

BARNES WALLIS



R-100

A Biography by

J E Morpurgo

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Longman

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Introduction

If achievement and fame were synonymous Barnes Wallis would rank among the best known Englishmen of the twentieth century. His long working life spans virtually the whole of the age of aviation. Time and time again his genius set before his countrymen a precedence in invention which should have put them far in the van of aeronautical developments; indeed, every major advance over fifty years—with the exception of jet-propulsion—owed something to his creative imagination, and many were contributed by him alone.

Nor was his skill limited to aeronautics or aerial warfare. He contributed to the development of radio telescoping and planned nuclear submarines. Himself a man who had learned his craft for the most part 'on the job', he stood nevertheless among the prophets of the new academic technological education. And still he found the time, the intellectual energy and the charity to devote himself to the revivification of a great school.

The technology in which he worked and dreamed—aviation—is that which above all others, at least until the beginning of space travel, belonged to our century, and in our century has seemed most likely to arouse hero-worship.

But achievement and fame are *not* synonymous, and there have been factors—personal, economic and political—which have kept Barnes Wallis, if not obscure then at best well-known to the *cognoscenti*, and to the generality only after much prompting.

Especially in Britain, but to some extent in all countries, there is an interplay between public reputation and public recognition: Tennyson was the best known of all the poets laureate because he was made a lord, and he was made a lord because he was the best known of all the poets laureate. Recognition of this kind was consistently denied to Wallis until his eighty-first year. True, he

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was much honoured by his near equals: he was one of the first working engineers to become a Fellow of the Royal Society, and his list of honorary degrees reads like a roll-call of British universities. But, in more public terms, until 1968 a nation that still stands in some awe of titles and decorations allowed one of its greatest inventors nothing more than the award which comes almost automatically to retiring colonels and still-hopeful civil servants.

In a very real sense Wallis's fame has suffered from the very fact of his being English. A creative engineer is subject to the laws of economics: of what merit engineering perfection if the perfected object is too expensive to be useful? And if, like Wallis, he works in a field where the costs of originality and experiment are phenomenal and the rewards often speculative and always long-delayed, it is generally true that the only possible patron is the State. But much of Wallis's achievement belongs to a period when Britain could no longer afford the inevitably vast expense of exploiting his ideas. His work was always set against a background of parsimony; the British aircraft industry had a short, ebullient youth and almost no prosperous middle-age before it settled into impoverished senility and came virtually to death. Above all in the last two decades Britain's economic troubles have woven a shroud for her aircraft industry. New and revolutionary techniques have been developed, vast schemes proposed and sometimes initiated, only to be shelved for lack of funds or set aside by changing political doctrines.

Wallis and many of his fellow-workers in British aeronautical engineering have wrought wonderfully and hoped wildly. But hindsight makes it obvious that the only time in his working career when he could have expected the full thrust of national support behind him was in the unnaturally enlivened war years. Hence the paradox that this essentially gentle man and devout Christian was most supported when he was engaged in the fearsome task of producing weapons of destruction.

Yet Wallis's Englishness has also held him from becoming a brilliant exile, from deserting to the imperial power of our time, the United States, which sensibly has taken over many of his drawing-board dreams and made them into commercial successes. The American public was not told about Wallis, but had it been told it would have greeted with disbelief—and even with patriotic

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indignation—the information that so many of the most cherished advances of their much cherished aircraft industry came to them by benefit of an Englishman.

At home Wallis's chances of acclaim have also been tempered by circumstances far outside his control. Throughout most of his working life he was the servant of huge corporations. For much of that time the ethos of the industrial giant in Britain was suspect: in the late 'twenties and the 'thirties the particular corporation for which he worked was regarded, without justification but with much fervour, as the principal villain of the popular pacifist nightmare.

Wallis saw creative engineering as an art and himself as a sort of poet, and he accepted without reservation Einstein's observation that 'imagination is more important than knowledge. Knowledge is limited, imagination embraces the world, stimulating progress, giving birth to evolution.' In one of his letters to Leo d'Erlanger he wrote: 'Perhaps I am more of the artist in love with creation than the business man trying to sell his wares.' And, recognising himself as a poet, on occasion Wallis adopted the poet's habitual arrogance, the self-assurance of being one of the 'unacknowledged legislators of mankind'. Acknowledged legislators have usually been most uncomfortable in the company of poets. Worse than this for his chance of reward was his self-damning habit of knowing himself right—and proving it. Nothing makes a man enemies so rapidly as the capacity for being generally right, nothing makes powerful enemies so powerfully as proving oneself right at the expense of men who are in a position to hide their errors of judgement by refusing to admit that they exist. The Establishment has an institutional memory that is longer than the careers of individuals. It does not forget or forgive sins against its predecessors.

In the last resort, however, it would seem that if Barnes Wallis has not had his due share of glory, the explanation must include something more worthy than enmity or chauvinism and less easily identified than historical misfortune. The very length and variety of his achievement makes it almost impossible for the public to grasp that all this came from one man's mind. Already in 1917 he was close to being the senior aircraft designer in Britain; at the age of eighty he could still boast that he had on the drawing-board a revolutionary 'plane that would fly Britain, first among the

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nations, into the next century. Barnes Wallis's later innovations are so youthful and so progressive that few can comprehend that these are products of the same mind that designed *R.80*, *R.100*, the Wellesley, the Wellington, the bouncing and tallboy bombs. He came close to the point of obliterating his chance of fame by doing too much for too long.

Did Wallis himself care much for fame? Undoubtedly he regretted and even resented the deliberation of the move to oblivion to which others subjected him for so long, for he recognised it as both slur on his work and disadvantage to his future activities.

In his mature years Wallis was not notably shy. True (despite the trumpeting he experienced when the film of *The Dam Busters* was shown) he resisted the easy lure of idolisation, arguing always that he must give his time to the future and had little to spare for reliving the past. But, when it suited his obstinacy, he recognised the value of publicity and could use it most effectively, as at the time when the British Government refused to exploit his revolutionary theories on variable wing-span.

His attitude to the writing of his life becomes then part of his biography. He constantly refused to co-operate with publicists, however skilful, whom he suspected of exploiting him without caring for the things for which he cared. But when finally he agreed to allow a friend of long-standing the exciting privilege of recording one of the most fascinating lives of the century, his own professionalism would not allow him to trespass upon the professionalism of others. In the sense that its author hopes to shift the balance of fame this biography is written in indignation, but the indignation is the author's and not the subject's. And, if this book is written unashamedly in affection, there has certainly been no demand from its subject that it should be written in adulation. No attempt has been made to enlarge the warts so that they hide the face, but where they are thought to exist they have been drawn into the portrait.

