

# reviews

## Processes of scientific intelligence

Edward Bullard

*Most Secret War: British Scientific Intelligence, 1939-1945.* By R. V. Jones. Pp. 542. (Hamish Hamilton: London, 1978.) £6.95. (Published as *The Wizard War* by Coward, McCann and Geoghegan: New York, \$12.95.)

MOST of the generals of World War II published their memoirs in the 1950s. However interesting these are as accounts of events and as revelations of personality, they are pervaded by unreality because their writers could not reveal the extent of their previous knowledge of the enemy's plans and arrangements. Now enough has been declassified to enable a rational account to be given of the controversies that raged before major decisions were taken. The relaxation of the restrictions has led, recently, to the publication of several books of great interest, those by F. W. Winterbotham and by Solly Zuckerman being particularly informative. Now we have a book by R. V. Jones, the grand panjandrum of the arcana of scientific intelligence.

At Oxford in the 1930s Jones became a pupil and protégé of F. A. Lindemann (later Lord Cherwell). As a graduate student he worked on the development of instruments for the detection of infrared radiation and became involved in Lindemann's wrong-headed crusade to promote infrared detection as an alternative to radar. Jones escaped from this at the end of 1938 and started on what was to be his main work until 1946: the understanding of German equipment, activities and military doctrine.

He kept his connection with Lindemann throughout the War and made good, but restrained, use of the access it gave to Churchill. The myth that he could call down wrath from on high served him even better than the reality. I remember, for example, an occasion when an Assistant Director of Air Intelligence told me that he was going "to get rid of that man Jones"; I told him he couldn't and next day found a sadder and a wiser Air Commodore. Jones was not universally popular; perhaps this was inevitable as he was attacking strongly held beliefs and was usually proved to be right.

When it became clear that he was right he sometimes did not soften the blow to his opponent's pride. He was given to practical jokes and to contriving situations in which they looked foolish. The story of the lump of coke that was said to have fallen from a Russian pilot-less aircraft and to contain 98% of an element 'unknown to science' is an entertaining example.

Lindemann's support of Jones was probably the most useful thing he did during the War. Since he died his reputation has suffered from attacks of unexampled virulence. The latest is J. Z. Young's chiding of Solly Zuckerman for not recognising "what an odious man he was" (*Nature* 271, 387; 1978). Was he odious? Readers of Jones' book can judge for themselves; for me it strengthens the impression that Lindemann suffered from an almost pathological unsoundness of judgement; if two views were possible, he almost invariably supported the wrong one. He was not an easy or a likeable man, and one of his least amiable traits was a deep and unrelenting hatred of the German people, even to the extent of omitting from *Who's Who* the fact that he was born in Germany. His support of Jones was, however, effective and important; it is interesting to speculate whether Tizard or Blackett would or could have done it as well if they had been in Lindemann's place.

Jones' first great success was the penetration of the system of radio-beams that enabled the Germans to bomb cities in England by night. This not only enabled the system to be rendered ineffective by jamming and by "bending the beams" but also drew attention to the gross neglect of navigational aids by our own bomber force who, at the start of the war, believed that they could successfully attack targets deep in Germany and needed no new aids.

Jones' success with the beams, with the understanding of German radar and, later, with the German flying bombs and rockets depended on the intimate connections he maintained with his sources; with the photo-interpretation unit at Medmenham, with the briefing of agents on the continent and with the cryptographers at Blech-

ley Park. No-one else had the overall grasp of what the sources could and could not provide. To me his most impressive achievement was the discovery and elucidation of the radio-signals that gave the tracks of flying bombs and rockets fired on the test range along the Baltic. In this he can truly say with the Duke of Wellington: "I don't think it would have done if I had not been there".

The book is a wonderful story of what a young man (he was 28 in 1939) can do. Like many others he knew that the things he did then were the most important things he would ever do and, now that he at last comes to explain it all to a wider audience, he is sometimes, perhaps, unnecessarily insistent on the follies of his opponents: though some of them were, indeed, remarkably foolish.

The accounts of practical jokes and subterfuges for outwitting politicians and Air Marshalls should not obscure the important lessons of this book. A government that takes action on irrationally alarmist views concerning another country's intentions or capabilities may precipitate a disaster. Such judgments depend heavily on the views developed by the intelligence organisations, of which scientific intelligence is an important component. Jones' main conclusions are that, although collecting information needs large numbers of people, the group that develops the meaning of the information should be small, should have close relations with the sources and should have as wide a range of experience as possible. His warning against leaving such matters to those working on our devices is of special importance. They are too close to our own problems and may conclude that, because a device, such as the V-2, is a poor choice for us, the Germans cannot be making it; and the evidence that they are must be a hoax.

This book provides an insight into the processes of intelligence. Whether this is desirable is dubious. The Russians know it all, but do the Cubans, the Cambodians or the Ethiopians? □

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