

Perspectives from within the Profession

By Philip Sabin

It is now 14 years since the 1st edition of AP 3000, the RAF's first official statement of air power doctrine since AP 1300 in 1957.¹ It is nine years since the Chief of the Air Staff's Air Power Workshop published its first volume of theoretical and conceptual studies,² and it is seven years since the launch of the RAF Air Power Review which was 'intended to provide an open forum for study which stimulates discussion and thought on air power in its broadest context'.³ Air power education and training in the RAF have been revolutionised over this period, in particular through the shift from the old RAF Staff College at Bracknell to the joint service Defence Academy at Shrivenham with its integrated academic staff and degree accreditation. Further changes are in immediate prospect, as the single service phase of

the Advanced Command and Staff Course (ACSC) is discontinued from 2006, but as the Basic and Higher Air Warfare Courses (BAWC and HAWC) at Cranwell, open to the entire cohort of officers at the appropriate level of seniority, come on stream. Now seems a good time to take stock of the current state of air power thought and understanding across the RAF, and of how these might be developed still further as the second century of air power continues in earnest.

I have been involved myself in many of the changes discussed above, as a long-standing contributor to the Air Power Workshop, and as one of the academics who helped to shape the present pattern of air power education at the Defence Academy.⁴ However, in this chapter,

I am concerned primarily to reflect the views and ideas of others who have been kind enough to give of their time to help in creating this snapshot of where air power thinking in the RAF currently stands. I will first outline my research methodology in conducting the study over the past 18 months. I will then detail my principal findings regarding the levels of air power thought and understanding which currently exist within the profession. Finally, I will discuss what ideas emerge for the future from the meetings I have had.

Methodology

I was very clear from the outset of this study that I did not want to create a mere *précis* of the many expressions of air power thinking which have appeared in Britain over the past fifteen years. The UK, together with the USA and Australia, has been at the forefront of the recent revival of air power thought, prompted in large part by the twin spurs of rapid technological advance and the fast-changing strategic demands of the post-Cold War environment. There are so many sets of ideas in the publications discussed above and in other works by British authors like Tony Mason and Andy Vallance that it would be impossible to do them any justice whatsoever in the limited space available here.⁵ Instead, I wanted to broaden the focus beyond the intellectual 'leading edge' to examine the absorption of this revived intellectualism within Britain's air power profession as a whole. After all, it is of little use for self-selecting experts to pontificate to one another, unless their ideas have a positive impact on the wider community. Has the RAF truly become a 'thinking Air Force', or are the military and civilian intellectuals unrepresentative exceptions within the overall profession?

To answer this question, I decided to adopt a three pronged research methodology. The first element was obviously to review relevant literature. Although there are plenty of contributions on substantive issues relating to air power, there is (not surprisingly) precious little publicly available material on my precise area of focus. An ACSC Defence Research Paper written by Wg Cdr Cameron in 2002 does address some of the problems inherent in achieving wider

acceptance of doctrine within the RAF,⁶ and I was also fortunate to be given confidential access to an official Air Force study conducted that same year into training needs in the area of air power and air warfare. There are some useful snippets in other written sources, but overall it was clear that my main material would have to come from elsewhere.

This leads me to the second element of my research, which involved meeting in late 2003 with 'focus groups' of officers at varying levels of seniority. I used as a vehicle for this the various courses at the Joint Services Command and Staff College, and I met with sample syndicate groups of RAF officers undertaking the Junior Officers' Command Course (JOCC), the Intermediate Command and Staff Course (ICSC) and the ACSC, as well as with a group of British Army and Navy officers on the ACSC. Each group was around 12 strong, and I endeavoured as far as possible to arrange our meetings at a point early in the course when they had not had time to undertake serious air power studies on that course itself. The first part of each session involved each officer completing a standard questionnaire, which I have reproduced for reference as an Annex to this chapter (see page 32). In the second half of each meeting, I asked the officers to discuss a series of more open questions, such as what they saw as the purpose of air power doctrine and of specifically British air power doctrine, what would encourage them to spend more time reading about air power, and how they felt the air power doctrine process might be improved.

It is important at the outset to record some basic cohort data for these focus groups, to set my findings in their proper context. Of the 11 RAF officers on the ACSC, six were aircrew, and years of service ranged from 12 to 26, with an average of 18. Of the six Army and four Royal Navy officers on the ACSC, three (all RN) were aircrew, and years in service ranged from 10 to 14 (average 12) for the Army students and from 16 to 23 (average 19) for those from the RN. The 12 RAF officers on the ICSC (Air) included six aircrew, and had between 10 and 20 years of service, with an average of 15.5. Of the 12 RAF students on the JOCC, six were

aircrew, and years in service ranged from 7 to 20 (not all necessarily as an officer), averaging 14. Hence, although the officers varied significantly in seniority, all had spent considerable time in their service, and they offered a useful testing ground for the impact of the growth in air power thinking and education over that same period.

The third and final element of my research involved extended interviews with a range of key individuals in late 2003 and early 2004. I met with 14 people in all, including very senior RAF officers (especially those involved in doctrine and education) and civilian air power experts closely associated with the Service. Some of my questions were tailored to the particular responsibilities of each individual, but there was a strong common core including such questions as how they kept themselves informed on air power issues, what they considered to be the most important books on air power, what they saw as the main challenges of air power education, what level of air power understanding was required at different stages in an officer's career, and where one should strike the balance between history and theory or between academic and military inputs. I also posed to the individuals some of the same questions used in the focus group discussions, such as the purpose of British air power doctrine and how the doctrine process could be improved.

Given the potential sensitivity of some of the issues raised, I felt it was important to assure both the focus groups and the individual interviewees that their remarks would not be attributed to them as individuals in the present chapter. The key thing was that they should feel comfortable in speaking openly about perceived problems, so that the issues may be properly aired. The RAF has a strong tradition (stemming in part from its flight safety procedures) of seeing criticism as more of an opportunity than a challenge, and I am deeply grateful both to the Service and to JSCSC, without whose help and cooperation this study could not have been carried out. One drawback of anonymity is that I cannot thank in person the many individuals who contributed their valuable time to this project, but I would also like to record my gratitude to them collectively at this point.

I would be the first to admit that my research has many shortcomings, and cannot be seen as offering more than a first cut at the various issues involved. My sample sizes were small, and my methodology deliberately rather loose and open ended compared to the longer questionnaires and more formal numerical responses of the RAF's own 2002 study. The pressure of other commitments precluded me from approaching a range of other groups and individuals whose views would, I am sure, have been very helpful in casting further light on the issues and dilemmas at stake. One should not, for example, neglect the perspective of airmen and NCOs, whose education was rightly a preoccupation of my interviewees alongside that of officers themselves. However, for all its limitations, I think my research does reveal some interesting patterns and ideas, and I present these here as a small contribution to the ongoing debate over where British air power thinking now stands and how we should proceed from this point onwards.

Existing patterns

A theme which emerged strongly from my individual interviews was that RAF officers were seen as less knowledgeable about overall doctrinal and professional matters than their Army colleagues. This was attributed primarily to the more highly technological nature of the Service, with a consequent risk of 'stove-piping' and over-specialisation. The skills needed to perform missions and other tasks at the tactical level were seen as more distinct from the demands of operational and strategic warfighting than was the case in the Army, and as requiring more intensive practice and training, thereby leaving less time for reflection on higher things. Some interviewees also highlighted the existence of a long-standing anti-intellectual culture among airmen, arguing that it was not 'cool' to admit reading. However, most felt that the situation was improving as a result of the many recent initiatives, and one cautioned against underestimating the ability of bright individuals to get scraps of information and pull them together into a coherent approach.

The responses to my questionnaires bear out this rather downbeat view of the degree to which the average RAF officer has taken on board the new



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intellectualism in the air power field. Only one of the JOCC students, and only four of those on the ICSC and three of those on the ACSC, said they had read any articles in US publications such as the *Aerospace Power Journal* and *Air Power History*. The figures for the Air Power Workshop's four previous books were somewhat more encouraging, with seven of the RAF students on the ACSC, five of those on the ICSC, and two of those on the JOCC saying they had consulted at least one (often in connection with their current or previous Staff College courses). Not surprisingly, the RAF Air Power Review had attracted the widest readership, with only four JOCC, four ICSC and two ACSC students not having read it at all. The number of articles perused by the remainder was generally in single figures, but two officers on the ACSC, four on the ICSC and two on the JOCC claimed to have read significantly more. There is no evidence in the questionnaires that aircrew are any more or less well read than their ground branch colleagues.

The great majority of the officers had read or consulted at least one of the three successive

editions of AP 3000, though two JOCC and four ICSC students still claimed not to have done so at all. It is very clear from the responses that the main impetus to come to grips with the document has been provided by courses which the officers have been taking or about to undertake, usually at Cranwell or JSCSC. One respondent did re-read the doctrine prior to Operation TELIC in 2003, but another saw it as useful 'for aspects of Service courses, not for the fulfilment of my primary role'. The blanket distribution of the publication to all officers did in itself prompt a degree of browsing, though one officer still complained that he could not find a copy on his squadron prior to attending ACSC. Typical responses which give a flavour of the whole are: 'I read Edition two cover to cover as part of Initial Officer Training in 1997; dipped into Editions two and three in last five years to clarify points', and 'Briefly read the first edition in about 95-96. It was issued to all officers and I was vaguely interested. Read the third edition more thoroughly in preparation for this course'.

I explored in the discussion sessions what factors affected the officers' reading on air power issues in their normal jobs, and three messages came through very clearly. First, there are severe logistic constraints, with the pressure of everyday duties

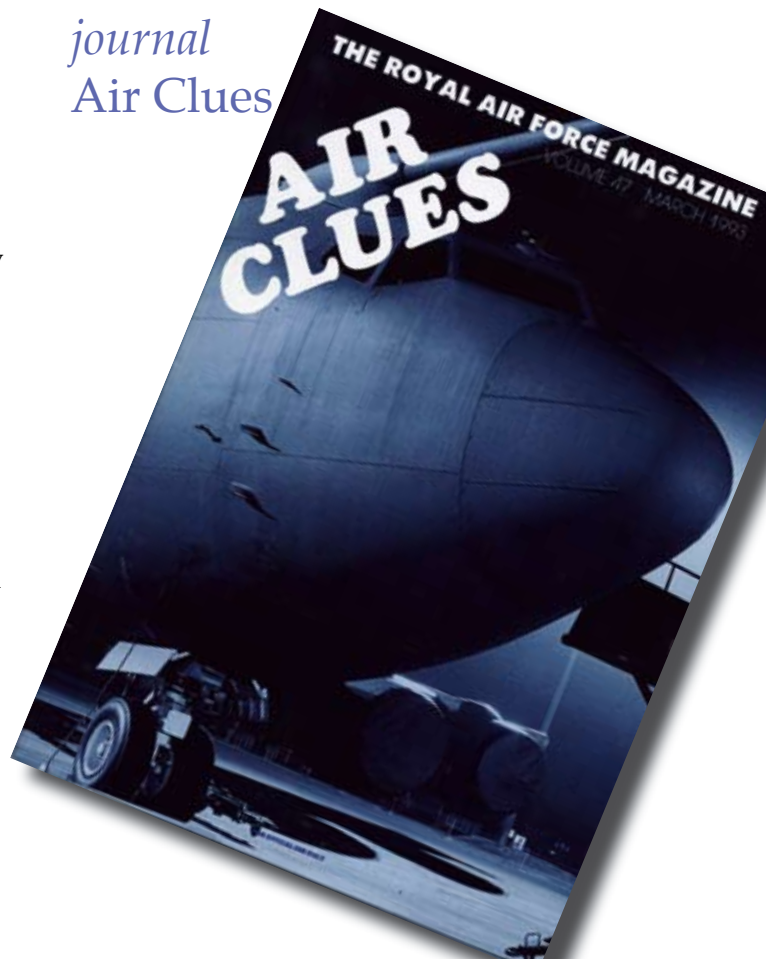
leaving little time for reading, and with most literature simply being unavailable in the crew room context. Second, any reading material must be perceived as interesting and accessible. AP 3000 in its current form was widely criticised as too long, complex and theoretical, and the officers preferred stories from recent air power history, presented in 'bite size chunks' as in the old journal *Air Clues*. Third, there was widespread agreement that high level doctrine and air power theory were of little immediate relevance to the successful performance of most officers' day to day duties, although some did concede that knowledge of these wider issues offered a better sense of the profession of which they were all part, and was useful for those aiming to progress to greater things.

Given this grass roots scepticism about the immediate utility of doctrine, I discussed with my more senior military interviewees why they tended to be so much in favour of spreading the air power gospel and ensuring that officers became 'warfighters first, specialists second'. The main rationale they offered was that this broader knowledge would become vital as the officers moved into more senior appointments, whether involving operational command and staff jobs or advocacy of air power interests in the joint environment. Two more immediate reasons were also put forward — that in an age of expeditionary operations, the moral component of fighting power required that personnel of all ranks be steeped in their Service ethos to help them endure the risks and discomfort involved, and that even junior officers needed to be able to inspire their own subordinates lest a culture of doctrinal apathy become ingrained.⁷ There was, though, a clear recognition that required levels of air power awareness rose with rank, and some of my interviewees explicitly eschewed 'force feeding' and suggested instead that those thinking 'beyond their level' be identified and helped to progress accordingly.

Besides revealing how widely the focus group members had read the main categories of official air power literature, I used the questionnaires to let them define for themselves what their

main sources of information were (aside from personal experience) and what air power conflicts they knew best. Responses on the first issue were complicated by the fact that some officers

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Air Clues



identified specific books, lectures or the like, while others just listed generic categories such as 'films' and 'courses'. However, the answers are still very interesting. The JOCC students seem to have derived most of their air power understanding from professional training courses and from TV documentaries, followed closely by books, squadron lectures and discussions, Initial Officer Training (IOT), AP 3000, films and magazines. The ICSC students made most mention of Command and Staff Training, books, magazines, TV documentaries and media reports, with squadron discussions, doctrine publications, professional training courses and films also making a strong showing. RAF officers on the ACSC gave greatest prominence to Command and Staff Training, with professional training courses and doctrine publications like AP 3000 also often cited, and TV documentaries, films, magazines and exercise experience playing strong supporting roles. The samples are too small and the categories too vague to make overmuch of these findings, but what is most striking is the diversity of the sources identified, and the prominent role played by 'popular' material such as documentaries, books and films alongside the 'official' contributions made by the Service itself.

When one analyses the air power conflicts about which the respondents professed most knowledge, some equally interesting patterns emerge. The RAF officers on all three courses claimed by a significant margin to know most about one or more of the various air operations which have been conducted in the Balkans, the Middle East and Sierra Leone over the past decade, with many having participated personally in these operations. The most recent conflict in Iraq, 2003, was listed first by no fewer than eight of the JOCC students, seven of the ICSC students, and four of those on the ACSC. It is clear from these results that the average RAF officer knows considerably more about contemporary air battles than about those of the more distant past. That being said, some conflicts before the mid-1990s did make a fair showing, and eight respondents across the three groups put such a conflict at the top of their list. The first Gulf war was the most prominent, with three ACSC students having taken part in it

themselves, but World War Two also registered very significantly, and Vietnam and the Falklands were each mentioned somewhere on their list by nearly half the members of each group.

It is interesting to compare this pattern with the results of the equally open-ended question which I posed to all my individual interviewees, when I asked them to name up to five books which they considered to be the most important and useful works on air power (defined as they pleased). The most popular book, with six mentions, was John Terraine's *The Right of the Line* (a history of the RAF in World War Two).⁸ Next, with five mentions, was Phil Meilinger's *The Paths of Heaven* (an edited survey of the evolution of air power theory).⁹ Four people nominated John Warden's *The Air Campaign* (a theoretical study based on historical examples drawn mostly from World War Two).¹⁰ Attracting three mentions each were Richard Overy's *The Air War, 1939-1945*, Webster and Frankland's four volume official history of *The Strategic Air Offensive against Germany, 1939-1945*, and Mark Clodfelter's *The Limits of Airpower* (about the U.S. bombing of North Vietnam).¹¹ Finally, two people each mentioned Jack Slessor's *Air Power and Armies* (a broad ranging study based on his experience in World War One) and Tony Mason's *Air Power: A Centennial Appraisal* (an eclectic survey from the pre-World War One to post-Cold War eras).¹² Twenty-nine other works, ranging from Book 1 of Clausewitz's *On War* to AP 3000, and including evocative memoirs such as Richard Hillary's *The Last Enemy* as well as weightier academic studies, received just one mention each.¹³ What is striking about these results are the diversity of the books cited, and the dominance of historically-based material, especially that relating to the World Wars. There is no sense of the contemporary focus which emerges from the questionnaire responses, and it is noteworthy that only one of the works which received multiple mentions (Meilinger) was published within the last decade, for all of the intellectual effort which air power has attracted in recent years.

The same feeling of airmen as individualists, each with their own unique 'take' on the subject,



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does, however, emerge from the questionnaire sections which probed how respondents would define air power and what they saw as the purpose of doctrine. Although these difficult issues are addressed directly and explicitly in AP 3000, there was no sense whatsoever of the respondents following this 'corporate line', even if they were aware of it. Instead, each officer seemed to be developing his or her own statement on the spur of the moment, producing a very refreshing sense of intellectual engagement. Their definitions of air power ranged from the simple ('the use of air assets to achieve an effect') to the involved ('the utility of aircraft, space or

missiles in the prosecution of military campaigns, whether in an offensive, defensive, surveillance or reconnaissance, transport or logistical role'), but all were to the point, and seemed to capture the essentials of the concept. Similarly, the officers' justifications of doctrine were diverse, thoughtful, and sometimes commendably pithy ('to illuminate current thinking and understanding, to be used as a basis or structure for planning purposes'). They even included a critical element — one ACSC student wrote that 'I am less content with doctrine since 9/11 as it seems to hinder rather than aid understanding of the global war on terrorism', while an ICSC student said 'It is what is "thought"

to be the agreed practice or procedure to follow. However, in reality, doctrine often does not solve the problem or point to an appropriate solution'. Some may be concerned at such diversity and independence of thought, but I found it very encouraging, and it would be a great shame to jeopardise it in order to achieve a more coherent overall view.

Although my focus is very clearly on air power thinking within the RAF itself, I did spend a small amount of time during the study exploring the perceptions of the other two Services on the subject. I got little sense from my individual RAF interviewees that 'outreach' in this area was a high priority, despite their concern that airmen be able to hold their own in the joint debate, and despite the fact that the official definition of air power covers far more than the assets of the Air Force itself. One senior officer did point out that a significant proportion of the print run of RAF doctrinal and other publications goes to the Army and Navy, but he also felt that there was virtually no understanding in practice among officers in those Services that works like AP 3000 also applied to them.

The questionnaire responses from the Army and Navy students on the ACSC do not suggest utter ignorance of air power issues. One of the Navy aviators had consulted an Air Power Workshop volume and the U.S. Aerospace Power Journal, and fully half of the officers as a whole had read at least one article in the RAF Air Power Review and had made at least some use of AP 3000. Their main source of information on air power was the courses they had taken (especially the 'Air Combat Power' week which they had just completed at ACSC itself). Like their RAF colleagues, they also cited books, documentaries and films as playing a significant role, but whereas airmen seem to have been most influenced by films such as *Battle of Britain* and *The Dambusters*, no less than three of the Army and Navy students said their image was based more on the Hollywood fantasy *Top Gun!* The air power conflicts they claimed to know best were almost identical to those of their RAF colleagues on the ACSC, though with more mention made of the Falklands war. Their

definitions of air power were also just as diverse and thoughtful as those of the airmen, though not surprisingly with a slightly greater prominence given to the context of the joint campaign.

In our subsequent discussion, very much the same messages emerged as from my RAF focus groups. Current air power literature was seen as too complex and hard to follow, instead of providing an accessible aide memoire for the hip pocket. Above all, the officers emphasised that the biggest problem was the perceived irrelevance of the material for the great majority of the tasks they were called upon to fulfil. One person remarked that there was no point getting interested in air power because the RAF so rarely supported them, either in war or in exercises. This might seem strange given the unprecedented integration of aerial firepower into recent surface operations in Afghanistan and Iraq, but one must distinguish between such high profile joint endeavours at the leading edge of 'network centric warfare' and the much more prosaic day-to-day activities of the average middle ranking British officer. Even those in the Air Force itself tend to see air power as a matter for course syllabuses and general interest rather than an issue of direct professional relevance. I will now explore what implications this might have for the further development of air power thinking and awareness in the RAF of the 21st century.

Ideas for the future

The best place to start is with how my senior military and civilian interviewees saw the future of British air power doctrine. Hardly anyone questioned the need for such a distinct doctrine, despite the proliferation of joint doctrinal publications in recent years (which one person thought had 'glutted the market'). Air power doctrine was seen as an essential building block for such joint doctrine, to avoid it becoming too Army-dominated, and several people argued that the articulation in the joint publications of a distinct 'British way in warfare' was itself a reason to have a peculiarly British perspective on air power. The UK was seen as having a distinctive approach which one person christened 'lawfare', in contrast to the less restrained and much larger

scale warfighting doctrine of the USA. Britain's expeditionary focus and flexible attitude to air power were seen as equally distinct from the more structured and subordinate approaches common in continental Europe. It was pointed out that not much good air power doctrine even existed outside the Anglo-Saxon world, and that British thinking itself had a major impact overseas.

As regards the content of the doctrine, there was a much greater range of opinion, revolving mostly around where to strike the balance between drawing enduring lessons from the past and keeping up with the fast-changing technological developments of the present and future. One very senior interviewee argued strongly that doctrine was not about academic theory and history but about getting bombs on target, and hence that there should be much more focus on leading edge experimentation and on linkage with the latest front line experience. Others were wary of mortgaging doctrine to the latest technological trends, and argued that the study of history was vital partly because it illustrated the problems often encountered with new technology. However, everyone accepted that a balance did need to be struck, and that both past and present experience had an essential role to play in air power doctrine – the former to help identify recurrent patterns and potential pitfalls, and the latter to keep pace with the transformation in the face of modern warfare.

There was a striking absence among my interviewees of the kind of air power 'zealotry' sometimes displayed by US air enthusiasts. Nobody felt that the best way to enliven doctrine was to imitate the often provocative visions offered in John Warden's works or in Phil Meilinger's 10 Propositions.¹⁴ Such visionary statements were seen as useful, but it was felt that formal doctrine had a duty to be more inclusive and consensual, or (as one person put it), 'at, but not forward of, the leading edge'. Some people admitted that British air power doctrine had been too focused hitherto on winning the bureaucratic battle with the other Services, and that a more integrated aim was needed, through a clearer articulation of the 'UK way in air warfare'. It was felt that the RAF had made something of the same mistake in the 1990s

as it had in the 1920s, becoming too focused on independent action, and neglecting the continued importance of close air support and land-air cooperation. In light of recent combat experience in the Balkans and the Middle East, it was argued that the RAF needed to integrate its thinking as much with the British Army as it had done with the USAF.

My interviewees had interesting ideas about how British air power doctrine should be produced. They recognised the conflicting perils of too much of a committee product on the one hand, and of too inflexible an individual viewpoint on the other. Most people felt that the Director of Defence Studies, as an established air power 'enthusiast', remained the best person to take the lead, though some did suggest that it was more important to strengthen that post's links with the Air Warfare Centre (AWC) at Cranwell than with JSCSC, and one went so far as to argue that the responsibility for writing about the latest trends should be transferred wholesale to AWC. That Centre's existing publications, in particular the (restricted) Air Operations Manual, were seen as very useful practical guides for officers of all Services, and it was suggested that one reason (besides their more tactical focus) why these documents seemed to have been more accepted by airmen is that they avoided the off-putting term 'doctrine'. However, several military and civilian interviewees did argue for exposing air power thinking even more than at present to comment and critique from outside the Service, rather than seeing it as a purely professional 'in house' endeavour.

On the logistics of doctrine production, views varied. Some people felt that the current revision frequency was too great given the problems of promulgating each new version of doctrine through the Service education process, whereas others felt that doctrine should become more of a living document, amenable to constant updates through presentation in a ring binder rather than book format. Some felt that the length and format of AP 3000 were about right and needed only minor tweaks, while others suggested that only multiple tailored publications could address the widely varying needs of the different user

communities. One idea was to have a much thinner 'lite' version of the doctrine for junior officers and a fuller version for more serious study, while another was to have one enduring publication focused on history and unchanging principles, complemented by a much more frequently revised digest of the latest technology and experience.

I also asked my interviewees for their views on the other official publications discussed in the previous section. The RAF Air Power Review was generally felt to have done a good job, in line with the encouraging response it received from the course students in my questionnaires. The books produced by the Air Power Workshop were also considered to be valuable contributions, but they were seen as less widely available, and it was suggested that they had tended to become a little repetitious (hence the different focus in the present volume). One person argued that the Workshop needed a broader range of contributors, including those with different views to the current rather self-selecting group of air power pundits, and he proposed the device of including debates on particular topics, as in some special editions of academic journals.

The primary aim of all of these various publications is to enhance the level of air power thought and understanding within the Services as a whole, and I will close by reviewing some broader ideas on how this might be done in the face of the challenges outlined in the previous section. I will focus briefly on four general areas — course structures, the role of inspiration, the fostering of individual talent, and novel approaches to encouraging air power thought.

It is very clear from my focus group results that courses like those at Cranwell and Shrivenham play a dominant role in air power education. My interviewees were pleased with the greater inclusivity of the new BAWC and HAWC model, but a number of them did express concern about whether there would be sufficient time in the new structure for valuable elements such as historical study, essay research and wargaming. There is no easy way to resolve

this problem given the ever greater pressures on the time of modern Service personnel due to so many ongoing military commitments, but one approach which was suggested was to take a more integrated overview of the entire educational process within the RAF (not just the air power element), perhaps in the context of a review of in-Service degree accreditation. Several interviewees warned that learning will be devalued if personnel feel they can succeed without it, and this may be why some people suggested a renewed emphasis on examinations to check that the material taught is actually being absorbed. However, others warned that such testing could simply prompt a 'learn and dump' mentality, and they argued that truly effective air power education must be based much more on carrots than on sticks.

This leads me to the second of the four areas, namely the importance which many interviewees attached to inspiration as a catalyst for interest. Having an inspiring teacher or mentor was seen as vital, and so ideas were proposed such as promoting interest in the history of one's own squadron, encouraging air power discussion groups at station level, or introducing in-house academics at Cranwell to exert the same formative influence on young officers as individuals like John Keegan and David Chandler famously had on Army officers at Sandhurst. Academics obviously have the advantage that they are dedicated to their task and provide continuity of expertise in contrast to the routine turmoil caused by Service postings, but my interviewees rightly noted the need to strike a balance between academic and military input. Not only is it vital for the academics to keep closely in touch with the latest developments lest they lose credibility in the face of the increasing military experience of their students, but it is also important that military teachers and commanders not feel free to abrogate their own educational responsibilities – in this context, the decline in usage of the Staff College library by military Directing Staff since the advent of on-site academics is a slightly worrisome development.

Again, this point leads me neatly into my third area for discussion, namely the fostering

of individual talent. Of concern to several interviewees was the risk that the inescapably bureaucratic nature of the RAF career structure left many middle-ranking officers, who were rather out of their depth with air power issues, in a poor position to inspire or to reward independent thinking (even in a context such as JSCSC), thereby raising the spectre of a Service 'doomed to mediocrity'. A number of people felt that the Air Force had to become better at spotting and developing the talent of individual officers at an early stage, even if this meant by-passing the middle managers on the way. External educational opportunities like the Masters courses at Cambridge or King's College London were seen as very useful in broadening the outlook of the chosen few, and some suggested taking this further by releasing more such officers to do PhDs as in the USAF, though others highlighted the obvious resource constraints on such an initiative. An even more difficult problem may be overcoming the perception that too much focus on intellectual matters may lead to one being pigeonholed as a 'doctrine head', and shunted into a career which, though interesting and fulfilling, has less chance of leading to the very highest reaches of the Service.

Finally, let me touch on some of the possibilities of novel approaches to encouraging air power thought, going beyond the more obvious routes of formal courses and official publications. Innovation in this regard has been rather discouraged by the poor response to the recent production of doctrinal material in CD-ROM format, which led to the common problem of enormous printing bills as hard copies were generated by users themselves. However, my focus group findings suggest that today's officers are very much open to non-traditional means of gaining information, and this does seem to be an area worthy of greater exploitation. TV documentaries in the present era of multiple digital and satellite channels offer surprisingly detailed coverage of air power history and technology in a form precisely designed to pique individual interest, and the installation of appropriate satellite or freeview decoders for

crew room televisions would seem to be a very worthwhile investment. There also seems little reason why even more material, such as JSCSC student essays and the contents of Air Power Workshop books, should not be posted freely on the internet, thereby increasing its accessibility to an increasingly web-oriented public both in Britain and overseas. In my own air power course at King's College itself, my use of various forms of conflict simulation has proven very popular as a means of giving students insights into the tactical and strategic dynamics involved, and this could prove even more the case among airmen with their inherently technological and competitive bent, especially given the advances in computer technology since the similar 'Project Warrior' which encouraged such simulation gaming among USAF personnel in the 1980.¹⁶

If there is one common thread which seems to me to unite these various ideas, it is the importance of process over product. One cannot codify inspiration or institutionalise genius, and even average officers seem to learn almost as much about air power from their own experience and private interest as from what they are formally taught. One very senior interviewee went so far as to suggest that air power doctrine should not simply be 'what is taught', but should emerge from a wide-ranging process of discussion and consultation, building on ideas from all ranks. From a traditionalist perspective, the fact that not one person in my focus groups reproduced the carefully worked out AP 3000 definition of air power might seem like a severe indictment of the success of doctrinal education in the RAF. However, from an 'effects based' viewpoint much more in tune with the approach of modern doctrine itself, the fact that almost all the officers generated insightful and sometimes thought-provoking definitions of their own does much to offset their professed ignorance and indifference, and attests to the actual (or at least potential) health of air power thinking in the wider Service community. There is still much to do, but it is more about reinforcing success than about recovering from failure.

FOCUS GROUP QUESTIONNAIRE

Which course are you currently undertaking?

Which service are you in, and how long is it since you joined?

Are you aircrew?

In no more than 50 words, please define what you understand by the term 'air power'.

Please list up to 5 recent or past conflicts concerning which you have the greatest knowledge about the air power dimension (starting with those about which you have the most knowledge of air power). Please indicate with an asterisk any conflicts in which you were personally involved.

Leaving personal experience aside, please list in rough order of priority up to 5 sources which have done most to shape your knowledge and understanding of air power. (Sources might be books, pamphlets, articles, films, TV programmes, courses, lectures or whatever. Just try to think what most sticks in your mind.)

Have you read any of the 3 successive editions of AP 3000, *British Air Power Doctrine*, and if so, roughly when and in what context? (Multiple answers are fine.)

Roughly how many (if any) of the Air Power Workshop's four recent volumes have you read or consulted? (The volumes are *The Dynamics of Air Power* (1996), *Perspectives on Air Power* (1998), *Air Power 21* (2000) and *British Air Power* (2003).)

Roughly how many (if any) articles have you read in the *RAF Air Power Review*?

Roughly how many (if any) articles have you read in US air power journals such as the *Aerospace Power Journal* and *Air Power History*?

In no more than 50 words, please explain what you understand is the purpose of doctrine (in general, not just air power doctrine).

Notes

¹ Royal Air Force Air Power Doctrine, AP 3000 (1st ed., RAF, 1991)

² Andrew Lambert & Arthur Williamson (eds.), *The Dynamics of Air Power* (Bracknell: MoD for HMSO, 1996)

³ Brian Finch, *RAF Air Power Review* 1/1, 1998

⁴ See, in particular, my article on 'Air Strategy and the Underdog', in Peter Gray (ed.), *Air Power 21: Challenges for the New Century* (London: The Stationery Office, 2000)

⁵ See, for instance, Andrew Vallance, *The Air Weapon* (London: Macmillan, 1996), and Tony Mason, *Air Power: A Centennial Appraisal* (London: Brassey's, 1994) and *The Aerospace Revolution* (London: Brassey's, 1998).

⁶ I Cameron, 'What Problems does the Royal Air Force Confront in the Face of the Increasing Importance of Doctrine?', unpublished ACSC Defence Research Paper, Joint Services Command and Staff College, 2002

⁷ On these aspects, see Anthony Seabright, 'RAF Ethos and Culture in the 21st Century – Aircrew or Air Power?', *RAF Air Power Review* 7/1, Spring 2004, and Sir Brian Burridge, 'Iraq 2003 – Air Power Pointers for the Future; Closing Address', *RAF Air Power Review* 7/3, Autumn 2004.

⁸ John Terraine, *The Right of the Line* (London: Hodder & Stoughton, 1985)

⁹ Phillip Meilinger (ed.), *The Paths of Heaven* (Maxwell Alabama: Air University Press, 1997)

¹⁰ John Warden, *The Air Campaign* (Washington DC: National Defense University Press, 1988)

¹¹ Richard Overy, *The Air War, 1939-1945* (London: Europa, 1980), Sir Charles Webster & Noble Frankland, *The Strategic Air Offensive against Germany, 1939-1945*, 4 vols., (London: HMSO, 1961), Mark Clodfelter, *The Limits of Air Power* (New York: Free Press, 1989)

¹² John Slessor, *Air Power and Armies* (Oxford: Oxford University Press, 1936), Tony Mason, *Air Power: A Centennial Appraisal* (London: Brassey's, 1994)

¹³ Carl von Clausewitz, *On War*, edited & translated by Michael Howard & Peter Paret (Princeton NJ: Princeton University Press, 1989), Richard Hillary, *The Last Enemy* (London: Macmillan, 1942)

¹⁴ John Warden, 'Employing Air Power in the Twenty-First Century', in Richard Shultz & Robert Pfaltzgraaf (eds.), *The Future of Air Power in the Aftermath of the Gulf War* (Maxwell AL: Air University Press, 1992); Phillip Meilinger, *10 Propositions Regarding Air Power* (Washington DC: Air Force History and Museums Program, 1995)

¹⁵ On the relationship between official and 'hobby' wargaming, see Peter Perla, *The Art of Wargaming* (Annapolis ML: US Naval Institute, 1990). For more recent information, visit <http://www.au.af.mil/au/awc/awcgate/awc-sims.htm#general>

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