The Prophet Militant and Industrial
The Peculiarities of Correlli Barnett


Correlli Barnett’s Audit of War is undoubtedly one of the most influential books of the last decade: it has greatly affected the intellectual climate in which questions of education, innovation, industry, and trade unions are discussed in Britain today. It is that rare thing: a work of history which speaks even to those inclined to believe that history is bunk. Cabinet ministers cite it, and may even have read it. Practitioner symposia on the British economy are incomplete without a reference to, or an illustration from, the Audit of War. And yet one might have expected Barnett’s book to be very unpopular. He is rude about institutions and personalities; indeed, he sets out to destroy the central creation-myth of modern Britain: that economy and society in the Second World War were peculiarly successful.

Barnett’s focus on the Second World War is not accidental. It is not, as might be supposed, that as a military historian Barnett feels more comfortable studying war rather than peace; it is that he sees war as a fundamental feature of the modern world. War is a test of a nation, as well as its fate.

* I am grateful to participants at the ICBH conference in April 1990 as well as my colleagues Richard Coopey, Paolo Palladino, John Pickstone, and Steve Sturdy for their invaluable criticisms of earlier drafts.


Barnett's title is thus apposite and revealing: war is an audit of a nation — to audit a nation at war is to audit the nation particularly rigorously; to audit its military technology, for example, is to audit all its technology, in peace or war.

Wartime Britain comes out very badly from Barnett's 'operational study'. He claims to have found appalling inefficiencies across industries from coal-mining to aircraft production. In fact, deficiencies in the older industries have been well-known for a long time; Barnett's originality lies in his claim that the new industries like aircraft and electronics were just as bad. He argues that there was a failure during and after the war to act on the evidence of industrial problems; that the British deluded themselves into believing that their science, technology, and industry had performed miracles during the war. Thus misled, they decided to build a 'New Jerusalem' rather than a modern industrial economy.

According to Barnett, the same factor led both to poor industrial performance during the war and to the creation of the welfare state: a British elite which from the nineteenth century was composed of do-gooding liberals rather than modern technocrats who understood the military and economic cruel-real-world. His central argument is that the British elite went wrong when it took to heart liberal arguments, by Herbert Spencer and others, that militant societies would give way to peaceful, free-trading, internationalist, industrial societies. For Barnett modern societies are both industrial and militant; but Britain was neither. Furthermore, its liberalism became romantic, idealistic, moralizing, chivalrous, and aristocratic. Noblesse oblige was taken so far that it undermined the British economy and nearly led to the destruction of the state in war through failure to understand the German threat.

In this article I want to call into question Barnett's militaristic and technocratic treatment of war production, of the British elite, and of the history of scientific and technological education. Indeed, I will suggest that Barnett should not be taken seriously as a historian of these matters. Instead, he should be seen as an exemplar of an influential British intellectual tradition which is supposed not to exist, not least by Barnett himself. This article complements José Harris's fine critique of Barnett's analysis of the welfare state.¹

I

Noel Annan, the biographer of the intellectual aristocracy, has called Corelli Barnett a prophet.² This description can be taken further than one

¹ José Harris, 'Enterprise and Welfare States: A Comparative Perspective', Transactions of the Royal Historical Society, 40 (1990), pp. 175–95.

² 'Disagreeable as it is to be cursed by the prophet, it is as well to have someone around in direct touch with God.' Noel Annan, New York Review of Books, 35/14 (29 September 1988), p. 63.
might think, for prophets were, historically, not just concerned with the future: the past and the present were also their subject. Prophets were loners: their authority came not from formal qualifications but from special knowledge. They did not engage with learned tomes; they were 'practical men'. In the pre-modern world the prophet assumed the authority of God; in the modern world technology, history, and war act as substitutes for the deity. Modern prophets know the cruel, real world. The British prophet additionally invokes the authority of government papers, especially 'secret' ones.

There is something to be said for Barnett's practical, no-nonsense, hard-nosed approach. He does not recognize disciplinary boundaries — he integrates military, political, intellectual, and economic history in a way rarely attempted in Britain. He asks big questions and provides big answers: 'Why has Britain declined?' 'Because of the nature of its elite.' He also gets down into the detail of technologies, machines, and firms in a way which has impressed empirically minded British historians. What has not impressed some historians is his neglect of the secondary literature, particularly that on the welfare state, a topic central to the historiography of twentieth century Britain. Barnett has claimed that the emphasis given by some reviewers to his discussion of the welfare state, at the expense of a discussion of economic performance, education, and science and technology, is itself an indication of the rightness of his thesis. Some reviewers' complaints about a certain lack of politeness in Barnett only add to this argument.

However, Barnett protests too much; for the academic response to his account of British industry and education is broadly sympathetic to him. The reviewer in the Economic History Review concluded: 'One is left with the impression of important points constituting a powerful case to be argued; but not of careful and precise judgements.' George Peden, in the English Historical Review, had his doubts about the book but concluded: 'Barnett's book tends more to polemic than to balanced and cautious judgement, but deserves attention, not least by members of the "enlightened establishment".' John Stevenson, in the Historical Journal, broadly accepted Barnett's 'well documented critique' of wartime industrial performance, but notes that the critique is not original. Paul Addison wrote that 'his demonstration of the inefficiency of major industries in wartime would be

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1 Harris shows that the secondary literature is clear that the postwar British welfare state was less generous than that of many other countries: 'Enterprise and Welfare States'.
3 The only review I know which dismissed Barnett's arguments about industrial performance was G. D. N. Worswick's in the Economic Journal, 97 (1987), pp 502-3
hard to refute'. Margaret Gowing saw his description of the wartime economy as biased in that it ignored the credit side, but agreed that the causes of decline were to be found in education and science and technology. Sir Alec Cairncross accepted the picture of industrial decline, but doubted Barnett's implicit faith in the power of state intervention to reverse it. Robert Skidelsky accepted that British industry was less efficient than the German, before, during and after the war. P. M. Jackson, in Parliamentary Affairs, called the book 'a significant scholarly work' which 'will be a major reference book for anyone interested in this period'. A. J. A. Morris, in the Political Quarterly, centred on Barnett's analysis of education and agreed with it. In the British Journal of Sociology, A. Stewart noted that the book 'sets out to reveal and dissect that [war production] record and does so with a degree of success which is not likely to be surpassed,' using 'devastating case studies'. More interesting still is the fact that some neo-liberals and some Marxists have been very enthusiastic about Audit of War: Denis Noble has noted that Sir Keith Joseph, while at the Department of Education and Science, was 'fond of recommending Correlli Barnett as compulsory reading material to his audiences'. Perry Anderson has said of Audit of War that 'it is composed at a . . . depth that makes previous treatments seem indulgent sketches by comparison'.

Surprisingly, there have been very few 'Thatcherite', or classical liberal, counterblasts to Barnett, even though we have had the liberal new economic history for over twenty years. Perhaps historians in this tradition have simply ignored Barnett on the grounds that he is a late and especially dubious example of old-style nationalistic and voluntaristic economic history. Let me note three partial liberal critiques: Theo Barker argued that wars were destructive of British power, and that the performance of a war economy tells one nothing about a peacetime economy; Robert

11 P. Addison, Contemporary Record, 1/2 (Summer 1987), p. 15.
12 M. M. Gowing, Contemporary Record, 1/2 (Summer 1987), p. 18.
13 A. Cairncross, Contemporary Record, 1/2 (Summer 1987), pp. 17-18.
21 T. Barker, Contemporary Record, 1/2 (Summer 1987), pp. 16-17.
Skidelsky complained about the implicit autarchy in Barnett’s arguments; and Cairncross noted that Barnett’s programme would have required a diminution of political liberty.

Barnett is, with good reason, linked to Martin Wiener in the shape of the ‘Wiener/Barnett thesis’ that British ‘culture’, specifically élite culture, caused the British decline. This argument has had a wide political and intellectual resonance. But there is much more to Barnett than this. Strikingly few reviewers and commentators have noted Barnett’s peculiar ideological position, much less described it accurately. John Stevenson noted only that ‘Barnett’s own perspective seems to belong to that of the long line of frustrated modernisers, who wish Britain were a different country from what it was and is — more like Germany, the United States, Sweden, Japan, or wherever the current vogue has happened to settle’. This, as I will show, is not specific enough. Even Marxists, normally very aware of ideological positions, do not categorize Barnett adequately. Bill Schwarz notes only that Barnett ‘is particularly fond of military metaphors’, and goes on to argue that the Audit of War is ‘a serious intervention in the historiography of contemporary politics and is no mere modish contrivance got up by the literary editors of the weeklies’. Alex Callinicos has described the Audit of War as ‘a local version of the stab-in-the-back myth’, which is true enough; but his description of Barnett’s politics as being of ‘the extreme right’ and ‘Tory corporatism’ is not sufficiently specific either. Paul Addison has been much closer to the mark: he has described Barnett as ‘probably the only modern British historian whose creed is Bismarckian nationalism’, and noted the ‘Teutonic feel’ of Audit of War. Skidelsky also commented on the unenglishness of the book. But it is extraordinary that British historians, normally so prickly about foreign ideologies, should not spot a Bismarckian nationalist a mile off. This may represent a general failure in British history to analyse ideas (as opposed to arguments). On the other hand, it may be that ‘Bismarckian nationalism’ is not as foreign to British historiography as first appearances might suggest. Thus, while it is tempting to see Barnett as a foreigner with strange ideas — and this would certainly fit his thesis — it may be that important elements of Barnett’s

12 Skidelsky, Times Literary Supplement, p. 295.
13 A. Cairncross, Contributions to Political Economy, 7 (1988), pp 113–20
14 For example, in Bruce Collins and Keith Robbins (eds.), British Culture and Economic Decline (London, 1991), a book which successfully demolishes the thesis. It seems to me that mention of H. G. Wells goes a long way in doing this.
15 Stevenson, Historical Journal, p. 507.
ideology are so common that they are not commented on, or even recognized.

Of course, except for a brief period before the First World War, British analogues of 'Bismarckian nationalism' do not figure in analyses of British political ideas. But this does not mean that such ideas ceased to exist, or to be influential. There is, however, a recent literature which regrets that such ideas did not remain permanently part of the ideological and political scene. We know very little about this British tradition, perhaps because it is an ideological perspective which does not label itself and does not write its own history. But there is a tradition of writing militaristic and technocratic critiques of liberalism, quite different from the well known socialist and social democratic tradition. I want to argue that it is helpful to see Audit of War as a bringing together of very strong versions of a technocratic critique and a militaristic critique of British history since the mid-nineteenth century. I will briefly examine these two critiques in turn, and then show that the combination is in fact quite common in what I will call the 'declinist' literature. I will not claim that militaristic and technocratic critiques are necessarily wrong; only that the form they have taken has given us very misleading and partial analyses of British history. This is especially the case when the two critiques are combined.

II

The technocratic critique of modern Britain dominates writing on British science, technology, and education since around 1870, and is important too in discussion of industry and especially state–industry relations.

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19 It is instructive, as well as amusing, to compare Audit of War with Arnold White's Efficiency and Empire (London, 1901) and H. Bennett's Must England Fall? (London, 1946).
21 One reason we may know very little about this kind of thinking is that members of the tradition ignore their predecessors for polemical reasons: it is precisely the lack of predecessors which is part of the complaint.
23 A good example of a technocratic account of industry and state–industry relations is Newton and Porter, Modernization. They define 'industrial modernization' as follows: 'It embraces structural change involving the transfer of capital and labour to technologically
Its basic argument is that the British elite has been hostile to science and technology, that there have been 'two cultures', and that politics, finance, and industry have been dominated by the 'traditional culture' with dire consequences for the British productive economy. The critique may be valid, but it is not well argued or documented, especially comparatively. The dominant mode and tone of this historiography might be labelled 'inverted Whiggism'. Where Whig historians wrote stories of English progress — practically everything that ever happened in England was the seed of a glorious future — now we have mirror-image chronicles of 'decline'. These dredge up any example of a civil servant being ignorant of technology, a businessman not investing in a modern machine, or a soldier doubting the efficacy of new weapons. This kind of writing has a long pedigree: the prodigious productivity of this industry has produced an impressive pile of horrors, to which present day 'declinists' help themselves liberally.

Given that we seem to have so much evidence, we cannot but fail to be impressed by the picture of the English elite as anti-scientific and anti-industrial, of English business as congenitally short-sighted, of the English people as trapped in an idiotic longing for all things rural. Indeed, practically the first thing we 'know' about modern British science and technology is that it has been 'declining'. But if we accept these accounts we face very serious historical problems. Rates of economic growth, not to mention levels of output, were higher in the era of 'decline' than the era of 'progress'. We cannot explain the most obvious historical fact about British industrial output, science, technology, and education: their huge expansion since the last century. The explanations of the 'declinists' too often turn out to be explanations not of relatively slow growth but of an imagined stagnation or even absolute decline. They are, in other words, a historiographical sledgehammer to crack a historical nut; impressive, but pointless.14

Just as significant is the fact that the technocratic critique assumes what needs to be proven: that the displacement of market or other rationalities by technical rationality, large investments in R & D and education, and scientific and technological education for the elite, are in fact central to economic growth. It is worth noting the measured scepticism of historians about such advanced areas of the productive economy with high growth potential in expanding areas of world trade. At the same time it embodies a commitment to enhanced industrial efficiency and productive capacity' (p. x) British politics and ideology are seen as backward and as a barrier to modernization strategies. Interestingly, Newton and Porter are critical of Barnett's account of wartime industrial performance, noting correctly that he does not distinguish between new and old sectors (pp. 98-9) and that he fails to identify the modernizing impulse in the Labour government of 1945-51 (pp. 107-8).

14 I am delighted to find that Harold James uses the same metaphor to make a related point, that 'cultural' explanations are not a good way of explaining the small differences in economic performance across West European nations (Harold James, 'The German Experience and the Myth of British Cultural Exceptionalism', in Collins and Robbins, British Culture, p. 124).
arguments, for the late nineteenth century especially. Furthermore, even if the general case is made, the case for Britain does not follow. Even if American growth, for example, was strongly influenced by R & D it does not mean that British growth was.

By contrast, the militaristic critique of Britain is better grounded, both theoretically and empirically. For example, the 'new sociology of war' has recently argued that the militaristic critique of liberalism and Marxism has great force. Attacks on liberalism have been a commonplace in the military historical literature on Britain. This argues, broadly speaking, that liberalism not only left Britain unprepared for war but that it encouraged a maritime, imperial orientation, and a dislike of armies. This turned Britain's attention away from the military realities: the need to maintain an army for continental operations. It is significant that, as Hew Strachan points out, Barnett is merely on the extreme of a consensus on these points. But this militaristic perspective, with its focus on the Army, has distorted the historical record of Britain's commitment to armed force. British strategy, which centred first on the Navy and then on the Air Force, may have been faulty, but it had a logic of its own. For our purposes it had a particularly interesting feature: the substitution of technology for manpower. More generally, British strategy was deeply concerned with industrial and economic as well as scientific and technological factors. The relative neglect of the army was the consequence, not just of liberal objections to large armies, but of the belief that warlike power could be more efficiently provided by using machinery against the civil population and industries of enemies. The importance attached to the Royal Navy in the Edwardian years, and to the Air Force in the interwar years, was not therefore a reflection of silly imperial orientation, but a very modern conception of warfare.

Military historians, and others, have put much of the blame for Britain's supposed unpreparedness for war in the 1930s on the Treasury, the most liberal, laissez-faire, and powerful of government departments. And yet, as John Ferris has shown, despite the undoubted influence of the Treasury in the 1920s Britain had the highest absolute defence expenditure of any

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country in the world, which was probably higher in absolute terms than its defence expenditure just before the First World War. Secondly, the Treasury was, as George Peden has convincingly shown, as concerned with the industrial aspects of arms expenditure as with the financial ones. Furthermore, far from retarding the development of military technology in interwar Britain, the Treasury and the Cabinet wanted air power and mechanization as a means of reducing manpower. In the 1930s they saw a strong Air Force as the cheapest and most effective way of meeting the German challenge. The RAF, and aeronautical technology, were important beneficiaries of the much-lamented Treasury stinginess and not one of its chief victims.

III

The combination of the militaristic and technocratic arguments is implicit in much 'declinist' literature, in two forms. The first is the idea of war as an audit of a nation's scientific, technological, industrial, and economic power. The shortage of dyestuffs and other science-based products in the early years of the Great War, as well as the 'shell scandal', has long been used as an indictment of late Victorian and Edwardian Britain. As far as the Second World War is concerned, the argument is much less developed, in large part because the audit was thought to be positive — though one should not forget books like Guilty Men which were as much about industrial performance in the interwar years as anything else. But the idea of war as an audit of a nation is in many ways a dubious one. First, because the dynamics of peaceful economic development and warlike economic development may indeed be quite different, as liberals have long maintained. It is thus wrong to equate the military importance of dyestuffs in 1914 with their economic importance had there been no war. Secondly, such arguments tend to assume that the war was determined to take place in a particular way at a particular time: Britain was bound to have been at war with Germany in 1914 and was bound to send a mass army to the continent.

40 G C Peden, British Rearmament and the Treasury, 1932-1939 (Edinburgh, 1979)
42 Edgerton, Aeroplane, ch. 2.
43 This applies even to a book as subtle and receptive to ideas as Aaron Friedberg's The Weary Titan, Britain and the Experience of Relative Decline, 1895-1905 (Princeton, 1989), which drew on Correlli Barnett, The Collapse of British Power (London, 1972) for this part of the analysis.
44 Cato, Guilty Men (London, 1940).
Had there been no war in 1914, or if the war itself had been different, the audit too would have been different.

The second implicit combination of the militaristic and technocratic critique lies in the tendency to compare Britain with Germany, rather than with, say, the United States. In order to describe the nature of this comparison, and how deep-rooted it is, let me take what might seem a hard case: Perry Anderson's recent formally comparative model of the 'British decline'. For Anderson there were three key British 'absences' from the nineteenth century: a conscript army, mass education, and a state-created infrastructure. The idea of 'absences' makes no sense without 'presences'; but, as in much literature of this kind, the actual historical comparator is not historically specified. Nevertheless, the most obvious choice for Anderson's 'Other Country' (to use E. P. Thompson's phrase) is Imperial Germany, which had the three-fold 'presences' and was the most successful European power before 1914. The British have long been seduced by an image of Teutonic efficiency, in which Germany succeeds in the modern world because of the efficiency of its industry, the national organization of that industry, and the systematic application of science-based technology to industry and to war. And yet it is clear that this twin picture is misleading; German GDP per worker was lower than British until well past the Second World War, as a graph produced by Barnett himself shows, and recent work by Feinstein confirms. The use of technology by Germany for warlike purposes has also been much exaggerated. Overall, as is clear from Table 1, both the USA and the UK pursued a much more capital-intensive path than did Germany. The German army was less technically intensive than is usually thought: 'The harsh reality ... is that the basic means of transport in the German army was well-known to Alexander, Hannibal, Caesar, Gustavus, Marlborough, Frederick and Napoleon: namely, the horse.' The numbers of horses involved were huge; 590,000 in 1939; 625,000 for Barbarossa; and a total of 1,198,724 in February 1945. Wartime losses of army horses amounted to 1.5m. It was the British and

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44 Anderson, 'Figures of Descent'.
46 See, for example, Wesley Wark, The Ultimate Enemy British Intelligence and Nazi Germany, 1933-1939 (Oxford, 1985).
Table 1
Volume of combat munitions production compared to numbers of military personnel (US$000 per man), 1940-1944.

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<th>Year</th>
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<td>1942</td>
<td>5.4</td>
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<td>1943</td>
<td>4.2</td>
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<td>1.3</td>
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<td>3.7</td>
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American armies which were most fully motorized. It is little wonder that historians who know Germany find the picture of overwhelming German superiority ludicrous.¹³

Given that Britain has been ahead of Germany economically for much of this century, it is surprising that so many have looked to it as a model. It is perhaps because Britain has been in military competition with Germany, and because Germany has been deemed to have had those features which British analysts believe are essential to economic success. In terms of economic performance the country from which lessons might be more appropriately learned was the United States, which has been easily the most efficient large economy throughout the century, and still is today. Comparisons with the United States would give us a quite different picture of absences and presences in the British state. Unfortunately, what we sometimes get is an implicit argument that the British economy should have been as efficient as the American by adopting German methods. This is a case which could be argued, but it needs to be done carefully.

IV

There are, then, good general grounds for doubting the validity of the existing technocratic and militaristic critiques, either singly or in combination. But even within the context of a faulty overall thesis Barnett is misleading and often simply wrong in details. I will consider just three topics: technical education; aircraft production in the Second World War; and the nature of the British élite. Others could have been chosen, but these three seem to me

¹² Ibid., pp. 130-5
¹³ James, 'German Experience'.
to be particularly important to Barnett's argument, and have attracted the least critical attention.

Barnett's scathing attack on British higher technical education provides an excellent example of lack of balance across time and across countries, and straightforwardly perverse readings. Barnett claims, for example, that there was no British equivalent to the German Technische Hochschule before the Second World War, 'with the single exception of Imperial College'. But Imperial College was part of the University of London and thus unlike German Technische Hochschulen, which were free-standing institutions. If we take degree-level technical institutions as equivalent to Technische Hochschulen the picture is quite different: there were many British technical colleges at which students studied to degree level, usually to take London External BScs. A rather special example was the predecessor to UMIST, whose Edwardian main building is an exact replica of a Technische Hochschule: 'Tech' staff taught, and examined, degree-level courses within the University of Manchester.

Barnett argues that the Victorian lobbyists for liberal education succeeded in creating a false dichotomy between enriching the mind and professional training. The practical was relegated to the civic universities, which he sees as academically and socially second-class, and therefore ignores. So instead of comparing civics with the Technische Hochschulen, he instead contrasts the Technische Hochschulen with Oxbridge! The contrast is vivid: Oxbridge turns out public servants; the Technische Hochschulen turn out engineers. But Barnett does not compare like with like: he does not compare Oxbridge, or the civics, with German universities. Had he done so he would have noticed that in German universities, before 1945, one could not study engineering. It was in Britain rather than in Germany that one found the integration Barnett is calling for: the British civic universities prided themselves on being centres for training in the applied sciences and engineering as well a providing a liberal education. Indeed, it is clear from recent work that many British advocates of technical education rejected the German model precisely because of its separation of liberal and practical education. In any case, Barnett is wrong to imply that engineering education was relegated to the civics: the largest single engineering school was at the University of Cambridge. Nor can the Scottish universities' role in scien-

14 Barnett, Audit, p. 204.
15 Ibid., p. 220
tific and technological education be ignored especially for the period before 1914. 19

The most obvious feature of British technical education between 1870 and 1914, as Pollard has reminded us, was its very rapid expansion. 40 By contrast, Barnett writes of the 'capturing of the future of British education by religion and the classics'; 41 at a time when the Church lost control of Oxbridge, where the classics became relatively less important. 42 Of course, Barnett does not deny that scientific and technological education expanded; but he presents examples of growth as exceptional. The very clear impression one gets is that British education and British culture became progressively less scientific and technological.

V

Let me now turn to Barnett's analysis of wartime aircraft production. Before rearmament, Barnett claims, 'the British aircraft industry as a whole had to be artificially kept alive by means of Air Ministry orders . . . and then only in tiny quantities because of the partial unilateral disarmament then being pursued by the British governments under the combined influence of moralising internationalism and financial stringency'. 43 This assessment is the standard one in the literature. In fact, the British aircraft industry was at least as big as any aircraft industry in the capitalist world; indeed, there is evidence to suggest that it was also the largest exporter in the world. 44 But when it comes to war production Barnett does have something new to say: the aircraft industry was at 'the centre of gravity of the entire British war effort' 45 but it suffered from the same fundamental defects as the older industrial sec-


40 Pollard, Prime and Decline.

41 Barnett, Audit, p. 129. In fact, most of Barnett's evidence for the backwardness of the industry concerns civil aviation, which was small by comparison with service aviation everywhere in the world, except Germany between 1919 and 1933. For Britain in 1934 the market for aircraft was as follows. Air Ministry £6m, exports, mostly of military types, £1 5m; home civil sales, £0.5m (UDC Memorandum, Royal Commission on the Private Manufacture of and Trading in Arms, 1935/36, Minutes of Evidence, p. 195.) Even in the United States the Army and the Navy accounted for at least 50 per cent of sales between 1927 and 1933, rising to at least two-thirds in 1936. American aircraft exports rose from under 10 per cent of US production in the 1920s to over 40 per cent in the late 1930s, largely because of sales of military types (Elsbeth E Freudenthal, 'The Aviation Business in the 1930s', in G. R. Simonson (ed), The History of the American Aircraft Industry. An Anthology (Cambridge, Mass., 1968).

42 Edgerton, Aeroplane, ch. 2.

43 Barnett, Audit, p. 146
tors — 'old wine into a new bottle' he calls it. He finds the productivity record particularly shocking; British productivity, he argues, was lower than American and even than German in terms of weight of aircraft produced per man-day. He produces two sets of comparative figures. In the first he calculates a figure for Britain of 1.19 lb per man-day for 1944, which he compares with reported figures of 1.5 for Germany (1943) and 2.76 for the United States (1944). The second comparison is of peaks in 1944: Britain (March, 1944) 1.28; Germany (best quarter, 1944) 1.93; United States (peak, 1944) 3.0. This seems damning enough. And yet these figures, which Barnett admits are approximate, are open to challenge at many levels. First, it is not clear whether the definitions of structure-weight and employment are the same across countries. Secondly, Barnett calculates British 'productivity' wrongly. To calculate productivity for 1944 as a whole and for March 1944 he uses the same figure for employment: 510,000, which seems to be a figure for 1943. More importantly, he converts yearly and monthly output figures per worker into output per day figures by dividing by 365 and 31, respectively. But even if every day of the year was a working day, not all the workers employed were working every day of the year. And even if the German figures were calculated on the same basis it may simply be that Germans (or rather Germans and foreign slave labour) had a higher 'productivity' because they worked longer hours.

There are alternative figures available. A properly comparative measurement of British and American productivity was made during the war by a senior Ministry of Aircraft Production engineer (Cambridge-educated, like many aeronautical engineers). He found US production to be 75 per cent more efficient than British; a smaller difference than Barnett finds. But, more interestingly, he argued that this difference was accounted for by the fact that American production runs were longer than British and that British factories tended to be smaller. This in itself does not damn the British effort: it is one of the peculiarities of aircraft manufacture that productivity increases rapidly with volume and rate of production, independently of technology used and of the initial skill of workers and management. There were sound military reasons for paying the (known) productivity price of relatively short production runs.

"Ibid., p. 127.
"Ibid., p. 158, n. 106, p. 323.
"Ibid., p. 146. He gives as his source Public Record Office reference CAB 87/13 PR(43)98. (43) dates the document 1943!
"For 1944: 221,985,000lb divided by 365 divided by 510,000 = 1.19lb per man-day (Barnett, Audit, p. 321, n. 23); for March 1944. 20,300,000lb divided by 31 divided by 510,000 = 1.28lb per man-day (p. 323, n. 106).
productivity comparisons, as well as being immensely difficult to carry out, were in the end meaningless. As Ely Devons, a former senior planner at the Ministry of Aircraft Production, put it: 'nobody was really interested in the weight of aircraft produced, but in its fighting power.'

The second comparison is between the British and German industries. Richard Overy has shown that the German aircraft industry was appallingly inefficient in the first years of the war. He suggests that in 1940, while Britain and Germany provided about the same quantity of resources for aircraft production, Britain produced 50 per cent more aeroplanes. Between 1939 and 1941 the Germans doubled the resources they put into aircraft production, planning for an increase in output of between 200 per cent and 400 per cent: they got 30 per cent more. In 1944, after Speer's reorganizations, they produced more than three times the number of aircraft using virtually the same quantity of resources they used in 1940. So, even if the Germans did produce aircraft more efficiently than Britain at the end of the war, Britain almost certainly produced more aircraft more efficiently for longer. Perhaps this is not surprising. For Goering 'air warfare was a moral rather than a material question'; for the British it was very much a material question.

Barnett sees the causes of British wartime failure as three-fold: the small scale of the industry in 1935, the very rapid expansion, and trade unions' restrictive practices. As we have seen, the British industry was no smaller than other countries', and expansion caused problems elsewhere: what is remarkable is that by 1940 Britain was outproducing Germany by 50 per cent in numbers, a fact that Barnett does not cite. As far as trade unions are concerned, Barnett gives the strong impression that they resisted 'dilution' of skilled work, indeed, that they were 'no less obdurate than in shipbuilding.' This is simply not the case. British and American levels of dilution, as measured by the proportion of women workers, were almost the same. It was in fact the German aircraft workers who resisted dilution, until 1944. Richard Overy notes:

In Germany the aircraft factories were slow to adopt new methods, and were permeated by many built in inefficiencies which it proved hard to overcome.

71 Planning in Practice: Essays in Aircraft Planning in Wartime (Cambridge, 1950), p 150
72 Ibid., p. 177.
73 He notes that by 1939 parity with Germany was achieved, but suggests this was due to the continued production of obsolete types (Barnett, Audit, p 142) This is certainly true, but the implication that all German aircraft were first-class is not established
74 Mensforth, 'Airframe Production'.

Handwork methods survived through the legacy of the early industry in the 1930s and because of the high degree of skill acquired by the individual Meister (the master craftsman) through a long and rigorous apprenticeship. The workforce resisted attempts to undermine the skills or dilute the workforce by using new methods and semi-skilled labour. Barnett is half aware of this, but with remarkable insouciance comments that: 'In Germany the skilled craftsman resisted dilution out of a mistaken belief that it would mar the superb quality of the German engineering product; in Britain they resisted it simply in defence of privilege' 17 This is not an isolated example of sheer prejudice: virtually all the faults Barnett finds in the British aircraft industry — emphasis on design rather than production, interfirm rivalry, etc. — were probably to be found to a greater degree in the German rather than the British industry. 18

But the efficiency of aircraft production, while giving an interesting insight into the comparative efficiency of war production, does not give us a measure of the efficiency of the war effort as a whole. The bulk of the aircraft production effort was devoted to strategic bombers, and these failed to bring about the surrender of Germany. We might conclude that too many aircraft were made, indeed that in wartime Britain there was too much rather than too little faith in technology. The key point about Britain and aviation in the Second World War was that aviation was at the centre of gravity of the war effort because the British elite did not believe in the martial, militarist spirit; instead, it believed in technology.

In other chapters Barnett gives a different account of aircraft production. He sees policy for aircraft production as a model for a general modernizing industrial policy. He notes a Treasury memorandum of 1943 which, in his words, showed that 'the best firms working for the Ministry of Aircraft Production and the Ministry of Production, thanks to American methods and machines, now equalled American levels of productivity'. 19 Some pages later he argues that 'in all the planning documents for the post-war era there is no equivalent at all of the vast national programmes of industrial development and modernisation under government sponsorship represented by pre-war and wartime rearmament'. 20 This is not true either: some, though not all, ministers were very well aware of the wartime production precedent for industrial policy, and in certain areas such policies were indeed carried through. 21 Labour ministers in particular were keen on

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78 Barnett, Audit, p 156.
79 Overy, Air War.
80 Barnett, Audit, p. 240.
81 Ibid., p. 264.
intervention in and reconstruction of British industry on technocratic lines: nationalization is a case in point. But Barnett dismisses nationalization as an ‘empty, if long revered, New Jerusalem slogan’ after noting:

The truth is that the wartime British Establishment’s whole approach to the question of industrial strategy was rooted in a Victorian mercantile conception of a myriad firms competing in a market place — industry was still often referred to as ‘trade’: ‘the coal trade’; ‘the steel trade’. The Establishment — politicians, civil servants, hired economists — had not yet grasped the twentieth century concept, pioneered by the great American and German corporations, of the massive technology-led operation that conquers its own market almost on the analogy of a great military offensive.\(^4\)

The examples he cites in this quotation illustrate the absurdity of the claim, for the myriad firms of the steel and coal trades were nationalized into single corporations, a policy he recognizes in his chapter on coal, and disparages for different reasons!

Barnett, like many a soldier, technocrat, or ‘declinist’, has no time for politics — it is merely an impediment to progress. And yet neither the politics of welfare — or of technocratic modernization — can be ignored. Barnett refuses to acknowledge that if there was a modernizing party in wartime Britain it was the Labour Party, along with many, though not all, his ‘New Jerusalemers’. Labour members of the Coalition, notably Dalton and Cripps, put forward radical programmes for industrial modernization which were rejected by the Coalition and by industrialists. There was no consensus on industrial policy.\(^5\) The reality was the Labour Party wanted industrial modernization and a welfare state, while the Conservatives rejected both on liberal grounds. To sum up, neither Barnett’s account of the ‘realities’ of wartime production, or that of industrial policy, is to be trusted.

VI

It would be inconceivable that the British elite, as Barnett sees it, could pursue a warlike strategy, much less a technological warlike strategy. He sees the British elite as weak, anti-scientific, anti-industrial, and anti-militaristic. What he calls the ‘“enlightened” Establishment’, which he sees as being in charge or at least very influential, had been


\(^{5}\) Ibid., p. 275.

a hundred years and more in the making, its ancestry beginning with (to put it in
stud-book form) romanticism out of emotion by idealism. . . . a century of cross-
breeding between the aesthetic and moral strains in romanticism had made the
‘enlightened’ British Establishment of the 1940s what it was: tender-hearted and
highminded, in that order; latter-day White Knights riding out in wartime Britain
to combat evil with the flashing sword of moral indignation, and questing in
simple faith for the grail of human harmony and happiness."

The ‘romantic idealism’ of the ‘New Jerusalemers’ came from non-
conforming Christianity, the idea of the ‘gentleman’, and the public schools.
Barnett’s condemnation of the elite continues: ‘not one of the New Jeru-
salemers was an engineer, an industrialist or a trade unionist, not one of
them had ever had experience of running any kind of operation in the real
world in which Britain competed commercially in peacetime and fought for
very life in wartime . . .’.7 It is difficult to criticize this picture because of its
improbability. The contradictions — the seeming equation of romanticism,
idealism, liberalism, Christian ethics, chivalry — suggest invention, but the
composite picture is strangely familiar. Hence, perhaps, its appeal. It is the
picture the elite presented of itself, and which is at the centre of the national
myth, found in wartime films, many of them made for American audiences.8

The wartime establishment were myth-makers of the first order. Arch-
bishop Temple described wartime Britain as an emergent ‘welfare state’9
when it was plainly a warfare state; G. M. Trevelyan could, in 1941,
describe the English as ‘ultra-pacifist’.10 In the Second World War, Cripps,
the longest-serving Minister of Aircraft Production, may have claimed to
have God as his ‘co-pilot’, but he directed the building of the bombers that
killed German workers with notable enthusiasm for efficiency and plan-
ing. Cripps, whom Barnett sees as a moralist who was also a ‘realist’,11 as if
he were the exception that proved the rule, was probably the most moraliz-
ing and utopian of all the ‘New Jerusalemers’. As D. W. Brogan put it in
1943: ‘In no country has so much talent been devoted to misrepresenting the
essential character of a nation as in England.’12 We might note, too, that
many of the ‘New Jerusalemers’ did indeed have the backgrounds Barnett
claims they did not have. Beveridge and Keynes were senior civil servants in
the Great War. Ralph Glasser, who met Beveridge in the 1930s, later
described him as ‘in essence the iron technocrat . . . He saw social probems

7 Barnett, Audit, p. 15.
8 Ibid., p. 18.
11 G. M Trevelyan, British History of the Nineteenth Century and After: 1782-1919
(London, 1937); ‘Postscript 1941’, p. 46 of Penguin edn (Harmondsworth, 1965)
12 Barnett, Audit, p. 18.
Major Attlee volunteered in 1914 and fought in Gallipoli, in Mesopotamia, and on the Western Front where he was wounded for the third time just before the end of the war. Stafford Cripps, who had a degree in chemistry, spent part of the Great War as assistant superintendent of the largest explosives plant in Britain.

Of course, Barnett is right to highlight the importance of public schools and Oxbridge in the formation of the British wartime élite, and indeed that they were formed before the Great War. But to suggest that the public schools and the ancient universities inculcated the world view that Barnett says they did is another matter. We might ask, following D. W. Brogan, who was the typical product of such schools: Churchill or Nehru (Harrow); Sir Oswald Mosley or Sir Stafford Cripps (Winchester); J. B. S. Haldane or Captain Ramsay (Eton); Neville Chamberlain, William Temple, or R. H. Tawney (Rugby)? The universities, too, needless to say, produced an élite which was divided ideologically.

But there is another objection to Barnett's account of wartime thinking and wartime policy-making. He does not direct our attention to those who were actually in charge of wartime Britain. We learn more about Archbishop Temple than about Winston Churchill, and — excepting Clement Attlee — practically nothing about the other key members of the War Cabinet. Between 1941 and 1945 these were Lord Beaverbrook (industrialist), Sir John Anderson (scientist and civil servant), Oliver Lyttleton (industrialist), Sir Kingsley Wood (politician), Ernest Bevin (trade unionist), Herbert Morrison (politician), Lord Woolton (economist, social worker, and industrialist), and Anthony Eden (politician). Most of these men were unlikely to have been in power had it not been for the war; nor were they representative of the prewar political establishment; nor were they necessarily enlightened. But they did run the country.

Although the distinction between illusion and reality is central to Barnett's book, his picture of the élite is itself an illusion. The myth had it that English niceness, gentleness, amateurishness, and stupidity led to brilliant success; Barnett's anti-myth has it that these same qualities led to disaster. One might summarize his argument and his appeal thus: he has extended the 'declinist' picture of industrial and technological incompetence to the heroic wartime period and expanded the 'myth of 1940' picture of the

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**Ralph Glasser, Gorbals Boy at Oxford** (London, 1988), p. 81. See also Harris, 'Enterprise and Welfare States'.


**Brogan, English People, p. 57.**
elite backwards and forwards as an explanation. In believing the myth Barnett is as English as cricket; he is a peculiarly English ideologue." 

VII

To conclude, let us audit Barnett. Among the assets are the fact that he has debunked some of the mythology of the Second World War, and that he has written in detail about British science, technology, education, and industry. But by magnifying to grotesque proportions certain arguments about the British 'decline' he has made it easier to see how common and how wrong they are. The responses Barnett has provoked are also illuminating: when neo-liberals and Marxists admire a militarist technocrat something very interesting is going on. We are shown the continued vitality of a modernizing tradition in British culture which supposedly does not exist. But there are many liabilities. Barnett shows that his modernizing tradition does not have a firm grip on reality. As an 'operational' account Barnett's book is misleading at many interconnected levels. It is not to be trusted as an account of wartime industry or industrial policy, or as an account of British education and the character of the British elite. It perpetuates in exaggerated form a series of illusions about Britain which stand in the way of a realistic analysis. We cower before invented images of the 'cruel real world', just as people once supposedly did before the vision of the 'New Jerusalem'. A vulgar materialist (rather than a vulgar idealist like Barnett) might conclude that his book is more a symptom of decline than a diagnosis.**


** Since finishing the bulk of this paper I have, by happy chance, come across Christopher Harvie's fine critique of Wiener's English Culture and the Decline of the Industrial Spirit, which noted that the book 'isn't, properly speaking, an explanation or even a thesis but an ideological weapon. It lies there, unexploded, ticking away... the thing is, intellectually, a dud, a whole lot of fancy fuses wired up to a charge of concrete.' But, wrote Harvie, it was necessary to 'explain why so many of those it had landed among have taken cover, and why others regard it as a wonder weapon'. Particularly worrying was the susceptibility to the book of 'influential power-brokers, particularly in the academic world, who have generally prided themselves on their judicious detachment and their "liberal" defence of academic freedoms'. Can this, he asked, be divorced from the supine reaction of leading figures in the world of university politics to the government's dismantling of so much of the system?' (Harvie, 'Liturgies', pp. 18, 19, 20). See also David Edgerton and Kirsty Hughes, The Poverty of Science: A Critical Analysis of Scientific and Industrial Policy under Mrs Thatcher, Public Administration, 69 (1989), pp. 419-33.