PROFILE

Chris Sherwell on Sir Hermann Bondi

An effective use of oil

HERMANN BONDI followed an auspicious precedent in British government when he left the Ministry of Defence to take over as chief scientist at the Department of Energy seven weeks ago. Before him, only Solly Zuckerman and Alan Cottrell had ever held the position of chief scientist in two separate departments of state—though they moved from Defence to the Cabinet Office, and in the days before the Rothschild reorganisation gave the institution its present form.

The appointment itself, when it finally came, was no surprise to anyone who had bothered to read the newspapers. But there was a gap before it was announced while the minor storm generated by the departure of Bondi's predecessor, Walter Marshall, subsided. The gap which Bondi himself left at Defence remains, and though names are being canvassed, no indication of who is in the running is officially available.

Bondi came to Energy with a remarkable record. Schooled in Vienna, where he was born 58 years ago, he went to Trinity College, Cambridge, and then became what was bureaucratically called a 'temporary experimental officer' in the Admiralty from 1942–45. In 1954, after holding a Trinity fellowship and lecturing for the best part of eight years, he was appointed to the chair of mathematics at King's College, London. Then in 1967 a leave of absence allowed him to become director general of the European Space Research Organisation. He stayed until 1971, when he became chief scientist at the Ministry of Defence.

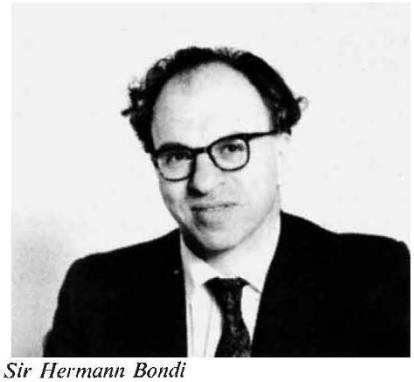
The experience at Defence colours his approach in his new post. He regards the issue of nuclear proliferation as particularly important, for example. But as he puts it, "Things have to be looked at with a certain order of priority". Short term problems like proliferation must be checked before long term ones can be tackled. If the world is going to blow itself up first, he is not too worried about, say, the threat of a 'greenhouse effect' from over-use of fossil fuel.

Not that he has no views on the greenhouse effect. He says the US National Academy of Sciences report published earlier this year has been read as "more definite" than he reads it. If atmospheric oxygen comes from living plants making use of carbon dioxide, he asks, and rising carbon dioxide levels can encourage plants to grow and so stabilise the rise, might not preservation of the most active plants in the best parts of the world be better than a restriction on the use of coal? It is a question for the long term, Bondi says simply, which will be of no interest at all unless we attempt to ensure our survival in the short term.

He is reticent about giving his own views on such immediate issues as maintaining the breeder option or Britain's choice of reactor. He stresses that energy as a whole, and not just nuclear power, is capital intensive and expensive, the turnover of the energy industries being about the same as the defence and education budgets combined. As he sees it, R&D in alternative energy technologies must be fostered in case conventional sources become unacceptable, unavailable or too expensive, but the judgment of likely fuel costs is complex.

One economic consideration which puzzles him is the effect of the oil price increase four years ago. The developed countries initially responded by saying they would maintain their economic growth and replace oil with nuclear power. That led to colossal predictions for the growth of nuclear power, says Bondi. "But the calculations were completely bogus". The fuel crisis stopped growth, and nuclear forecasts slumped. Instead of energy prices rising relative to other things, inflation and a lack of growth caused fuel costs in many fields to become a smaller share of the total than they were. "So if I'm asked whether a project for an alternative energy source would become economic if the real price of fuel doubled, I must ask if engineering costs will go up equally disproportionately, and whether we'll be back where we started".

As Bondi sees it, a rise in fuel costs, rather like a failed harvest in developing countries, has to mean a substantial drop in the standard of living. But developed countries have been totally unwilling to accept this. Is there an appreciation of this within government? "I preach it", Bondi replies with a smile. He is as aware as anyone of the problems governments face, as he shows when he allows his thoughts about costs to stray to current issues. The difficulty when it comes to choosing a reactor or investing in alternative energy sources, he says, is not really a lack of money, but spending it sensibly and responsibly—not whether to purchase, but what to purchase.



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Sir Hermann Bondi

So how should a chief scientist be seen? "Like any scientist", Bondi says, "the chief scientist has a particular standing when he gives a judgment on scientific matters. But he wouldn't be a responsible citizen if he didn't have a judgment on other matters as well, although he has no more claim to authority on these than anybody else". Bondi regards the important element in the chief scientist's task as "making clear what the scientific issues are, within the context of other questions".

He is clear why he came to Energy. First of all he was asked, and he has an appetite for change. Another attraction was that it was controversial. But there is a third aspect, which has to do with his time at Defence. He enjoyed his time there, he says, and they enjoyed having him. He rejects completely any suggestion that they wanted to see him go. But the contribution of somebody from outside springs from the person's different background and different way of thinking. "He treads water for a while, learns to understand the issues and how to handle the machine. Then he can make a distinct contribution. But after some years he loses the advantages an outside background is supposed to confer".

He has now applied the lesson to himself. At Defence, he says, he had become part of the furniture. "I was with my fourth secretary of state, my third permanent secretary, and my sixth chief of defence staff". Continuity has its own contribution to make, he says. "But I'm not convinced that I was bringing to it as much as I had done, say, two years ago, though"—and this with a twinkle—"I knew very well how to put a drop of oil into the machine". He now has more oil, and a smaller machine.