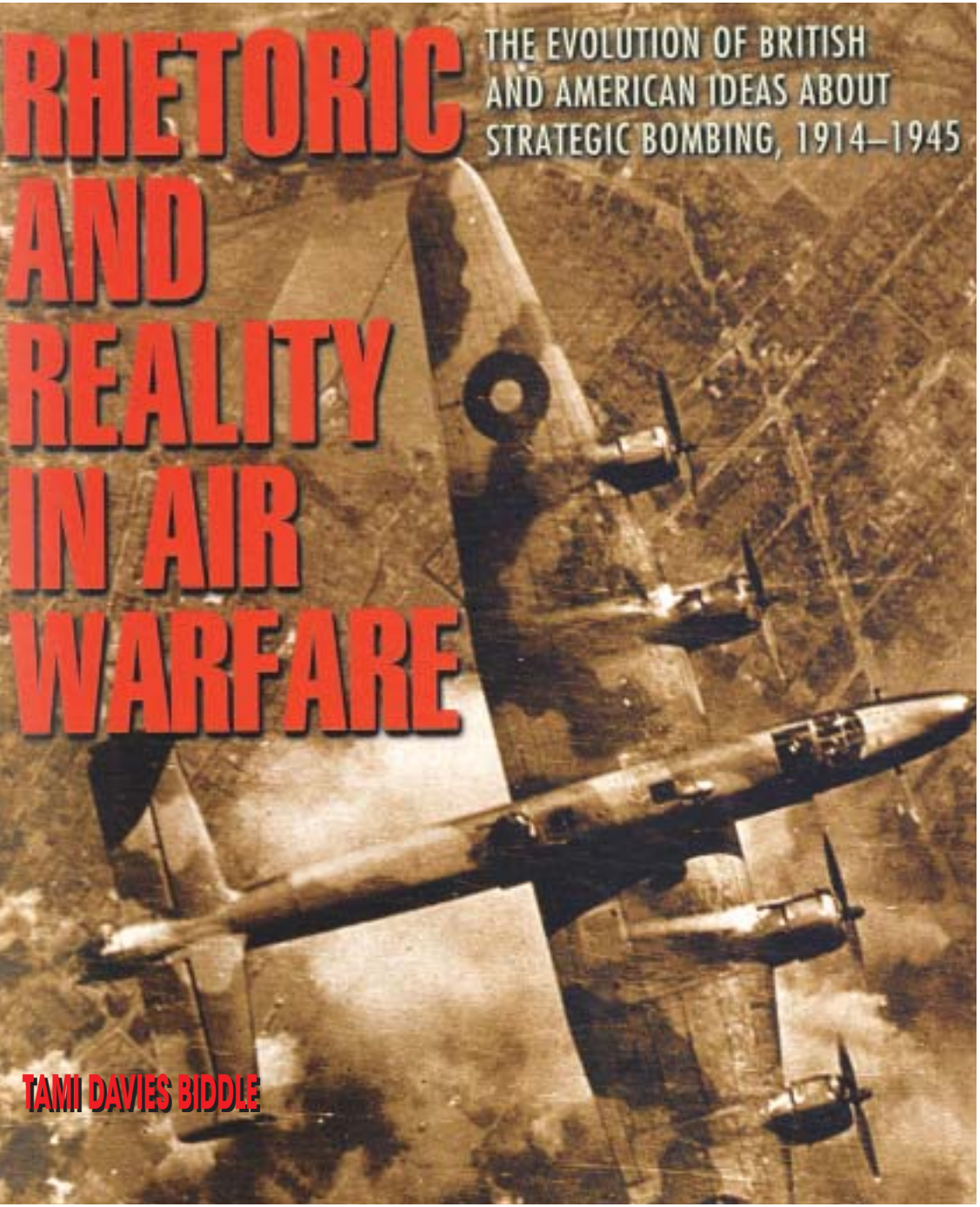

Review Essay by Gp Capt Peter W Gray RAF

In espousing the 'Transformation of Warfare', the United States Secretary of Defence recently confirmed that forces must think, train and exercise with the transformational mindset with which they are going to fight (Foreign Affairs, Vol. 81, No 3. May/June 2002). As an experienced politician, Donald Rumsfeldt can be forgiven for leaving out three further key elements that also contribute to eventual success on the advanced battlespace of the future. The first of these is the need to transfer the conceptual thinking into a body of coherent doctrine that will articulate the 'fundamental principles' necessary for the guidance of his military forces. To be scrupulously fair, Rumsfeldt's audience of Foreign Affairs readers would not necessarily see doctrine as anything other than an issue exclusive to those in the military who use it on a regular basis. Furthermore, he may have had the niggling doubt (shared by many in uniform) that doctrine actually reduces down to turgid manuals whose sole utility is the mechanism for justifying tribalism between the services in the next round of extravagant equipment expenditure.

The second element that Rumsfeldt omitted was the need to equip adequately to meet the laudable aspirations inherent in a new, revolutionary or transformational way of fighting. That he chose not to do so is again totally understandable in a fiscal environment where legacy weapon systems still have to be paid for; where the global war on terrorism still has to receive its share of monies allocated and finally the enabling technologies have to be developed. In a transformational warfare scenario, these technologies are effectively as fundamental as the principles of flight are to air warfare in general – or indeed to a strategic bombing campaign. The complexity, however, of the digitally aware battlespace is such that the order of magnitude of difficulty is huge.

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The third area into which the Defence Secretary chose not to venture is the fraught issue of conducting transformational warfare in some kind of combined or coalition environment. This can be difficult for a number of reasons. New 'ways of war' are open to varying interpretations with no one service, or nation, having intellectual copyright over the thinking at issue. It may well be that the best way for a small player to get his views incorporated is to persuade the more dominant partners that they thought of them first. Development of new equipment is also problematic in that thinking, doctrine and capability are inextricably interlinked. Secrecy has always been part of the military exploitation of technology; but arguably never so much as in the field of communications, associated cryptography and software. Yet without these a real transformational war cannot be fought.

COALITION BANNER

The final two elements of the dilemma could be dealt with under the coalition banner. But they are, arguably, too important to lump together. The first of these involves what today would be termed 'intelligence preparation of the battlespace'. Going to war (into conflict or whatever terminology one cares to use) with differing views as to the enemy vulnerabilities, weaknesses, intentions, potential for recovery or mindset does not lend itself to a conventional campaign – let alone one predicated on effects-based or transformational warfare. The final element is the legitimacy of the operation per se and, within that, the legality of the targeting, the rules of engagement and so forth. These are extremely contentious issues with scope for serious intra-coalition strife. The same themes are starkly evident within Professor Biddle's time period – yet they are no closer to resolution.

If we therefore broaden the process to incorporate all of the elements: thinking, formulating doctrine, equipping, training, exercising and working in a coalition environment the scale of difficulty (and cost) increases many fold. Yet these elements must be tackled in a rigorous and determined manner-not least because failure so to do will result in the various elements only fusing together in the crucible of warfare. The more complex the nature of the warfare, the less the chance of us getting it right on the day, with those whom we send into harm's way paying the ultimate price.

The dangers of missing a vital link, or of advancing with faltering step, spread the responsibility far and wide. All those involved should therefore have this book — Rhetoric and Reality in Air Warfare — as mandatory reading. It is evident from Professor Biddle's excellent account of The Evolution of British and American Ideas about Strategic Bombing that there were flaws, missing links, self-delusion, blind optimism and poor planning in the handling of what could be argued to have been a transformational way of going to war. Even those sceptical of drawing lessons from history need to sit back and apply the levels of masterful analysis evident in this scholarly work. Those that would seek to distinguish the precedent likewise miss the essential point.

FIELDS OF DEVASTATION

The revolution in military affairs brought about by the ability to mass produce weapons on a vast scale, and mobilise the citizen armies with which to wield them, resulted in the bloody end that characterises most revolutions. The devastation on the fields of France and Flanders brought its own version of casualty aversion. The strategic bomber – to the enlightened as they saw themselves – represented a new, or transformational, way forward. But the rhetoric of the advocates was at odds with the reality of the doctrine, the training, the exercise programme, the equipment and so forth. As Professor Biddle expertly chronicles, those sent in harm's way paid the price. Professor Biddle takes the experiences of the First World War as the backdrop for the development of the rhetoric, the ideas, the ensuing doctrine and the equipment. Her comprehensive treatment ensures that the training and exercise elements also receive full coverage. Professor Biddle's analysis of the rhetoric extends to the experiences of those on the receiving

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An Avro Lancaster III, 103 Squadron, RAF Bomber Command, preparing to depart for the Ruhr, 1943

end of the bombing in Britain during the Great War with particular emphasis on the need to retaliate – or at least be seen to be so doing. Ironically this clamour for revenge was at variance with the later assessments of the disproportionate effect of bombing on morale as against the physical damage wrought. Here Professor Biddle points out that Trenchard, by being increasingly outspoken in private as well as with the Press, manoeuvred himself into a position where this morale factor was the only justification for the ever rising casualty figures in the face of little damage and even sparser 'effect' on the German military effort.

As thinking matured, too many lives had been staked and lost...

Trenchard had even less room for manoeuvre when appointed Chief of the Air Staff for the second time. As thinking matured, too many lives had been staked and lost; reputations built; honours awarded; and the very survival of the fledgling Service was at stake. The time was propitious neither for a recant nor a sober reflection on the real lessons learned.

INDEPENDENT SERVICE

From this baseline, Professor Biddle expertly chronicles the development of thinking on both sides of the Atlantic through the interwar years. She highlights the parallels and, more importantly, the areas where the RAF as an independent Service diverged from their US counterparts who were still under the aegis of the Army. Professor Biddle follows the arguments over the ideal ratio between fighter and bomber squadrons shedding a few myths en route. She points out, for example, that RAF procurement

expenditure actually increased between 1924 and 1932 and that the UK aircraft industry was as large as any other (on a par with the US, France and Germany). Biddle goes on to assert that the customary excuses for Britain not being ready to fight Germany were less of a factor than the inability of the Service to match its declaratory policy of a major strategic bombing offensive with the realistic demands that it would have to meet in the prosecution of such an ambitious aim.

...American conceptual thinking on air power never ceased to contemplate the indirect, or psychological, effects of bombing...

Notwithstanding a shared understanding of the fundamental offensive nature of air power, the US Air Corps had to develop its policies within the constraints of American security posture which circumscribed the potential uses of aircraft. Bomber aircraft had to find, and then attack, naval threats to the US coastline. As thinking developed, Professor Biddle highlights the dual personality that air power thinkers had to adopt: superficially they had to conform with Army thinking. But internally, they developed an altogether more independent concept. Nowhere was this more evident than at the Air Corps Tactical School which became the alma mater for many of the leading proponents of strategic bombing.

ENDURING THEME

Professor Biddle rigorously assesses the ACTS syllabus with the implicit broad definition of doctrine – that which is taught. Notwithstanding the requirement to cover army co-operation, she points out that American conceptual thinking on air power never ceased to contemplate the indirect, or psychological, effects of bombing. A key area for development, however, and one that would later cause much stress between the wartime allies, was the scope for economic analysis leading to specific targeting of the enemy structure. In what has become an enduring theme in US targeting psyche, interest increased in urban and industrial power grids. Concentration on the social and economic 'sinews that held together modern societies' would undermine the enemy will to fight. Biddle very shrewdly points out that this has to be seen through the eyes of a nation that had been very hard hit by the Great Depression and therefore had seen at first hand the fragility of modern economic systems.

Professor Biddle deals with the alternatives to the bomber in a characteristically thorough manner with, in particular, some excellent analysis of the development of fighter aircraft and air defence systems. The inevitable, and to the theorists very uncomfortable, corollary to this was the means by which the bomber (or its formation) would survive the sortie in the face of determined defence. The rhetoric at the time was, after all, that the 'bomber would always get through.' The reality was that it would take considerable losses to convince first the British, and then their American counterparts, that fighters were indeed a potent threat — no matter how 'well the formation was flown and tightly maintained'. Biddle disposes of the Trenchardian-style rhetoric in short order.

BRITISH EXPERIENCES

The most depressing parts of this book are the two — extremely comprehensive – chapters on the realities of the British experiences through to 1942 and then the combined efforts thereafter. Although as Professor Biddle makes abundantly evident, the two Allies agreed to differ, fudged the issue — or just plain disagreed — all too often. As indicated at the outset of this essay, differences in intelligence appreciation, and the relative importance of different target arrays, can prejudice not only the effectiveness of the campaign, but also the lives of those charged with its prosecution. During the inter-war years, the legitimacy of strategic bombing was discussed at some length. In the UK, Neville Chamberlain laid down guidelines for Bomber Command based on extant interpretations of draft international law. Slessor recorded the

Both the British and American teams sought answers to the hugely difficult questions on the impact of bombing on civilian morale...

pragmatic Air Staff view that this was all very well, but at some stage the 'gloves would have to come off'.
History records that the gloves were well and truly discarded in practice — not surprisingly in an extremely vicious total war that neither the UK nor America wanted. But as Professor Biddle, and others (including this reviewer), acknowledge, there were increasing attempts by those charged with the prosecution of the war, at the grand strategic level, to attempt to distance themselves from some of the consequences. Churchill's belated, and unjustified, squeamishness over Dresden was a classic case in point. Biddle, along with the more enlightened of US authors, bluntly states that American 'wartime and post-war emphasis on 'precision bombing' was for public consumption'. The central theme of rhetoric and reality again emerges, with area bombing a serious pastime for both forces.

Professor Biddle ends her account of the combined bomber offensive with a sobering account of the results of the campaign — and by direct implication, of one of the most taxing military conundrums of the century — the real effectiveness of air power. The seriousness of this question cannot be overstated.
For the Americans, the culmination of many years of thought, doctrine formulation (at Langley and then Maxwell), equipping, training, exercising and finally going to war with allies was but the starting point.
The advent of nuclear weapons opened further vistas for the employment of air power, and by an independent service at that. The scale of destruction evident in German cities raised eyebrows, particularly amongst those who sought the moral high ground with the Nuremburg trials looming. The ensuing surveys raised as many questions as they answered and have become a specific section of research into the bomber offensives in their own right. As Professor Biddle points out, the initial assessments stressed the incontestable:

- The contribution to the achievement of air superiority over Germany and hence over Normandy prior to the invasion
- Diminution of German oil supplies
- Interdiction of supplies and areas of battle
- Destruction per se
- Neutralisation of V and other special weapons

...air power was one of the levers of warfare that would have cumulative effect on an enemy...

CIVILIAN MORALE

Both the British and American teams sought answers to the hugely difficult questions on the impact of bombing on civilian morale. In the case of Germany, it was hardly relevant as surrender had followed total and utter defeat in all strategic areas — air, land, sea, diplomatic, ideological, economic and so forth. Likewise, the air campaign against Japan was but one element of total war. As Professor Biddle points out, the high levels of pain endured by the respective populations, from London in 1917 through Guernica to Germany and Japan, does not necessarily correlate with surrender. The discussion has continued ever since in a multitude of fora, books and articles. But this not render the debate either sterile or merely of academic interest. If one looks at the valid criticism that either element of the bomber offensive had been ineffective, this begs the question where the finite resources – of men and materiel – could have been better expended. The emphasis on effect is made deliberately in this era of effects based operations.
The effectiveness of an air campaign, or indeed any military operation, cannot just be measured in terms of weight of bombs dropped etc. At the end of the day, if you have not won . . .
Biddle concludes that, notwithstanding the continuing debate, the strategic bombing offensive was 'decisive'. The real achievements of air power made final victory possible. As the more genuinely enlightened strategists such as Tedder realised, air power was one of the levers of warfare that would have cumulative effect on an enemy. What air power's detractors missed in the aftermath of the Second World War — and continue to miss (or ignore at their peril) — is that, in the vast majority of cases, exploitation of the medium is here to stay. Those who previously sought to denigrate the threat by suggesting that none would challenge the might of the USAF were rudely awoken on 11 September 2001.

In her conclusion, Professor Biddle highlights that the ideas expounded by British and American airmen were not 'pulled from thin air. The[ir] expectations — and hence their arguments — revealed the way in which they interpreted the world around them and in which they sought to promote their own interests'.

The same is true today. She goes on to point out there has always been an endemic problem in air forces in that they establish their institutional identity around the future. The same is again still true.
The downfall in this blind faith in potential may only become apparent in conflict — to the detriment of those in harm's way. Sober analysis of the real lessons of the past was, and remains, vital.

FINE PIECE OF SCHOLARSHIP

Early in the essay, the reviewer recommended this book as mandatory reading for all involved in the development of a transformational route to future warfare. The potential readership must be wider than this as the book is a fine piece of scholarship. The old adage that prose should be so tight that the removal of a word or a sentence should be immediately obvious is well represented in this work — every phrase adds to the sum of the parts with no wasted words. The choice of sources is exemplary with an outstanding blend of primary and secondary material from both the United Kingdom and America.

The strategic bombing campaign, the development of the doctrine and quest for the aircraft have all been well covered by other authors. Many of these are now out of print and tend to deal with the strategy in isolation — few, if any, actually cite the Air Publications that represented the doctrine manuals of the time! This volume, however, brings so many of the points together that it truly becomes a magnum opus. It is therefore an essential working document and a vital starting point for any study, at any level, of the strategic bombing campaign.