

# Historic Book Review

## Bombing to Win : Air Power and Coercion in War

By Robert Pape

Reviewed by Air Commodore Neville Parton

This is the very last in the series of Historic Book Reviews, which started over 4 years ago with Maurice Baring's *RFC Headquarters*. In that time a broad range of books have been considered which, in one way or another, hold a special place within the world of air power writing. It is therefore highly appropriate to finish with Professor Robert Pape's *Bombing to Win*, which is the first publication in this series to have been written by an individual with no direct military experience – and yet managed to fundamentally challenge conventional thinking about the use of air power. Indeed the story is all the more interesting as the path that Professor Pape followed was not that the one he had planned - so let us start by examining the writer's story.

Robert Pape had never planned to be an academic, and certainly not to study air power – in fact his original desire from high school was to join the US Government's Foreign Service, and it was this aim which initially led to him becoming an undergraduate at the University of Pittsburgh. Here, in his words, he 'fell in love' with the subject of political science, and graduated *summa cum laude*<sup>1</sup> with both a BA and an MA, having become particularly interested in the areas of international relations and political theory. Still aiming for a career in the Foreign Service, but having

become seized by John Dunn's work on the democratic (or otherwise) nature of Soviet society, Pape then moved to the University of Chicago to undertake doctoral work, with an initial PhD subject area aimed at the theory underlying the 'meaning of democratic institutions'. As is often the way with PhDs however, this was to change significantly due to the influence of a key individual – in this case John Mearsheimer – who introduced the young student to the world of security studies. Reading Schelling's *Arms and Influence* and Walzer's *Just and Unjust Wars* led to a growing interest in both coercion and the use of air power, which would come together to form the basis of his final dissertation topic, which was to consider why coercive air power did not work for the US in Vietnam.<sup>2</sup> Pape's political science background meant that this was approached in a very specific manner, with the development of a detailed data set examining the use of air power in previous conflicts – which would underpin the development of all his theories in this area. Following the award of his PhD in 1988, Pape moved to the University of Michigan on a post-doctoral fellowship aimed at enabling him to publish his thesis as a series of articles and a book - as he had realised that expanding the data set would help in providing further

evidence for his theories.

1990 and the first Gulf War saw a significant change in Pape's status, as the media looked for individuals who could provide knowledgeable comment on events, and especially putting air power's role in context. At this point, Pape also began to consider that this subject area was likely to be of perennial interest, and could sustain a career in academia, albeit some further work would be needed in order to further develop the dissertation into a really sound publication. However, despite the clear importance of air power in Gulf War I, in the academic world there was still a lack of interest in the subject – and it was against this background that Pape received a phone call from Mark Clodfelter in 1991, making him aware of the opportunities for academics at the newly-formed School of Advanced Air and Space Studies (SAASS) at Maxwell Air Force Base, Alabama – and suggesting that he should apply. Following a visit and interview, at which it was clear that the USAF 'thinking' community was already taking Pape's views seriously, and consequently that this would be a good location to complete work on the book. In fact, from the author's viewpoint *Bombing to Win* was immeasurably strengthened by the interaction that took place with the staff and students at Maxwell, including the commandant – one Colonel John Warden.

At this point Pape was faced with a dilemma: still thinking about the possibility of a career in the Foreign Service - even if this was becoming steadily more remote, but enjoying the intellectual aspects of academic

life – if not so certain about some of the other elements. From a personal perspective his articles were getting coverage in reputable publications and the book was complete, when a fresh challenge arrived in the form of an offer from Dartmouth to go and teach in a very different environment – and one which would lead to a significant change in direction. After moving to Dartmouth in 1996, as he started teaching international relations theory, he became aware that much of the prevailing thought about the use of sanctions – and in particular the effectiveness of economic sanctions – appeared to be based on a poor understanding of what was actually providing the coercive effect. Work in this area led to further success, and in 1998 Pape was considered for award of tenure.<sup>3</sup> This required, amongst other parts, sending a file of his work around ten other respected academic institutions to gather their thoughts on his academic worth; however, in this case it also led to a suggestion from Stephen Walt, an outgoing member of the Political Science department at the University of Chicago, that Pape should be considered as his replacement. Following a highly successful – and emotional – trial lecture, Pape was offered the post and took up tenureship as a Professor of Political Science in 1999. At this stage he had begun to take an interest in the linkage between technology and great power politics, which might have led to his next book had it not been for the events of 9/11. This led to a rapid re-engagement with the media, and subsequent research into the phenomenon of suicide attacks, where his interest was particularly fired by the Tamil Tigers, whose

widespread use of such tactics clearly indicated that this was not, as many had suggested, a largely Islamic-fundamentalist issue. Furthermore, the way in which attacks were clustered gave many indications of being directed as part of campaign plans in which they were being used for coercive effect, with the linking factor being their use largely against occupying powers or forces. Again Pape's political science background came to the fore, and a detailed database was rapidly built to allow worthwhile analysis and deductions to be produced. Professor Pape is now the Director of the Chicago Project on Security and Terrorism, and his most recent publication is firmly based within this subject area.<sup>4</sup>

Running clearly throughout all of Professor Pape's work is a fascination with, and deep understanding of, the subject of coercion, allied to a rigorously analytical approach to research. This combination has enabled deep insight into a range of issues, and that understanding provides a perfect jumping-off point for our consideration of his first, and perhaps best-known, book.

*Bombing to Win* is, as has already been noted, a different book from the others in this series in a number of ways, and one of the most obvious is that it is written from a social science perspective, which looks upon historical events as being conducive to a form of analysis that is more commonly found in science and engineering. As this approach may not be generally familiar to readers of APR, a small digression at this point seems appropriate. Fundamentally, the origins of social science lie in a belief that there are laws,

approximating to those in physics or chemistry, which apply to the way in which people behave.<sup>5</sup> In the field of international relations perhaps the best-known example is that of the Correlates of War (C of W) study, which set out to examine a number of conflicts, over a 2,000 year timeline, and from this study to determine causal laws related to warfare.<sup>6</sup> Of course, there are some issues with this approach that could be seen as problematic, such as how a war is defined: for the C of W project one of the definitions was that there had to be a minimum total death-count of 1,000 people to qualify for inclusion, which in turn meant that events such as the Falklands War were excluded from the study. However, the general approach is to study a number of previous events, having first codified them to allow deductions to be made following the study, and from the analysis to deduce the relationships/laws between the factors.<sup>7</sup> In conventional science, proof would then be provided by using the deduced laws to make predictions regarding particular behaviour, which could subsequently be tested and verified. In the social science area, and particularly that of international relations and security studies, such an approach is clearly difficult, and instead the general approach is to apply the laws to previous examples and see if they correctly predicted the actual result. The difficulty in many cases is that the same data set used to verify a particular 'law' is that which was used to derive the law in the first place. Nevertheless, it does represent a serious attempt to bring a credible form of analysis to an area where it is particularly difficult to identify the importance and interaction of the

manifold factors involved.

So – onto the specific example. Pape lays out his stall early on and is not backwards in identifying what the book sets out to do, which is to examine how coercion has, or more to the point has not, worked in the past, and from this to draw lessons for the future. Four broad existing coercive theories are identified: the first suggesting that coercion is a matter of national resolve, with victory going to the side which is more committed, whilst the second emphasizes balance of interests, with whichever side has most to lose likely to prevail. The third considers that it is the vulnerability of a state's civil population to air attack that is the decisive factor, with leverage coming from 'punishing' a large portion of the population; and the fourth relates to the balance of forces, with destruction of military targets the key to success. However, Pape argues that these theories are inadequate for a number of reasons, with the major factor being their over-simplicity. He also identifies that it is important to differentiate between deterrence and coercion, as whilst related, the coercive case is by far the more difficult to achieve. Another particularly valid criticism identified is the general lack of any explanation in the extant theories of the actual coercive mechanism, or in other words the way in which high explosive and incendiary effect is turned into a political or military advantage. Pape puts it thus:

*... In particular, the mechanisms by which military effects are supposed to translate into political results are hardly ever studied. Reviewing literally thousands of planning documents for the*

*preparation of this book, I found ... no document, at any level of government, of more than a page to explain how destroying the target was supposed to activate mechanisms ... which would lead to the desired political change.<sup>8</sup>*

He then suggests that a far more complex model is required to satisfactorily explain the way in which coercion operates; so complex in fact that he begins by presenting his theory in symbolic form.

His hypothesis is laid out in this fashion as  $R = B p(B) - C p(C)$ , where:

$R$  = the value of resistance

$B$  = the potential benefits of resistance

$p(B)$  = the probability of attaining benefits by continued resistance

$C$  = the potential costs of resistance

$p(C)$  = the probability of suffering costs

*Coercion is predicted to occur when  $R < 0$*

Expressed in words, the theory suggests that the problem in coercion is convincing the target state that giving in to the coercer's demands will be better than resisting. Success or failure will be determined by the target state's decision-making with regard to costs and benefits, with coercion occurring if it is believed that the possible cost of resistance, taking into account the probability of suffering those costs, is greater than the likely benefits from resistance, this time taking into account the probability of resistance being successful. Therefore, the coercer must seek to alter the components in his favour – although not all the elements may be susceptible to manipulation.

Of course one of the inherent assumptions within this model is that

the individuals making the decisions are 'rational', and will effectively perform a similar (although probably unconscious) calculation before committing to such a strategy. However, a number of the cases, it could be argued, do not relate to leaders who were necessarily rational, with Hitler and Saddam Hussein immediately springing to mind. A further, related, question prompted by the equation is who exactly is it that is carrying out this calculation: is it a country's leadership, or the mass of the population, or some particular part of the country's system of government?<sup>9</sup> A further potential aspect of the analysis that perhaps should be noted is that it could be questioned as to whether the campaigns chosen are all comparable. For instance, the Japan-Chinese conflict 1937-45 is treated the same as the Germany-Holland campaign of 1940, despite one being eight years in length and involving continental scope, whilst the other lasted for four days and ranged over a few hundreds of square kilometres. Of course the purpose of the coding exercise is to allow such vastly different cases to be compared, but given that the time factor is identified as being particularly important in coercion, it does give an indication as to just how complex the comparison process is.

In terms of the overall study, thirty-three cases that involved the use of air power in a strategic environment were identified and used, with five being subject to particular in-depth scrutiny. The latter comprised the campaigns against Japan in 1945, Germany in 1945, Korea in 1953, Vietnam between 1965-68 and Iraq in 1991. Of course in a review of this nature it is simply not possible to

go into the analysis in depth, but it should be noted that the investigative approach is consistent between each case, and that both the examination and supporting narrative are based upon considerable amounts of research.

So what are the conclusions drawn from this work? The fundamental deduction arising from Pape's research is that those strategies which target the civilian population do not work, whilst those that target military forces do. The former are identified as 'punishment' strategies, where the coercive mechanism involves causing suffering to a mass of the general population, whilst the latter are identified as 'denial', where the causal link is provided by denying the use of military force to the ruling power. Even here though, conventional thoughts on air power are rejected, and Pape is particularly critical of Warden's thoughts regarding decapitation as expressed in *The Air Campaign*. He argues that even in the Gulf War campaign of 1990-91, this aspect did not work well, and that the Allied effort did not in fact significantly hinder communication between the deployed Iraqi forces and their headquarters. A more fundamental point is that coercion even where successful is difficult to achieve, and generally takes far more time than first thought. However, it is the corollaries drawn from these factors that are of more concern to airmen, as Pape contends passionately that strategic bombing fundamentally does not work – in any of its generally postulated approaches. His analysis leads to a proposal that air power is best used in support of ground forces, and should therefore concentrate on how best to destroy an enemy's fielded forces – which

neatly brings us back to some of the very earliest debates on what air power's fundamental role should be – something that has been at the heart of many of the books reviewed in this series.

Whilst some elements of the analysis may be hard to accept, given some of the limitations and/or potential flaws identified, the overall deduction has a ring of truth about it, as any form of government that rules by the use of coercive force will clearly be sensitive to any action that might result in the loss or weakening of that force. Indeed, one perspective that might have provided some additional useful material would have been to consider the type of government against which coercive air power was most successfully used. This element is definitely missing, as all of the 'coerced' states considered were subject to varying degrees of totalitarian rule, thus allowing control of the population's behaviour in a way that would be difficult in a democracy. Conversely, air power's coercive effect is particularly attractive to democracies, as it offers the possibility, albeit frequently chimerical if Pape is to be believed, of achieving a desired end-state at the lowest cost in terms of its own citizen's lives. Here it is worthy of note that most coercive air campaigns have been used by democracies against totalitarian regimes. So a useful follow-on question might be to consider how effective coercive air campaigns against democracies could be, particularly if conducted by a repressive regime?

It is interesting to note that Professor Pape's subsequent work has concentrated on the area of terrorism,

and particularly suicide bombing, as a question that is left hanging is what relevance this understanding of air power might have for dealing with terrorist groups and other sub-state actors. Although as already noted, Pape is generally dismissive of the decapitation model, this might have more utility in this area – certainly the Israeli approach over recent years has focused on using air power in this manner against both Hamas and Hizbollah, albeit with widely varying results. A similar campaign is of course being waged against Al Qaeda by the US along the Afghanistan/Pakistan border, but it is perhaps too early to tell whether this is being effective, or whether Al Qaeda is too much a hydra for this approach to work.

What is most surprising is that in the fourteen years since the arrival of *Bombing to Win*, there has been no major response. A publication was due to appear in 2004 entitled *Precision and Purpose: Debating Robert A. Pape's Bombing to Win*, edited by Jonathan Frankel and under the Frank Cass label, but this has sadly never seen the light of day. Whether you agree with the methodology or conclusions of Robert Pape's book is to a degree immaterial; it has fundamentally changed the debate on the way in which 'strategic' air power works, and therefore has to be taken seriously – especially as the lack of any formal response to the publication has left it as, *de facto*, the last major public pronouncement on the subject.<sup>10</sup> Furthermore, the thoughtfulness and depth of the analysis, even if not concurred with, means that this is a book that should be read by anyone with a genuine interest in broadening their

understanding of air power – and it is still readily available. However, the fact that there has been no successor publication should be of some concern, or, to echo the headline of an article title in APR a few years ago, where are the air power thinkers now?<sup>11</sup>

The current security situation facing the UK, in which the apparent belief is that Afghanistan and Iraq-type situations represent the likely future, calls out for analysis of the ways in which air power can best contribute to this new reality – or to demonstrate that the future scenarios are wrong. Ninety years ago, the RAF proved adept at working out how to use air power in a very different security environment that in which it had been developed – as we stand at the beginning of the 21<sup>st</sup> century, the question has to be asked – are we still up to that challenge today?

### Bibliography

Ball, Philip. *Critical mass : how one thing leads to another*. London: Arrow Books, 2005.

Pape, Robert A. *Bombing to Win : Air Power and Coercion in War*. Ithaca: Cornell University Press, 1996.

### Notes

<sup>1</sup> 'With highest honour'.

<sup>2</sup> Pape, "Coercive Air Power in the Vietnam War", *International Security*, Vol 15, No 2 (Autumn 1990).

<sup>3</sup> The award of a permanent post within a university department.

<sup>4</sup> The Project on Security and Terrorism is funded by the Pentagon's Defence Threat Reduction Agency, the Carnegie Corporation, the Argonne National Laboratory and the University of Chicago.

<sup>5</sup> Readers who would like to increase

their understanding a little more in this area are strongly recommended to read Philip Ball, *critical mass* : how one thing leads to another (London: Arrow Books, 2005). For science fiction/fantasy aficionados an exposition of the logical end-state of this approach can be found in Isaac Asimov's original *Foundation* trilogy.

<sup>6</sup> A causal law is one of the form that if a plus b happens then c results.

<sup>7</sup> In this sense codification refers to a means of identifying similarities and differences: for instance a simple codification would be to identify whether wars only involved single or multiple protagonists. Here a codification could be 1 = single aggressor versus single responder, 2 = single aggressor versus coalition responder, 3 = coalition aggressor versus single responder, 4 = coalition aggressor versus coalition responder. All conflicts would then be codified into one of these groupings, which in conjunction with a number of other factors or indicators would be used to conduct the analysis.

<sup>8</sup> Robert A. Pape, *Bombing to Win : Air Power and Coercion in War* (Ithaca: Cornell University Press, 1996), p. 328.

<sup>9</sup> In fact this question is dealt with by the way in which codification was carried out, which is beyond the scope of this article.

<sup>10</sup> And therefore a worthy candidate for some aspiring air power academic or strategic thinker to challenge!

<sup>11</sup> GpCapt Ian Shields, "Where are the Air Power Strategists", *APR* Vol 11, No 1, Spring 2008.





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