board meeting the Cabinet Secretary was being advised that the case for transfer ‘had considerable failings and a fairly destructive argument against it can be produced by the Air Ministry.’ Soon after that meeting Mr Sandys issued a directive which began with the statement that Coastal Command would continue as a separate Command. It had been, said the Cabinet Office, ‘an unnecessary and deplorable exercise.’ The outcome was not wholly satisfactory. The issue of principle was still open; more resources than the Air Ministry considered appropriate were allotted to the North Atlantic; and some basic questions of maritime policy were swept under the carpet, at least for the time being. But a decision had been reached. The Air Ministry put in hand a programme of Shackleton modernisation for a bigger Coastal Command and also a specification for a Shackleton replacement which led to the Nimrod. And changes in the command relationships which Sir William Dickson had suggested at the beginning of the controversy were introduced.

And so, finally, to air transport where policy was not bedevilled by such fundamental doubts as marked nuclear deterrence, air defence and the maritime scene. Improvements in air transport capability stemmed inevitably from a policy of reducing in Europe but, despite the cut back in Service manpower, maintaining an effective influence in the Middle East and Far East. The difficulties were recognised, whether contingencies arising overseas were limited wars in either theatre or the kind of emergency that was to occur over Kuwait. Mr Macmillan thought that ‘with skill and ingenuity’ British positions could be maintained. One of the keys to success was obviously more long-range capability and secure

reinforcement routes. As things stood in 1957 neither was satisfactory. Mr Macmillan was very scathing about the inadequacies of the Hastings/Beverley force; and what was the determinant of the size of force required – the movement of a brigade from Britain to Singapore in seven days – could only be secure if Indian Ocean staging posts under firm British control were available. India and Ceylon were likely to refuse facilities if the emergency did not meet with their political approval. Gan was being prepared in 1957 to meet this need; the Air Staff would have liked another Indian Ocean staging post – in the Seychelles. Improvements to Masirah in South Arabia also had route security in mind as well as V-bomber dispersal. Interestingly, HQ FEAF preferred Diego Garcia to Gan.

One of Mr Sandys' early decisions was to relax somewhat the requirement for Far East reinforcement. As then stated, this could be met by a force of twenty Britannias, plus a few Comet 2s. This was the first objective for an enlarged Transport Command. It was not achieved until the end of 1960, happily in time to make all the difference to the Kuwait Emergency in 1961. Amongst a number of industrial and technical difficulties, which resulted in only one RAF Britannia coming off the line each month, the crucial factor was the failure to secure big enough orders for the civil Britannia to justify a higher production rate. But the Britannia fleet was not the biggest of the problems. These derived more from what the Army began to demand, under three heads: a long-range strategic freighter, tactical transports and short-range transports, including helicopters. The War Office presented Mr Sandys in August 1957 with a demand for a long-range freighter capable of carrying up to 13 tons over a range of 3,000 miles. This was a much bigger requirement than anything previously stated. It coincided with the completion of studies of a Beverley replacement which pointed to an aeroplane of similar performance to the C-130 which had recently gone into service with the USAF. But at first this was considered too small for the strategic role and too big for the tactical. Moreover, the Army wanted the aircraft quickly: by 1963, by which time their manpower strength would have been reduced by National Service. So if it were to be British, aircraft developed for other purposes would have to be adapted; otherwise, it would have to be a foreign aircraft, which meant an American buy. The Air Staff came to favour a compromise:

the C-130 after all, with the larger and more expensive C-133 another possibility.

The trouble was that the Army had moved the goal posts. A Chiefs of Staff sub-committee had earlier stressed the importance of stockpiling heavy equipment at the main overseas bases as a much cheaper alternative to carrying them about the world in large aeroplanes: heavy equipment such as armoured cars and the Thunderbird SAM, and also the BLUE WATER surface-to-surface missile (which was later cancelled). Since it was not agreed policy that tactical nuclear weapons such as BLUE WATER should be deployed outside Europe, the case for a high-quality strategic freighter was not all that strong. With hindsight, the Air Ministry might have argued the case more than it did, especially as its budget made no allowance for a new strategic transport in the Army's time-scale. One could wish that Mr Sandys had thrown his weight about, as he did on other issues. As it was, he agreed that a new aeroplane was needed, and that neither the C-130 nor C-133 would be considered. But what British aeroplane? The various possibilities were examined throughout 1958: beef up the Beverley; a freighter version of the VC10; re-design the Britannia and give it rear-loading doors; a Handley Page freighter based on the Victor wing and tail. Then there was this turboprop aircraft, the Britannic, that was being developed in Belfast: good range, very good load, but a turboprop and slower than some of the other candidates. The Air Staff strongly favoured a turbojet and eventually persuaded the Air Council and Mr Sandys and the War Office to back the Handley Page aeroplane, the HP111.

The Cabinet, no less, decided the issue early in 1959. There can be no doubt that politico/industrial arguments were decisive. Shorts in Belfast was government-owned; the end of Britannia production was in sight; without a major order most of the labour force would have to be laid off. To select the HP111 would prolong the life of the company and hamper the policy of progressively rationalising the aircraft industry. A late entrant into the race, the rear-loading Britannia, was favoured by the Ministry of Supply as a useful and relatively inexpensive interim solution. Both Mr George Ward and Mr Sandys were advised to speak against it (*the HP proposal Ed*). So it was that the Belfast was ordered: at best, the Air Council's

second choice; for which there was no allowance in forward costings; an untypical aircraft and highly unlikely to have a civil market; and with an engine (the Tyne) not in service elsewhere in the RAF. It made little sense in logistic and engineering terms. The VCAS of the day said, 'they will be obsolete when we get them.'

The background of policy to this unfortunate decision was the need to move reinforcements of equipment as well as men to deal with limited wars outside the NATO area. The War Office was also demanding more air transport within theatres. So in addition to unplanned expenditure on a long-range freighter, the Air Council found itself presented with a much bigger bill for tactical and close-support transport aircraft than it had allowed for in its 1957 plans.

The scenario is important. War Office air transport requirements were for:

- a brigade group parachute drop;
- the move of two brigade groups in an overseas theatre within a fortnight;
- air supply of up to six brigade groups during the first month of a limited war.

The bill: an additional 75 medium-range aircraft (Argosies; and we haven't the time to examine why this aeroplane was chosen); at least another 200 short-range transports and helicopters, including 80 – a totally new requirement – for the Army in Europe. This bill was never met. It was excessive even if the scenario had remained unchanged; and it included expensive items such as the Rotodyne and Chinook-type helicopters. But the Air Council had to go some way towards meeting it. Some fifty Argosies were ordered and delivered and the Whirlwind force was usefully increased. What eventually reduced the War Office bill – and to mention this takes us outside Mr Sandys' time as Minister of Defence – was a revision of overseas policy by which the Army's commitments in the contingency of limited war were very substantially cut back. And behind that revision were growing financial difficulties and also doubts about the security of British bases overseas. Even so, the post White Paper insistence of the Army on maximising air supply to maintain itself in the field was one more factor affecting Air Ministry plans for the size and shape of the Air Force. Transport aircraft of all

types in service in the early sixties were nearly twice as many as the Air Council had proposed in 1958. The number of helicopters trebled. With these changes came a change in the geographical deployment of the Air Force: fewer squadrons in Europe than had been planned and more overseas.

A very brief summary: looking on the one hand at the Air Force which the Air Council considered appropriate to a deterrent strategy and on the other, to that which was emerging when – nearly three years later – Mr Sandys ceased to be Minister of Defence, there had been several developments. A smaller, but still powerful, V-Force but with increasing doubts about BLUE STREAK, which the Air Ministry knew about and to some extent shared, and also about BLUE STEEL Mk 2, which they may not have known. Polaris was beginning to be discussed though there was not yet what an Air Ministry official was to describe as a ‘Gadarene rush throughout Whitehall’. A much smaller fighter force: final decisions as to exact size not yet taken but the writing was clearly on the wall; indeed, the Air Staff itself had reduced its claim for a fighter force of twenty squadrons to twelve and also the size of the SAM force for UK Air Defence. Coastal Command was somewhat larger: not a wholly unpalatable consequence but the controversy about control of the Command had needlessly involved much time and effort. Developments in the air transport force I have just described. This increase was arguably greater than was strictly necessary; it was certainly financially embarrassing. It had been a difficult time for the Royal Air Force. The sad fact is that even more difficult times were not far away.

## QUESTION TIME

**Sir David Lee:** Thank you very much for a very interesting and informative talk. Now our panel of experts for the questions includes Sir Ewen Broadbent, who was Private Secretary to George Ward at the time, Air Chief Marshal Sir Frederick Rosier, at that time Chairman of the Joint Planning Staff, and of course Cecil James.

**Sir Frederick Sowrey:** May I ask to what extent BLUE STREAK and Thor, which were Duncan Sandys' ideal deterrent weapons, were flawed because they were liquid-fuelled, and therefore had to be located above ground. The process of fuelling being a long and protracted one, they were inherently inflexible. Would the approach have been any different had BLUE STREAK been solid-fuelled, and therefore capable of a more dispersed or hardened deployment?

**Cecil James:** There is a slight embarrassment in answering authoritatively because these decisions are still covered by the thirty year rule. However, may I just say something nice about Duncan Sandys who in his public and indeed private persona, was rather a grim man. He held a press conference in February 1958 to announce the deployment of Thor, and he asked that questioners stand up and identify themselves. A gentleman of rather untidy aspect rose and asked, in a thick Mittel Europa accent, 'Is not the deployment of Thor in the eastern counties of the United Kingdom a serious provocation to the USSR and her allies?' Sandys considered a moment and replied 'It's convenient to put them there.'

The fact of the matter was that there was no alternative to Thor, but it was on the point of reaction time, and, just as crucial, the period for which it was possible to keep it fuelled before it was necessary to stand it down, that the case for scrapping BLUE STREAK was based.

**Sir Alisdair Steedman:** You mentioned that the Britannia was a political aircraft, but we have had rather a lot of those in our time, and incidentally we got 22 not 20 because two remained unsold and were used to ferry members of the Government around. Is it reasonable to suppose that, particularly with transport aircraft which have uses other than military ones, any government will go against the political and economic factors of the day and produce aircraft

especially for the armed forces. I would suggest it is very unlikely, and that it would be more sensible for the Air Staff to work out their requirements on what is available, rather than what they would ideally like.

**Sir Frederick Rosier:** I certainly would accept that. On the other hand if you take the Belfast it was certainly a political aeroplane, and a poor aircraft for the job.

**Sir Alisdair Steedman:** May I just recount a story? The Belfast was powered by Tyne engines, and its performance was insufficient to allow it to clear some of the mountains which it had to encounter on flights to the Far East. We therefore had to send it by somewhat roundabout routes, and it took a very long time to get there. Thus the Captain of the proving flight sent a signal when he reached Gan, saying that all was well, and there was no sign of scurvy in the crew. The AOC-in-C Transport Command, Bing Cross, was not amused!

**Air Commodore John Greenhill:** I would just like to ask, as an ex-Flight Commander on a day fighter squadron at the time, to what extent the human impact of the review was taken into account? There was, almost overnight, a sense of bewilderment in the squadrons. Nobody knew what it was all about. Could you enlarge on that?

**Sir Frederick Rosier:** The problem was to a great extent that the Air Council were not masters of their own destiny. There is no doubt that morale did suffer – the morale of Frederick Rosier suffered! I remember becoming Group Captain Plans at Fighter Command, and having sized things up, going to the then CinC, Dermot Boyle\* and saying that we could do nothing to influence the kind of aircraft we might have in the future, and what would he say if I and my staff concentrated on the Control and Reporting system. He agreed completely, and we then concentrated on that aspect. (\*CinC Fighter Command Aug 56-Jul 59 was actually Pike, not Boyle, who had left in Jan 56, the gap being filled by Patch. CGJ)

**Sir Ewen Broadbent:** Could I add a frivolous and a serious point. In the Ministers' Private Offices we sat around in 1957, often very late at night, waiting for our masters to return from Sandys and one of the more literate Private Secretaries produced some doggerel. It ran in part:

First am I, I'm Duncan Sandys  
The Services are in my handies  
Who but I at such expense  
Could emasculate defence?

More seriously, I think the Prime Minister placed the Services and the Service Ministries in an impossible position at that time. He gave a directive to Duncan Sandys which gave him total authority over the Services as well as their resources, but he did not give him the organisation. He did nothing about the organisation, so Sandys had Colonel Popes, and perhaps one other, to help him. The Service Ministers had to stand up in Parliament and defend policies for which they were not personally responsible, and the whole thing was a shambles. Macmillan knew it because he asked his colleagues to agree to a reorganisation. This circulated for about a year, and a lot of blood was spilt over it, before Macmillan eventually became so embarrassed that he shelved it for four years. Nothing was done between '58 and '62, at which point he thought he could revive the subject with the studies by Ismay and Jacobs.

**Graham Hall:** Why do we retain conventional weapons?

**Sir David Lee:** The simple answer is in case we have a conventional war. The whole essence of policy today is deterrence, and you must have a range of options open in a crisis, other than escalating directly to a nuclear exchange.

**Sebastian Cox:** The speaker did seem to me to be suggesting that in certain areas the Sandys White Paper was not as disastrous as it is sometimes portrayed. Could you say whether you think there were any very great benefits for the Royal Air Force in Sandys' policy?

**Cecil James:** I think that in a sense the title of the lecture is misleading, because the policy was not really his. He was really the hatchet man for Macmillan, and a lot of what we regard as the 1957 White Paper's policy was virtually written beforehand. I think Sandys did sincerely believe in the importance of having a nuclear strike force. He saw that as moving from the manned aeroplane to the unmanned missile, and he had, as it were, some pride of authorship in BLUE STREAK, because he had been involved with it early on as Minister of Supply, and he had taken it over as Minister



of Defence. I think he saw it as a political defeat if BLUE STREAK was cancelled which was one reason why I think he tried very hard – much harder than the Air Staff – to get it accepted.

Leaving that aside, I am bound to say that his onslaught on air defences, granted the intellectual environment of the time, which was that of massive retaliation, was correct. I think the Air Staff to a degree agreed with him that we were spending too much on air defence. I think also his failure to bring the Army under control with regard to its overseas plans and its demands for air transport were very regrettable. On the proposal to transfer Coastal Command to the Navy, I would simply quote the Cabinet Office official who said that it was all a deplorable and unnecessary exercise.

Overall a curate's egg – good in parts, but not many.

**Sir David Lee:** May I just add it was most unfortunate that relations between Sandys and the Chiefs of Staff were not good, and one really must blame Sandys for this. He would call for the Chiefs at short notice, and then keep them waiting for fifteen minutes in his outer office. He had no conference table in his office, and he would make them sit on chairs in a semi-circle in front of his desk balancing their papers on their knees. Men of that stature should not have been treated so discourteously, and they were irked by it.

**Question:** Given the facts that the Government was faced with the necessity of cutting defence to keep within financial and manpower limits, how should this have been done?

**Sir Ewen Broadbent:** I think the main criticism of Duncan Sandys is one of methodology. Sandys almost deliberately prevented open debate. People did not know what he was doing, papers were not seen, etc, and the Service Ministries began to play the same game. In those circumstances you will not get good decision making. What could he have done? Well, a lot could have been done in an ad hoc way, had he wanted to, but it just was not Sandys' personality to do so, and that was the problem.

**Wing Commander Bill Taylor:** What was the impact of the Sandys White Paper on NATO, and what was the NATO reaction to it?

**Cecil James:** The donkey work had really been done before the

White Paper was actually published. The Government had had some success in persuading its NATO partners to make certain changes in the strategic concept, and from December '56 onwards we do have a NATO policy directive which in effect is based on massive retaliation. There was still some negotiating to be done on the precise force reductions which Ministers wanted to make in 2TAF and BAOR and those were uncomfortable negotiations, but nevertheless they were carried through.

**Sir David Lee:** It only remains for me to thank Cecil James for an excellent lecture, and also my two fellow panellists and you, the audience, for a stimulating question session.

## MEETING ON 20 JUNE 1988

### Introduction by Air Commodore H A Probert MBE MA

This evening we are returning to the air war in World War II, and this time we are going to look at it from the German side. Dr Boog, our speaker, is one of the leading air historians in West Germany. He came originally from what is today East Germany, from Leuna-Merseburg, where he obtained first-hand experience of Allied bombing. In 1944, at the age of 16, he underwent training as a glider pilot but then, instead of going on to the Heinkel 162 as had been intended, he found himself in the *Volksturm*, an experience which he fortunately survived. After the war he came to the West. He spent a short time as a translator and interpreter at Nuremberg and then went as an exchange student to the United States; one of the first exchange students to go from Germany to the USA in the late 1940s. Returning to Germany in 1950, he worked for the United States Air Force in Germany on intelligence duties until 1964 and also studied part-time at the University of Heidelberg where he obtained his PhD in 1965. Since then he has worked in the Military History Research Office in Freiburg, where the main research in West Germany into wartime history and the history of the post-war *Bundeswehr* takes place. His work has concentrated upon the air aspects of World War II and as Senior Air Historian he has contributed to the main writers' programme and also lectured extensively in and outside Germany. A major work which he has written is *German Air Force Leadership and Command, 1935-45*. He has also written on *The Strategic Air War and German Home Air Defence, American, British and Soviet Foreign Policy and Strategy, 1939-1943* and is co-author of a volume *The Attack on the Soviet Union*: many more items have flowed from his pen. I personally in my time as Head of AHB have met him a number of times and it gives me great personal pleasure that he has agreed to come over and address our Society on the air war from the German standpoint.

# THE POLICY, COMMAND AND DIRECTION OF THE LUFTWAFFE IN WORLD WAR II

by Dr Horst Boog  
Chief Air Historian, West German Military  
History Record Office, Freiburg

Mr Chairman, thank you very much for your kind introductory words. I consider it a great pleasure and an honour to be here, especially in view of such distinguished predecessors as Professor R V Jones and Mr John Terraine.

It is, I believe, not unusual that those who have lost a war are more critical of themselves than those who came out of it as victors. I shall, therefore, not concentrate on the strong points of the *Luftwaffe*, that is on its able application of technical principles such as the use of interior lines, mobility, concentration of forces at decisive points, surprise and successful co-operation with ground forces. I shall consider instead some special traits of the *Luftwaffe*'s command and leadership which constituted the basis, as well as the limits, of the performance of the German Air Force and turned out to be decisive and constituent causes of its defeat. Now this does not mean that without these particular characteristics the *Luftwaffe* would have won the war: it would have been out-produced anyway, but to crush it would have been harder, and maybe resistance to the war in the year 1939 would have been greater. Of these characteristic traits, which were most clearly reflected in the training of the general staff officers, I think five are important:

First, there was a gradual reduction of *Luftwaffe* leadership and command thinking to purely military aspects, in which the General Staff Officers certainly became specialists with great abilities although the principle of general assignability continued to be cherished by the General Staff theoretically. We shall see later that this reduction of scope did not solely follow from the fact that Hitler pressed for rapid expansion of the armed forces to make them ready for his war at the cost of shortening the training of the officers. During the war there was a further reduction of General Staff training to the needs of the routine work of troop staffs. The original objective of this training, the education of future Chiefs of Staff, was renounced as being no longer possible. Understanding the world

outside Germany became increasingly difficult for these officers, for other reasons too, such as punishment for listening to foreign broadcasts, and unclear conceptions about the outside world were the result. For instance, when Pearl Harbour happened nobody in the armed forces operations staff knew where it was located; I heard this from the Chief of the *Luftwaffe* Section. War conditions further led to a limitation of the experience of staff officers, because there was no time for familiarising them with other Service Branches or careers or theatres of war or even with the life of the troops at the front. Specialisation was the natural consequence and certainly the fastest way of getting results from these officers, though in limited fields.

This basis was too narrow to produce officers accustomed to think in terms of all the Services. As the last energies were mobilised towards the end of the war (it was already early in 1943) a further shift of values took place, from knowledge and ability to courage, bravery, resolution, youthfulness, belief in Hitler, and strong nerves as requirements for General Staff Officers. Irrational values were now to replace the rational approach to things which ought to have been the business of the General Staff and higher officers.

A second trait, of fundamental importance, was the over-emphasis on tactics and operations at the expense of the other spheres of command like logistics, intelligence, technology and signal communications, training and air transport. This attitude was called S3/A3 thinking. To become an operations officer, and eventually a chief of troop staff, was the goal of most General Staff Officers and for various reasons the *Luftwaffe* had relatively more S3/A3 positions than the other services.

Thirdly there was in practice, not in theory, underestimation of the importance of technology in relation to tactics and operations. While the first Chief of the *Luftwaffe* General Staff, General Wever, repeatedly stressed that tactics and technology were of equal importance, his third successor, Jeschonnek, in 1939 rejected the opinion of his engineers that technology was the basis of the *Luftwaffe* and that the technical superiority of the air force would therefore be decisive. Since all industrialised nations had reached about the same technological level, he argued, it was hardly possible to gain technical superiority for any significant period of time. It would be better to stress the development of air tactics, which were

still largely undeveloped. This would secure the *Luftwaffe* its superiority over the enemy in case of war. Later in the war it was exactly the temporary slight technical advantages that were decisive for the outcome of the air war. Suffice it here to add that technology was not in high favour among most officers and that engineers were often regarded by them with disdain, the whole situation being symbolised at the top by Goering who bragged about his technical ignorance.

The fourth trait was the doctrine of the offensive, which was valid until almost the end of the war. The first Chief of the *Luftwaffe* Staff regarded the bomber as the decisive weapon in the air, a conviction that entered into the basic *Luftwaffe* manual on the conduct of air war. He at first meant the heavy bomber, because he was influenced by Douhet. Later, in a realistic appreciation of Germany's situation, he favoured fast medium bombers, the operational radius of which was large enough to cover the necessary distances to the potential enemy capitals. Offensive thinking was conditioned by Germany's unfavourable geo-strategic situation in the middle of the Continent which required that the war be carried into enemy territory right from the beginning, to conquer, together with the army, a *glacis* deep enough to offer some protection against enemy air raids. That Hitler and Goering later developed ideas of the global use of very large bombers must be mentioned here although this plan was never earnestly pursued and never materialised. The idea that the country could also be defended by a strong fighter force was foreign to the German Air Staff because in Germany as elsewhere there was a strong conviction that an effective air defence against bomber raids was impossible.

Finally, and as already implied by the concentration of air armament on the medium bomber, it was the co-operative type of air war that prevailed, although the idea of the necessity of strategic bombing under certain conditions always existed latently in German air doctrine and came to the fore when the situation was considered favourable for it, as in the summers of 1940, 1941 and 1942. Indeed it had already appeared in late 1938 when Hitler ordered the quintuplication of the *Luftwaffe*, an expansion which was thwarted by the outbreak of war.

Offensive thought in the German Air Force did not follow the

lines of Douhet but was generally orientated towards co-operation with the ground forces and, theoretically at least, with the navy. Since experience in close air support was only gained during the Spanish Civil War, the *Luftwaffe* planners at first considered this type of air battle to be most difficult and therefore believed that the normal co-operative air war would comprise indirect missions in support of the ground forces against the rear areas of enemy forces, but within the zone of operation of army groups (*Operationsgebiet*). So they called this type of 'normal' air war '*operativer Luftkrieg*' (operative air war). The limits of *Operationsgebiet* were, of course, flexible so both terms were also applied to missions and flying forces providing either technical support on the battlefield or independent strategic bombing operations.

The concept of *operativer Luftkrieg* was thus unclear. The Bomber Chief of the Operations Department of the *Luftwaffe* General Staff, Major (later General) Deichmann, told me that when, in 1936, he called together all General Staff Officers and made them write down their definition of the concept of *operativer Luftkrieg*, he got as many definitions and interpretations as there were officers present.

Unclear thinking led to the attempt to conduct a strategic air war by tactical means as, for instance, in the Battle of Britain. The term 'strategic air war' did not exist in official *Luftwaffe* terminology. It was developed only late in the war after the Allied strategic bombing offensive had demonstrated the nature and effects of strategic air war and when it had become clear to the German Air Staff that it was more economical to destroy enemy tanks and weapons where they were produced than on the battlefields.

The factors contributing to the development of an essentially co-operative air doctrine were the following:-

- The experience of WW I, when support on the battlefield (starting in 1917) brought favourable results more quickly than the Zeppelin and giant bomber (Gotha) raids on Britain.
- The fact that the *Luftwaffe* by itself could not occupy the *glacis*, or forefield, thought necessary for Germany's protection in case of war, but had to do it together with the army. Only the army could occupy territory.

- The fact that most of the higher air force officers were former army officers.
- Shortage of the raw materials necessary to conduct a time-consuming strategic air offensive.
- The intention not to destroy the industries in the countries to be occupied on the Continent, but rather to use them for one's own purposes later on.
- The fact that the principles of independent strategic bombing were not yet solidly confirmed, the Spanish experience rather having proved the effectiveness of direct and indirect support of the ground forces.

Although the main incentive for Hitler and Goering to create the *Luftwaffe* as a third service was the idea of an independent strategic bomber force (as an attribute of a big power and as the *raison d'être* of an air force independent of, and equal with, the other Services and as a means to avoid the repetition of the bloody trench warfare of WW I), independent strategic bombing was to be only the last of the *Luftwaffe's* three main tasks. The primary and continuous mission was the destruction (or at least paralysis) of the enemy air force through attacks on its ground organisation and production workshops. Later in the war it was learned that this had also to be done by continuous air battles. The second task was support of the operations of the ground forces, support of the navy enjoying equal rank in theory, but becoming the stepchild in practice because of lack of aircraft. The bombing of the centres of enemy war potential (strategic bombing) came last and was to be resorted to only when there was a standstill in land warfare and when a decision of the war could not be brought about otherwise, because this kind of air war consumed, so it was believed, too much material and time before its effects (if there were any at all) made themselves felt at the land front. The land front was considered to be Germany's main 'theatre of war'. Frederick the Great was aware that he could not sustain a long war and so were Germany's military leaders in subsequent centuries. After all, another means of overcoming positional warfare had been developed, the strategic use of tanks supported by the air force, a method that really functioned for the first time in the western



campaign.

The necessity to economise led to the early development of navigational and bombing aids (*Knickebein*, *X-* and *Y-Geräte*), the adoption of the dive-bomber and the extension of the dive-bombing requirement, even to the He 177 heavy bomber. You will all know its story and that, in order to reduce air resistance during the dive, two of its four engines worked on one crankshaft. This caused so many technical difficulties that the bomber never became operational. It was finally built with four separate engines and designed for horizontal bombing, but though about 1,200 He 177s were produced they could not be flown for lack of fuel. The dive-bombing requirement reduced the range of the bombers because of the extras needed and thus forced the designers towards the short- and medium-range tactical bombers.

Lack of raw materials was one reason why the air staff in 1939 refused to develop area-covering munitions, and it was only in 1942, after the incendiary attacks on Lübeck and Rostock that their development was ordered. The necessity to economise, and the recognition of the international laws governing the air war (which were like Swiss cheese and very inconclusive at that time) were, together with the classical continental European distinction between combatants and non-combatants, the main reasons why the *Luftwaffe* doctrine expressly forbade indiscriminate bombing to be part of the strategic air war concept, except as a reprisal measure. I must say, however, that the instrument of reprisal was resorted to so often that it soon lost its meaning: the more so since it was British policy to carry through strategic air attacks not as reprisals but as a method of warfare and for a long time the only way they could reach into Germany.

It was accepted that no bomber force in the world was able to drop its bombs exactly on target, either at the beginning of the war or later, and that collateral damage was thus unavoidable. I can say, however, that it was the *Luftwaffe*'s intention to adhere to the principle that its foremost objective was the enemy armed forces and targets of military relevance, until the spring of 1942. Admittedly (as in other bomber forces) the necessities of war usually prevailed over non-intentional collateral damage; civilian casualties were accepted if they could not be avoided in the execution of operations. But even

Hitler, who must be blamed for many inhumane actions, warned his Chief of the Air Staff not to wage an indiscriminate bombing war, only ten days after his public announcement of 4 September 1940 that he would 'erase' British cities, and he repeated this order in his directive of 6 February 1941. Indiscriminate bombing would lead to nothing, he said. Of course, Hitler did not warn for humanitarian reasons. It was the economic point of view he considered, and his fear of British retaliation.

When the *Luftwaffe* started to engage in some intentionally indiscriminate bombing attacks on British country towns in 1942, the so-called 'Baedeker raids', it did so without sufficient bombers because these were tied down in Russia and the Mediterranean. The V1 flying bomb, the development of which was accelerated in 1942, was designed as an area-covering terror weapon and the V1 offensive was designed to be an indiscriminate air war.

Let me repeat, after all this evidence, that the *Luftwaffe* was mainly designed to be a co-operative air force in the widest sense, not a strategic instrument or a terror instrument. Although this latter function was propounded by the Germans themselves before the war, to threaten potential enemy nations into submission, and deliberations about the possible use of the *Luftwaffe* as an instrument of terror were not abhorrent to the *Luftwaffe*'s leaders, either before or during the war – such ideas were pondered over by most aviation writers and air strategists at one time or another, all over the world.

I shall now try to demonstrate some of the consequences of the five basic features of the *Luftwaffe*, insofar as I have not yet done so. The most striking example of the narrowing of *Luftwaffe* staff and command thinking to military matters and, within this limitation, the dominance of operational matters over the support and infrastructure sectors, was the organisation of the German Air Force High Command. The *Luftwaffe* was a new service without much command experience and it therefore changed its top echelon organisation more often than any of the other Services. There was the difficulty of combining the tactical with the technological side; there were personal feuds between the top officers which were fostered by Goering's policy of 'divide et impera' and by favouritism.

Governing this top organisation until 1939 was the desire to streamline it in accordance with the immediate requirements of the

expected short war, at the beginning of which all forces, including the reserves, had to be used for the decisive blow. Chief of Staff Jeschonnek reduced the General Staff to something like Goering's personal operational staff, confining it voluntarily to operational and tactical matters and excluding, as an unnecessary burden, everything not needed for the immediate purposes of operations, such as training, technology and the inspectorates. The Chief of the General Staff also assumed the position and duties of the Chief of the *Luftwaffe* Operations Staff in order to shorten the chain of command and thus make it more effective. The Quartermaster services had been downgraded organisationally.

This was certainly an effective organisation for a short campaign but turned out to be insufficient for a long war of attrition. The reorganisation that took account of this came too late, in 1944 and 1945. The *Luftwaffe* General Staff had become an operations staff – just for the execution of orders. Nowhere was there a permanent planning staff, neither in the organisation of the Ministry, nor with the air fleets. Nowhere was there a permanent advisory or co-ordinating counsel or agency, for long-range planning, and (although the necessity of conducting the air war economically was always stressed) nowhere was there anything like an Operations Research Section. Planning was only one of the many tasks of the operations officers on the higher staffs. They did it besides their daily routine and operational work and at the most for just a battle or for a short campaign. There was no overall plan for the war in Germany, there were no technical planning and advisory committees for the conduct of the strategic air war against Britain; this was considered to be a military domain. It was not until 1943 that the Chief of the General Staff grew aware of the fact that this type of air war also required the knowledge and advice of the civilian technical and economics experts of the Armaments Ministry.

The predominance of the military aspects, and of operational matters, was further reflected by the low esteem enjoyed by the Quartermaster Service, employment in which could prejudice an officer's career. When the Operations Officer of Air Fleet 4 was given the function of Quartermaster of his air fleet by the Commander-in-Chief, Field Marshal von Richtofen (who also told him that this was only an intermediate step to becoming the air

fleet's Chief of Staff), the officer protested, even though a Quartermaster was higher in rank than an Operations Officer in the Operations Section. Not the best officers were assigned Quartermaster duties. There is ample proof that many operations, indeed the entire war, was fought on the basis of operational and political objectives and not on the basis of logistics. The chief of the economy and armament department of the Supreme Command of the Armed Forces admitted this in January 1942 in a speech before his assembled armament inspectors. This is not to say, that under certain circumstances, the quick and bold utilisation of a favourable opportunity does not also lead to success, but this applies more to the tactical and operational spheres. To base one's strategy on sudden opportunities does not seem to be a successful method.

Air transport as a means of supply was theoretically neglected until 1940, although the *Luftwaffe* carried out substantial air lift operations between Morocco and Spain in 1936 at the beginning of the Spanish Civil War. The Chiefs of blind flying training schools and of air transport operations were one and the same person in the first years of the war, since the same type of aircraft (the Ju 52) was used for both purposes. Once aircraft support operations became necessary the Ju 52s, with their instructor crews, were gathered together from the training schools and assembled into ad hoc transport units. Had there been an Air Transport Command early enough the problems of air supply for Cholm, Demjansk and Stalingrad in Russia, and for Tunis, would not have been given to Hitler so readily by Goering and the *Luftwaffe* General Staff. This command was, however, only established late in 1943 after the great losses in the air supply operations of the winter 1942/43, losses that could never be replaced and which substantially impeded the training of bomber crews.

This brings us to training, which, as Field Marshal Kesselring and the Quartermaster General of the *Luftwaffe* confirmed after the war, was the stepchild of the *Luftwaffe*. If cuts had to be made in the supply of gasoline or of new combat planes, the training sector had to suffer first. At the end of the war, a German fighter pilot received only one-third of the flight training time of an American pilot and more than 50% of the flying accidents were due to inadequate training. The number of aircraft lost without enemy action was

generally higher than that caused by enemy action and ranged around 1,800 aircraft per month in early 1944 as against about 1,500 per month caused by enemy action. The comparatively low esteem of the military for technology resulted in important technical positions being filled by incompetent people, the best-known case being that of Udet, who was not the manager needed to direct air armament and the German aviation industry. Goering appointed him because he knew that Hitler regarded him as the most able and popular flyer in Germany.

In the *Luftwaffe* General Staff there was no civilian engineer or scientifically trained officer in a position of responsibility and, as mentioned above, there was organisationally a gap in the *Luftwaffe* High Command between operations and technology. Goering preferred highly decorated combat officers in positions of technical responsibility; their combat experience counted more than the expert opinions of engineers. Successful young engineers were, therefore, allowed to demand alterations to aircraft already in series production which resulted in delays in mass production. Jeschonnek, the Chief of the General Staff of the *Luftwaffe* said in March 1942 that the front-line officer should not have to accept everything that the aircraft industry wanted to get rid of.

The Corps of Engineers of the *Luftwaffe* was created in 1935 to set the active officers free for their operational tasks, with the result that these officers, who were always the superiors of the engineers, were not forced to familiarise themselves with technology, which for many of them meant dirty fingers. In fact, when this uniformed civilian Corps of Engineers was replaced by an Engineer Officer Corps in the later years of the war, the *Luftwaffe* High Command could not make up its mind as to whether or not those engineer officers were to bear visible insignia marking them as engineer officers, because it was feared that an officer recognisable as an engineer officer would not enjoy the authority and reputation of an ordinary line officer. The question was never solved during the war.

The prevalence of the operational point of view led responsible officers to underestimate the importance of completing each individual stage of aircraft development and to squeeze them together in time so that series production began before testing had finished. This happened elsewhere too, in times of need, but in the

*Luftwaffe* it was the rule and resulted in the jamming and delay of series production. The best examples are the multipurpose Me 210 and He 177. Goering, especially, had no idea of the duration of the different development phases of aircraft. He was always astonished and furious when he was confronted with the fact that this policy did not lead to results as fast as he had thought. Lack of understanding of the laws governing technical development and production, coupled with the prevailing military principle of order and obedience, resulted in the belief that the aircraft industry could be commanded like an infantry company. Moreover, the technical uncertainty of the responsible officers as to the type of aircraft suited best for each purpose brought about too many experiments in aircraft designs. In 1943, Germany produced more than 50 types, with about 250 variations and modifications, against only 18 standard models of the Americans. There were, in addition, more than 130 experimental types.

The preoccupation of the General Staff with operational matters further stifled the issue of tactical and technical requirements for the direction of the aircraft industry and allowed this lavish experimentation, when mass-production of the most important types should have been the order of the day. On the other hand, Goering and Field Marshal Milch, as well as Udet, seemed not to have sufficiently understood the importance of continuity of research and development. Goering and Milch especially, were more interested in production. Before the war, the research funds decreased continually in relation to the production funds and the aviation research department was steadily downgraded organisationally until its chief resigned early in 1942. In early 1940, all research and development projects were ordered to be stopped unless they yielded results within one year, after which, it was thought, the war would be over. This, and not Hitler's later meddling with aircraft production, was the main reason why the first jet fighter, the Me 262, was not mass produced earlier. There was also Milch's reluctance to risk putting a revolutionary new aircraft, with all its teething problems, into production.

Obviously, the leader of the *Luftwaffe* assumed that the conduct of an air war required a good tactical general staff officer in the first place, and could eventually do without technical general staff

officers. So, under the pressure of Hitler's war policy, the Technical General Staff College was disbanded two years after its establishment, and technical courses at the College were completely dropped in late 1938, to be resumed only late in the war without success. There was also much reluctance among general staff officer candidates to become technical general staff officers because of the latter's low reputation. In this they shared the fate of the engineers in the *Luftwaffe*. The disdain with which the latter were regarded by many officers was enhanced by the fact that officers usually had a broader education, better manners, were able to lead men and had an *esprit de corps*. Above all, they had the authority of command which the engineers did not have. Many a young engineer left the Engineer Corps to become an active officer at a lower rank, but with a chance of a better career. The relatively low esteem enjoyed by technologists and scientists is best demonstrated by the fact that such people, if they had not had previous military training, were drafted as ordinary soldiers and put into the trenches with a rifle, instead of being kept in their civilian capacities and put into laboratories. This attitude changed only later in the war, when it was too late.

Intelligence was another field which did not enjoy a reputation comparable to that of operations. The best staff officers were not assigned to such duties and, after the first setbacks, Goering and Hitler no longer wanted to believe in intelligence. The *Luftwaffe* intelligence service was disorganised as much as the entire German intelligence community, the co-ordination of the different Services being attempted only in 1944. German air intelligence substantially underestimated the three main opponents, England, the Soviet Union and the United States, in the decisive pre- and early war years, especially since ideological bias and euphoria arising from initial successes impeded its work. Whether Hitler, had he received correct data on the enemy, would have thought twice about going to war is, however, questionable. The results of intelligence work were usually realistic in relation to the enemy deployment, front-line strength, training, organisation and equipment, ie as regards tactics and operations. The signals intelligence service produced particularly good results. The cypher service, however, seems to have produced very little, and only information of a tactical kind.

Where intelligence failed was in its strategic perceptions

concerning the enemy's economy, production capacity, morale and so on. To explain this failure one must remember that the *Luftwaffe* general staff officers who were in charge of the major positions within air intelligence, were trained more in the military field and not so much in areas important in grand strategy, such as economics, politics, science and technology. The belief in a short war, which had to be decided right at the start, by the use of all available forces led to the assumption that the potential that might be developed by the enemy later on in the war could be neglected. It was rather short sighted, but that's how it was. It is no wonder that, in a society that valued fighting and leadership qualities in the field more than good performance in the supporting sectors and at the desk of the intelligence officer in the rear, there was a traditional disdain for intelligence work, which was considered to be close to spying. It should also be kept in mind that a military organisation that cherished the principle of the offensive is naturally more inclined to impress its will on the enemy by force, rather than attempt to understand him. In fact, only after Germany had been thrown onto the defensive did the *Luftwaffe* reorganise and intensify its intelligence activities, because now it needed to know more about the intentions of the enemy, in order to take appropriate measures for defence. Organisationally the intelligence officer on a staff was always subordinate to the operations officer.

As regards the principle of the offensive, let me just say that it prevented the timely preparation of a strong German air defence. You all know the words 'fortress without a roof'. As to the consequences of the overemphasis on co-operative air war, it suffices to say that the German bomber force had its greatest losses in this type of warfare – co-operative close escort – especially in Russia – something that was considered to be the most difficult kind of air war before the Spanish Civil War. Low-level attacks by medium bombers were frequent and costly and in 1943 the German bomber force had to be renewed twice, ie the losses were three times its initial strength at the beginning of the year.

Many of the fatal consequences of the main ideas around which the *Luftwaffe* was built up can be explained by the pressures of the situation: ie by the pressure exercised by Hitler to expand the armed forces (especially the *Luftwaffe*, which had to be established



practically from scratch) and by the resulting armament in breadth rather than in depth, which cared for front-line strength more than for spare parts and reserves, and was to make the armed forces ready for the assumed short war as soon as possible. This explains the *Luftwaffe*'s attitude towards technological research, training, strategic intelligence and reserves. Indeed, Field Marshal Milch told the Director-General for Air Armament, Udet, before the war that Hitler would conduct only short wars, so that all aircraft repairs could be done during the breaks between the campaigns. The fiasco came when the war turned into a European, and later into a World, War of attrition which Hitler had hoped to avoid by settling affairs in Europe before the big powers of East and West became too strong. Such an explanation, however, can only partially be accepted and would otherwise be rather superficial, because it neglects the fact that the traditional German militarist's thinking led to quite a few of Hitler's demands. This does not mean that all the military leaders also accepted Hitler's political and ideological goals, but the limitation of higher military leadership thinking to military matters, which was to Hitler's liking, had started already under the elder Moltke and had been intensified by Count Schlieffen, until General Ludendorff developed the idea of total war, in which politics was the servant of war. So attempts to widen the horizon of general staff officers, failed both in the 1860s and in the 1920s and early 1930s. Logistics, another of the non-operational fields, had been the weak point of the so-called Schlieffen Plan before WW I. Rommel was another good example of a tactician for whom logistics became important only when it did not function. The priority of the offensive was always a fundamental element in German military thought, mainly for the geo-strategic reason already mentioned.

The treatment of technology and technicians in the *Luftwaffe* also had deeper causes, originating from the social and political situation since the beginning of the industrialisation process, which started half a century later in Germany than in England. Most of the *Luftwaffe* leaders were born in the late 19th and early 20th centuries, well before the First World War. At this time the army would have preferred officer candidates from high schools which stressed the sciences and modern languages, the so-called *Realgymnasien*. For political reasons, however, it looked for candidates from the

*Humanistische Gymnasien*, high schools that stressed the humanities, because they were the sons of families of the higher classes, of the bourgeoisie and aristocracy, which stood for throne and altar against the egalitarian and democratic ideas of the lower, more technical-minded classes of workers and craftsmen, who were even suspected of intending to overthrow the monarchy. The *Humanistische Gymnasien* produced graduates with a classical and all-round education, humanists who did not like the specialisation that went with technology. This does not mean that they did not like science. On the contrary, many of them became famous scientists. But scientific achievement to them was something that depended on the capabilities, on the genius, of the educated individual. In short, graduates from the *Humanistische Gymnasien* were not particularly prepared for the technical professions. More than 75% of the later *Luftwaffe* generals came from upper middle class officer families or belonged to the nobility. Only 17% of the generals' fathers had technical professions. Two-thirds of the generals grew up in rural environments. Only 5% of the *Luftwaffe* generals and general staff officers obtained technical degrees. During the time of the Weimar Republic these officers could not familiarise themselves with higher technology because Germany was not allowed to have aircraft and heavy weapons. The belief was kept alive that the officer with a higher education was superior to the engineering specialist and could carry out the majority of duties. So, when the Technical General Staff College was closed, it was obviously believed that the 'tactical' general staff officer could handle operations as well as technology, whereas it had never been assumed that the technical general staff officer would be able to do both. To demonstrate the prevailing belief that the broadly-educated officer was competent in the technological sector and at the same time to elucidate the misconception of technology which existed, I should like to quote a sentence from an official report on *Luftwaffe* performance during the *Wehrmacht* manoeuvres in 1937: 'Officers', it said, 'who received commissions as commanders of airfield service companies for the duration of the manoeuvre were not able to fulfil their difficult task, even if they were public prosecutors.' This implied that a public prosecutor (ie a person who had studied law at a university and was considered to be an educated man) was expected to be able to run a

highly technical outfit without any preparation.

National Socialist ideology thought of the rational approach to life in an industrialised society as ‘Americanism’, against which it glorified pre-industrial and irrational values like faithfulness, bravery and so on; without these, of course, no society and no armed force could exist, but they needed to be supplemented by rational values. The ideology thereby created an atmosphere which did not exactly favour a rational approach to life and to technology. There were many good technologists and scientists in Germany and Hitler used them for his purposes, but he, and National Socialism, did not want to submit to the laws and regularities inherent in technology. Technology was considered to be an art, the product of the creative individual genius; that a lot of team work by ordinary men was necessary to achieve results here was simply not understood. So, when the Germans realised that they were far behind the Western Allies in radar technology, Goering staged an inventors’ contest in the belief that a spark in the brain of a genius could bridge the gap. The suitably qualified scientists – who first had to be released from the armed forces – could, however, not solve the problem at short notice, as may be understood.

Let me now mention the so-called *Auftragstaktik* (mission type order) as a further cause of inadequate technical understanding among many air force officers. The army, where most of them had come from, had developed this principle in the previous century. It permitted a commander to execute an order in accordance with the actual situation and did not lay down *how* he had to execute it. In land operations, for which this principle was developed, it allowed quick changes in response to new situations. In air operations, however, the principle did not work so smoothly, because they were largely conditioned by predetermined technological factors, which could not be changed so readily and required much more planning and adherence to advance programming.

Once an air operation had started, there was little scope for further orders and many an older *Luftwaffe* officer, having been educated at the *Humanistische Gymnasien*, and originally trained in the army, was driven to despair. One of them wrote after the war that, whereas general staff work used to be an art, in the *Luftwaffe* it was a mechanical business with a slide-rule, which required ‘just common

sense', organisational abilities and some technical skill. Such duties he obviously considered to be beneath the general staff officer. Younger officers certainly thought otherwise, but they had no say.

The neo-humanistic belief in the well-educated individual who was able to understand and fulfil a multitude of tasks had produced in the early 19th century the principle that officers could be assigned to any kind of role. In a perverted form this ideal seems to have amalgamated with the otherwise social-Darwinistic leader-principle of the National Socialists. Goering, in particular, favoured it in the *Luftwaffe*. While the other service headquarters were called High Command of the Army or Navy he had his Air Ministry and Air Force High Command designated as 'The Reich Minister of Aviation and Commander-in-Chief of the *Luftwaffe*' until shortly before the end of the war. The belief in the capabilities of the individual leader went so far that, whenever a problem had to be solved quickly, Goering appointed a dictator (eg when electronic valves became rare, a tube-dictator) or a plenipotentiary for the specific task and gave him almost unlimited authority to deal with it. At the end of the war there existed many of these plenipotentiaries, each encroaching on each other's business and creating turmoil. Together with the traditional military principle of obedience, which had been instilled into the generals while they were still schoolboys in a *Gymnasien* before WW I, and with the prevailing Nazi-authoritarianism, it was this individual approach to leadership that tied the *Luftwaffe* to the traditional authoritarian style of command requiring almost omniscient leaders at the top. In addition, the traditionally high reputation of the military, and of the officer, in militarised German society created a gap between civilians and the military and induced the latter to look at war as the exclusive business of the soldier. Since there was not much horizontal exchange of information and since the staff organisation stressed the vertical lines of authority ending in the respective commander or leader – for instance, the only connection between the various intelligence services was in Hitler's head – the leader was supposed to be able to decide virtually everything on his own with little advice from experts and was certainly overburdened. Another example of the belief in the all-round capabilities of the individual staff officer was the early attempt to educate general staff officers to be good operations officers at the same time as good

engineers, an attempt which failed.

For all of these reasons, the *Luftwaffe* did not develop a co-operative style of command and leadership, as I have indicated already when mentioning the absence of mixed military and civilian advisory and controlling bodies. It did not try to compensate for the natural limitations of the knowledge and abilities of any one individual leader by establishing boards and committees. One would have expected that in an air force, a highly technical instrument capable of interfering with enemy economies and consuming the highest share of the nation's armament expenditure, a co-operative style of command would have been the first thing to develop, because there, more than in the army, many technical and economic factors had to be considered. No single person could master all of these issues without the permanent advice of experts and committees, firmly established throughout the whole organisation. For the conduct of a strategic bombing campaign it was, for instance, necessary to have the advice of civilian experts on questions of the economy, the industrial grid system, science and so on – just as Bomber Command and the British Air Staff were assisted by various civilian ministries and agencies.

Officers by themselves cannot know everything necessary for such a war. If Goering and Hitler chose to ask outside individuals for advice, they did so only on an ad hoc basis. Advisory and controlling boards ought also to have been set up in the fields of operations and technical administration of the *Luftwaffe*. But since the officers had the say here, and there was a gap between the civilian and military side in German society, the climate for such an organisation did not exist. Moreover, Hitler's basic order No 1, of 11 January 1940, for the safeguarding of military secrecy, prevented the steady flow of technical, political, scientific, military and economic information that had to form the basis for higher decision-making in a modern war, because nobody was to know more than was necessary for his immediate task. Hitler – and similarly Goering and many little *Führers* in this social-Darwinistic system of command – relied on his own genius and refused to submit to a rigid routine of regular attendance at conferences of permanent boards. When the *Wehrmacht-Akademie*, in 1938, drew up a manual for the conduct of war at the highest level (*Kriegführung*) providing for such a top

organisation, Hitler prevented this manual from becoming effective. He did not want to have anybody telling him whom he would have to consult and when. The overall conduct of the war he made his own domain. This was also one of the reasons why the general staff training of the *Luftwaffe* did not include courses in grand strategy and why the *Wehrmacht-Akademie*, which tried to train higher officers in this, ceased to exist in 1938. The Supreme Command of the Armed Forces, and especially the Armed Forces Operations Staff, was kept small and could thus not undertake the effective direction of the war as a whole and the operations of all the Services. Under all these circumstances it is no wonder that nothing like the British and Allied committee system ever developed. Hitler's conferences were usually monologues; Field Marshal Milch's air armament conferences were parliamentary debates with very few definite or recognisable conclusions and hardly any decisions to be carried out. Too many people participated.

In conclusion I should like to point out that many of the problems of the *Luftwaffe* were also encountered by other air forces, and indeed still occur in new disguises. The *Luftwaffe* was too young – just 4 to 6 years of age, when the war started – to have enabled its leaders to gain sufficient experience in the handling of such a highly technical service, and during the war it had no time to cope with the multitude of problems which were mainly caused by Hitler's irresponsible policy and strategy, on which the *Luftwaffe* had next to no influence. Goering's political influence on Hitler had been on the decline since 1938. The *Luftwaffe* had no time to get away from the old army style of command and its leaders were still too much involved in thoughts and attitudes that corresponded more to those of a pre-industrial and authoritarian society and had not yet developed to match the degree of industrialisation which Germany had now reached and which had enabled her to build a strong air force. The mental approach to the air war was inadequate. While the outward appearance and form of contemporary RAF and British staff documents already demonstrated a great amount of rationality, comparable German documents did not. This indicates an irrational, or romantic, approach to the overall direction of the war on the German side (though not to tactics and operations) in contrast to the systematic grand strategy employed on the British and Allied side.

On the strategic and grand strategic level, *Luftwaffe* leadership was poor. But within its own limitations and the ones imposed on it from the outside – here I mean Hitler, the National Socialist regime, the war itself, and allied superiority in men, material and advanced thinking – the *Luftwaffe*, I believe, performed very well. That it lasted so well through this long war was mainly due to its good tactical and operational leadership, its initial technical superiority and the fighting virtues of its soldiers. The fact must, however, be faced that it was the fate of the *Luftwaffe* to have to serve Hitler's political, and inhumane ideological aims in the most terrible war ever experienced.

What I wish to make clear above all is that if the air war, as Richard Overy says, was a test of the modernity of industrialised nations, then its outcome was the proof of that modernity.

## QUESTION TIME

**Chairman:** We have had this evening an enormous amount of food for thought. Indeed some of us are probably finding it a little bit difficult to take it all in and probably want to reflect on what has been said. Who would like to start the ball rolling?

**Sidney Goldberg:** To me your talk this evening does not have quite the same flavour as your book which I read with very great interest. There was no mention of organised antagonism or disguised rivalries and I must respect your wish to steer clear of personalities and controversies, so I would just like to ask one question: Was the high level of suicides in the High Command of the *Luftwaffe* indicative of a high degree of incompetence?

**Dr Boog:** There is some truth in this suggestion. Udet, for example, had been pressed into the *Luftwaffe* by Goering, was unsuited to the competitive environment, and when he realised Germany could not win tried to get out but could not.

**Tony Bennell:** Can I ask about R & D at the end of the war? It is sometimes suggested that Speer and others were able, even as late as 1943/44, to begin to put some direction into the *Luftwaffe's* R & D programme and the development of new aircraft that they would otherwise not have had, despite the order that you have mentioned that there was to be no R & D on the grounds that the war was in effect over. Is this valid? Were there types which were brought forward because Speer was able to see that they could be rapidly developed, like the four-engined bomber that you have mentioned and presumably the Me 262?

**Dr Boog:** It was not only due to Speer that things improved. The *Luftwaffe* was aware of the mistakes it had made as early as 1942 and Speer had just become Minister of Armament, but he had nothing to say about the Air Force; he was just responsible for the Army. The Navy he got in 1943 and the Air Force in 1944. The way Speer made himself felt in the *Luftwaffe* was by withholding raw materials in order to force it to give production and research to him. This was in spite of Goering, who as you know, was the next one after Hitler. Of course the shortcomings in R & D had been realised much earlier and they tried to make up for them, but it was too late. The best example



is radar. Centrimetric research was stopped in the spring of 1939 because the Professor who did it – I forget his name – thought that nothing would come of it. Another example is that there were only four hundred people working in the electronics industry in the first years of the war. All the others were at the front. And then in 1942, when they noticed that the British were far ahead, they still neglected it, and here you have the offensive principle. When you are on the offensive you develop navigational aids, bomb aiming aids, and things like this. You do not develop radar, which is a more defensive weapon. Eventually they did call in all the scientists but it was too late.

**Graham Hall:** Is there any evidence to support the suggestion that astrologers were brought in?

**Dr Boog:** I can just make one comment here. Goering as you know, was in charge of the weather service which was also responsible for weather forecasting for the Army. So he got rather nervous and sent somebody to ask an astrologer what the weather would be.

**Denis Richards:** I was surprised by only one thing that our speaker said this evening and this was when he pointed to deficiencies in German air transport. I am sure that was true later on, but at the beginning of the war it was always reckoned that it was a very strong point for Germany that she had a fleet of something like 450 transport aircraft, whereas the RAF had a mere one or two squadrons of Bombay transports, plus a communications flight for flying VIPs about. We, of course, were rescued by the Americans, but what happened to the Germans? Obviously the planes got out of date and were shot down too easily. Did they totally ignore the development of this splendid corps of transport planes they had at the beginning.

**Dr Boog:** At the beginning of the war there were only about two squadrons of operational transport aircraft and they were intended to transport the airborne troops and the parachutists. The several hundred other aircraft of this kind were primarily training planes, so there was no transport air fleet. Subsequently disagreements between the Head of Flying Training and the Head of Air Transport resulted in all training planes being withdrawn from the training units for use in air transport operations. This was the crucial point; later the

situation was changed, but it was too late.

**Sir Frederick Sowrey:** We in this country have always understood that one of the most effective military planning staffs was the German General Staff, the OKW. How was it that this got lost in the formation of the *Luftwaffe*, when so many of the senior *Luftwaffe* officers had themselves been Army Officers?

**Dr Boog:** I am afraid I do not consider that the OKW was a particularly formidable planning staff. The Army General Staff from which the senior *Luftwaffe* officers were drawn was restricted in its military thinking. This was very bad. Attempts were made in the 1920s and early 1930s to widen the training of General Staff officers to include politics, economics, etc, but these did not last. All we had was an operational staff for fighting battles but not for the conduct of a big war. And why this OKW organisation did not work is a long story. The three Services were fighting against each other and since Hitler did not want anything strong under him he kept the OKW staff very small. The common saying was that these people were just there to carry letters from Hitler to the Services and back again. It was a very small staff. It was not effective at all.

**Sidney Goldberg:** How was it that most of the records of the *Luftwaffe* were destroyed whereas, if I understand it correctly, so many of those of the *Wehrmacht* remained intact?

**Dr Boog:** The *Luftwaffe* destroyed its own records in early May 1945 in Southern Bavaria by order of Goering.

**Miss Goulter:** I am interested to hear about the German attitude towards maritime aviation. Have you noticed during your researches any discernible change in attitude towards attack on Allied, particularly British, merchant vessels – especially given the increasing success of the British attacks on German merchant vessels operating between Norway and the Dutch coast? Hitler seems to have taken very seriously the British attacks on German merchant vessels and placed considerable numbers of FW 190s in Norway.

**Dr Boog:** As the war developed we did not have enough aircraft to continue attacks on ships. All we had were commercial planes such as the FW 200 which we used for reconnaissance purposes to help the U-boats attack ships. During the air-sea battle in 1943 in the

Mediterranean we did not have enough planes to use in conjunction with the Navy and, in fact, Goering had withdrawn all the planes assigned to the Navy in the course of 1940-41.

**Desmond Penrose:** Was it purely lack of aircraft that precluded greater attacks on Royal Air Force Bomber Command stations that might in turn have reduced some of our effort against your industries, particularly from 1943 onwards?

**Dr Boog:** In 1943 we had no planes for this purpose. We did scratch a few together to resume strategic air attacks against Russia and England, but these were only on a small scale. Our planes were too old to penetrate as far as the bomber stations, There were too many British fighters in between.

**Desmond Penrose:** Yet you did have considerable success with your intruder squadrons later on.

**Dr Boog:** True, but Hitler was not keen on these operations. He wanted to have enemy planes shot down over German, or German-occupied, territory so that the people could see them. When they were shot down in England nobody saw them. Certainly the *Luftwaffe* wanted to pursue these tactics but Hitler opposed them.

**Mr Saxon:** One aspect of *Luftwaffe* operations was consistently first class, namely the anti-aircraft defences, and I assume that many of the deficiencies that you have referred to did not apply to the ack-ack. Would that be right?

**Dr Boog:** I am not convinced of this; in my view this was the weakest part of our defence, though certainly many planes were damaged. Hitler of course was in favour of the *Flak*; he wanted as many guns as possible, but the *Flak* shot down less than half of the number of planes shot down by the fighters. It would have been much better to have devoted more effort to the production of fighters, but Hitler was obsessed with *Flak* and in 1941 wanted to disband the whole of the fighter force to concentrate on anti-aircraft guns. Speer told him that we could not make the industry do this. We could not just start producing *Flak* guns tomorrow instead of fighters. No, fighters were much more efficient than *Flak*.

**Tony Richardson:** Dr Boog may well be right that *Flak* was

inefficient but it sure frightened the pants off me!

**Air Commodore Colin Kunkler:** You intimated that possibly the *Luftwaffe* was not really ready for war. You could also say that about the Royal Air Force. We had our bomber enthusiasts: 'The bomber will always get through'. The only problem was that they did not think it had to hit anything and it was only after vast technological advances such as Oboe and H2S that we were able to make the bomber do its job. But on the other hand the *Luftwaffe* had had a very valuable practice match, if I may put it that way, in Spain. Do you consider that Spain was an advantage or a disadvantage to the *Luftwaffe*? You may have learnt some very good lessons, for example for the attack on Warsaw. I do not doubt that it must have taught you much for the wider European conflict.

**Dr Boog:** You said that the *Luftwaffe* was not ready for war. Of course no armed force is fully ready for war at any time. It depends on how you look at it. I did say that due to technical superiority and so on, the *Luftwaffe* had its successes, but it was not ready for the kind of war that actually developed, because its way of thinking was not up to the level of technology necessary to conduct such a war.

On your other question, Spain taught us a lot, but it also led us in the wrong direction. The most important lesson was close air support and we had successes with that in the Polish campaign and to a great extent in France. The breakthrough near Sedan on 14 May was a success but after that the *Luftwaffe* became stuck with this type of air war. In Russia, for instance, Directive No 21 said that all 'operational' air war – and here they meant strategic air war – had to be non-stop, but the *Luftwaffe* must not conduct a strategic air war but solely employ its forces in direct and indirect air support until a line from the Gulf of Finland to the Caspian Sea was reached. Now this never happened. So the *Luftwaffe* forgot about bombing, for instance the main communications centres, and the Russians transferred their industries to the East where we could no longer reach them.

**Chairman:** Could I follow: on from that? You mentioned that you saw the Battle of France, in particular the breakthrough at Sedan, as being one of the *Luftwaffe*'s great successes. Are there any other

campaigns that the *Luftwaffe* was involved in during the war that you would regard as particularly successful?

**Dr Boog:** Taking a broad view, I would say that the operations which were conducted in support of the Army, that is in close air support, were usually successful. Operations which were more or less strategic in character failed.

**Chairman:** I would have thought one major success was to build up the air defence of Germany against the Anglo-American bombers.

**Dr Boog:** First, let me mention another success, namely the air-sea battle near Crete in 1941. This was also close air support but this time for the Navy. Turning to your point about air defence, yes of course it was a success. What else could we have done? But the number of bombers was too great, and only one bomber could be engaged at any time. Kammhuber wanted to involve the entire German electronics industry in his night-fighter defence system so Hitler threw him out and sent him to Norway, because we could not afford it. In general we switched over to defence too late and whatever we did was too late, because we were so obsessed by the offensive principle.

**Sebastian Cox:** You were explaining what you considered to be the weaknesses of the German staff officers. One of the things that I think was probably the strength of the British system was that Squadron Commanders, as the war progressed, were rotated from their commands and frequently posted to the Air Ministry, where their experience at the front would obviously be utilised to assist the Air Ministry in formulating its policy. Now I know, because you have corresponded with the Air Historical Branch on exactly this point, that, for example, German fighter pilots were not rotated out of the front line and stayed essentially as fighter pilots from the time they joined their unit, until they were either shot down or promoted so high – as with Galland – that they no longer fought. Was there no rotation of front-line experienced personnel into the German Air Staff and Air Ministry.

**Dr Boog:** This is a good question. In fact the fighter pilots had to fight until their nerves broke down or until they were killed, or otherwise could not do the job any more. A good friend of mine was

charged in 1944 with motivating these nervous wrecks of Squadron Commanders and Wing Commanders to fight again. He flew American or British machines and he was in radio contact with the other aircraft and he flew all sorts of manoeuvres, and they had to try to 'shoot' him down. This is the way he tried to motivate them. As regards rotation, there was very little because in the end we no longer had enough fighter pilots. Goering did not want any of his pilots sent for general staff training. There were so few staff officers that they could not rotate to the front. So there was a gap between the staff and the front line. In the early years, of course, some of the Air Force officers who had gained experience, for instance, in Russia were sent to the General Staff College to act as instructors there, but later on for lack of personnel this was impossible.

**Air Commodore John Greenhill:** I listened particularly to what was said about the failures of senior staff training in the *Luftwaffe*. Could you step out of the strict historical context of your talk and offer an opinion on whether today's *Luftwaffe* has taken all this on board, and to what extent are these analyses a part of present *Luftwaffe* staff training?

**Dr Boog:** That is a very good question and I must tell you that the major tendencies I have tried to describe exist to some degree in all Air Forces of the world. Certainly the *Luftwaffe* has learnt from this, but when I talked about these things recently to the staff of our Air Transport Command, the Commanding General asked me if I was talking about the present-day *Luftwaffe* or about the old one!

**Chairman:** Ladies and Gentlemen, I am afraid I must draw this discussion to a halt. I suppose the conventional wisdom in the UK about World War II is that the *Luftwaffe* faced increasing problems as the war went on but that it was, for most of the time, a highly dangerous opponent. Usually we here dwell heavily on all the shortcomings of the RAF, and I just wonder whether our speaker fully appreciates the extent to which the *Luftwaffe* put the fear of God into us. So perhaps we come back to a truism that the winner is usually the side that makes the fewer mistakes. May I say on behalf of us all a very warm thank you to Dr Boog for coming and for addressing us so effectively in what is, after all, for him a second language.

## FURTHER COMMITTEE MEMBER PROFILES

### **Air Commodore J G Greenhill FBIM**

John Greenhill was educated in Edinburgh and at St Edmund Hall, Oxford before joining the Royal Air Force in 1945 for pilot training at the RAF College – Cranwell. His front-line flying appointments covered the last of the piston fighters (Spitfire & Tempest) and the early generations of jet fighters (Vampire, Meteor, Hunter, Javelin) briefly on No 5 Squadron in the last days of the Raj on the NW Frontier, No 16 Squadron in Germany (including a spell on the ground at Gatow at the beginning of the Berlin Airlift) and No 245 Squadron in Fighter Command.

The Sandys' White Paper of 1957 proved, for him as for many others in Fighter Command, a watershed and within a year he found himself in Jordan seconded to the RJAF in command of the RAF element of a British training team and subsequently as Air Adviser to HM King Hussein.

As so often on secondments, actual duties bore only a passing resemblance to the brief. But this exciting tour proved good experience when later as Air Adviser to the British High Commissioner in Zambia during the Rhodesian UDI crisis he found himself as a GD Officer helping, among other things, to calculate the oil carrying-capacity of the Benguela railway line!

Staff College in 1961 led inevitably to a succession of staff appointments in OR, Defence Operations Plans, the Air Secretary's Dept. and finally in 1980/81 as Director, Organisation & Admin Plans (RAF), engaged largely on an asset-stripping exercise.

Interspersed with these were tours with Glasgow and Strathclyde UAS – an Edinburgh man to Glasgow? –and as Air Attaché in Rome when the Italian Air Force generously allowed him to fly in virtually everything they had in, or coming into, service.

He is a graduate of Staff College, CFS, the Day Fighter-Leaders School and the Senior Officers War Course.

Since retirement he has been working for the NHS on contingency planning but keeps himself sane as a Flying Officer, RAFVR, flying Chipmunks with one of the Air Experience Flights. He isn't sure whether

the cadets regard him or the aircraft as the more venerable part of RAF history!

### **Commander P O Montgomery VRD & Bar RNR**

Peter Montgomery was born in March 1923 and educated at the Roan School until his family moved to Scotland in 1937. He joined the RAFVR in July 1940 and trained as a pilot in Canada (in 1941 sharing, at Service School, the same instructor as our chairman Air Marshal Sir Frederick Sowrey). After a tour night fighting on Defiants with No 410 (Canadian) Squadron and No 256 Squadron he joined No 600 Squadron at Salerno in October 1943 and completed a second tour in October 1944, being commissioned from warrant officer on his 21st birthday.

Demobbed as a flight lieutenant in 1946 he found RAF Reserve flying opportunities in Scotland limited and joined No 1830 Squadron, RNR Air Branch in 1951, flying Fireflies and Sea Furies and qualifying in Deck Landing in 1953. With the winding up of all Reserve flying (except University Air Squadrons) in 1957, he transferred to General Service in the RNR (Seagoing – known to the Air Branch as fish-heading). Tay Division RNR was prepared to accept a Lt Cdr with no seagoing knowledge but it took three years to learn the language!

Finally Peter qualified as a Watchkeeper and later as a Commanding Officer (RN Destroyer Command Examination) taking coastal minesweepers to sea at weekends and on NATO exercises, once even to the West Indies. Promoted to Commander, he had at times as many as five ships under command and was Senior RNR Officer of a division of ships check-sweeping the Dutch and German coasts for wartime mines. At Tay Division, Peter became Commander and was Commander of HMS *Unicorn*, the oldest ship afloat in the Navy, laid down in 1798, until the ship was given to Dundee as a museum.

After moving to Worthing in 1971 he took part in NAT() exercises as Commander, Operations in the UK, Malta and Gibraltar until he retired from the RNR in 1978. All this was part-time activity, as he ran his own business for 25 years. He retired from a balsawood company in March 1988 and runs his own consultancy on balsawood technology.



**Minutes of the Second Annual General Meeting of the Society  
held at the Royal Aeronautical Society,  
4 Hamilton Place, London, W1 on Monday 14th March 1988**

*Present:* Air Marshal Sir Frederick Sowrey (in the Chair) and 67 other members.

*1. Chairman's Report*

The Chairman welcomed members to the Meeting and asked for their consent to take the Notice of Meeting as read and this was agreed. He mentioned that once the formal business of the Meeting was concluded there would be a brief discussion period prior to the lecture by Mr Cecil James scheduled to start at 6.30 pm. The lecture and a discussion panel after the lecture would be chaired by Air Chief Marshal Sir David Lee.

The Chairman stated that there was no doubt from reports he had received of the valuable contribution that the Society was making to the history of the Royal Air Force that was not undertaken by any other institution. Our output had been solid history not just waves of nostalgia; this history had been sometimes personal, always accurate but not always comfortable. The achievement of 1987 was considerable. There were three major lectures – by John Terraine ('World War II – The Balance Sheet'), Dr. John Tanner ('The RAF Museum') and Air Commodore H Probert ('The Air Historical Branch'). The chief function in the year was the all day seminar 'Air Aspects of the Suez Campaign – 1956' held on 26th October at the Royal United Services Institute, bringing together planners, commanders and operators together with a large cross-section of the audience who had participated at varying levels. This provided a personal insight into the operation not previously covered. It was built on official reports which, with personal reminiscences, opinions and judgements filled in the gaps which had previously existed.

The lectures were recorded in the first two copies of the Proceedings to an acknowledged high standard and he felt an explanation was desirable as to why *Proceedings 3* was different. At the time of making the publishing decisions, the Committee was faced with the uncertainty of the success of the Society. Towards the end of last year only a small proportion of the 500 members of the Society had renewed and to date

only 281 have renewed. He felt the reason could possibly be inertia but he would like to hear from the members if this were not the case. At the time of decision it was clear that the publishing costs on the previous level could not be justified and so the Committee took a conscious decision that computer-generated script would have to be accepted. The Editor himself put in 56 hours of very detailed unpaid work on our behalf, quite apart from the normal arrangements he makes for printing, collating and despatch of the publication. The Chairman said he was very aware of the need for the Proceedings to be of a uniformly high standard as it was our only link with members unable to attend the lectures, seminars and meetings. If there were any benefactors present at the Meeting he would very much like to see them after the Meeting. The Committee will examine this matter again as they are not satisfied with the present situation.

The Chairman felt that membership numbers must be the answer and a new pamphlet was available which he invited members to collect on their departure if they felt they could recruit any new member. The Committee is also being given some free advice on publicity. Recruitment was felt to be particularly important so far as the mid-rank and mid-career officer was concerned and should help him in his career. Principles of air power are of paramount importance here but so too are lessons of leadership, morale, *esprit de corps* and inter-Service co-operation that history can provide. The members may have views of their own which the Committee would be pleased to hear in the discussion period after the Meeting. He hoped the members were attracted by the future programme outlined in the Proceedings. If there were any comments members wished to make on his report could they please defer them until the discussion period after the Meeting.

## *2. General Secretary's Report*

The General Secretary reported upon the Committee's decisions on various points raised by members at the previous Annual General Meeting.

## *3. Treasurer's Report*

The Treasurer reported upon the Society's finances during the year as set out in the Accounts sent to all members. The Society had set itself modest targets in the scale of meetings and publications with a level of

subscription at £10 which it was hoped would serve it for a term of years. He explained the items in the Income and Expenditure Account shown in the Accounts and invited any questions. A point was raised on printing costs which was dealt with by the Treasurer.

*4. (a) Report and Accounts for the year ended.31st December 1987*

It was RESOLVED that the Report and Accounts for the year ended December 1987 be received, approved and adopted.

*(b) Annual Subscription*

It was RESOLVED that the annual subscription of this Society remain at £10 for a further year.

*5. Appointment of Committee*

i. It was RESOLVED that the re-appointment of the existing Committee of the Society en bloc for a year to the end of the AGM in 1989 be and is hereby approved.

ii. It was RESOLVED that the re-appointment of all existing thirteen members of the Committee of the Society as listed in the Notes to the Notice of the AGM (being held on 14th March 1988) to hold office until the close of the AGM in 1989 be and is hereby approved.

(Extract from Notes to the Notice of AGM).

Note 1. Members of the existing Committee (\*= ex-officio member):-

Chairman:	Air Marshal Sir Frederick B Sowrey KCB CBE AFC
General Secretary:	B R Jutsum FCIS
Membership Secretary:	Group Captain H Neubroch OBE FBIM
Treasurer:	A S Bennell MA BLitt
Programme Sub-Committee:	Air Commodore J G Greenhill FBIM *Air Commodore H A Probert MBE MA Air Commodore A G Hicks MA CEng MIERE MRAS

Publications  
Sub Committee:

T C G James CMG MA  
S Cox BA MA  
A Richardson  
P G Rolfe ISO  
\*Group Captain M van der Veen  
MA CEng MIMechE MIEE MBIM  
\*M A Fopp MA MBIM

*6. Reappointment of Auditors*

It was RESOLVED that Messrs Pridie Brewster Chartered Accountants be and are hereby re-appointed Auditors of the Society for the period ending at the conclusion of the next General Meeting at which Accounts are laid before the Members, and that their remuneration be fixed by the Committee.

*7. Draft Constitution*

It was RESOLVED that the Constitution as set out in Note 2 of the Notice of the AGM of the Royal Air Force Historical Society being held on 14th March 1988 be and is hereby approved and adopted as the Constitution of the Royal Air Force Historical Society.

*8. Closure of Meeting* The Chairman declared the Meeting closed at 1815 hours.