

UK electronics

Sleeping giant waking up?

ONE of Britain's largest technical companies, the General Electric Company Limited (GEC), seems in the process of emerging from two decades of well-managed torpidity. No relation of GE (for General Electric) of the United States, the company has in the past few weeks startled its shareholders by making a bid for British Aerospace, still partly owned by the British Government, and (last week) by saying that it hopes to spend £300 million buying back its own shares from shareholders. But behind the scenes, and in the long run much more important, GEC has set about the rejuvenation of its research programme with unfamiliar zeal.

Not before time, the company's critics will be saying. GEC now is the result of the 1964 Labour Government's widely-shared trust in the management style of Mr Arnold Weinstock (now Lord Weinstock), GEC's managing director then and now, and of its belief that successful companies are preferably big. Thus GEC is an amalgam of its old namesake with Metropolitan Vickers and English Electric (which had already taken over Marconi when swallowed up).

Latterly, GEC's admirers have turned to grumbling. The most widely publicized complaint is that the company's success at making money (profits last year of £671 million on a turnover of £5,600 million) has not been matched by its willingness to invest in new enterprises. One consequence

is that GEC's reserves of cash and negotiable financial assets, commonly called its cash mountain, amount to more than £1,500 million, more than a third of total assets. Shareholders complain that they could do as well by investing their own money in the financial markets. GEC's



Derek Roberts, the new favourite

technical people, however, argue that other large electronics companies (Hitachi and Siemens, for example) have financial reserves which are twice as large when measured by the yardstick of the labour force — more like £15,000 per employee than GEC's £7,000.

For GEC, it is (or should be) more

worrying that its growth has slackened off (both turnover and profits were virtually identical in the past two financial years) and has, over the past five years, been much slower than that of other British electronics companies such as Racal, Ferranti and Standard Telephones and Cables (STC).

Lord Weinstock, meanwhile, is no longer Whitehall's favourite manager — and not simply because of his opposition last year to the Telecommunications Bill, then passing through Parliament, on the grounds that the British telephone network was destined to be an uncontrollable private monopoly. Questions have also been raised about the once-admired management technique, involving the deliberate devolution of financial responsibility to the host of companies in the group. This, the argument goes, may be a recipe for not losing money but inhibits concentration on innovation.

In reality, with a total of 17,000 technically-trained employees, GEC spends something like 11 per cent of its turnover on research and development, much of it on defence contracts. Devolved management has inevitably left individual operating companies with responsibility for the size and character of their own research programmes. While there is no sign that this principle is about to be abandoned, the past two years have seen a marked increase of GEC's centrally supported research.

In the British electronics industry, people say that the arrival of Mr Derek H. Roberts as GEC's director of research five years ago has been the chief catalyst of change. Since then, centrally directed research, previously negligible, has come to occupy a quarter of the effort of GEC's central research organization, chiefly based at the Hirst Research Centre (Wembley, London) and the Marconi Research Centre in Essex.

New efforts are concentrated in micro-electronics, with the development of devices based on gallium arsenide (GaAs) roughly on a par with those based on silicon. Although not a volume manufacturer of microelectronic chips, GEC is an important source of chips designed for specialized applications (many of them in defence). Of the £55 million spent last year by the central research organization, roughly a half was recovered from GEC's operating companies as the cost of commissioned research, with the remainder divided equally between externally commissioned research (from the Ministry of Defence among others) and the company's own new research effort.

Time will no doubt tell how decisively these developments will change the unflattering reputation that GEC has recently required. Last year, electronics and telecommunications accounted for £290 million of the group's profit, and is the most quickly growing sector of its business.

John Maddox

Conglomerate research revives

If Lord Weinstock is no longer the British Government's favourite manager, Mr Derek Roberts, GEC's director of research and a member of the company's board since the end of last year, is fast becoming the establishment's favourite industrial scientist. A member of the Advisory Board for the Research Councils, in that capacity and in his own right he repeatedly appears as a witness before parliamentary committees, arguing the case for more generous (and rational) policies in the support of science.

Roberts, a vigorous Mancunian physicist, was recruited to GEC from the Plessey Company in 1979 and elected to the Royal Society and the Fellowship of Engineering the following year. Appropriately, he argues for the abolition of the conventional British distinction between science and engineering, as well as for the recognition that women have a potentially important role in industrial research and development. (A brochure describing the successful careers of a score of GEC women has apparently been a hit with British schools.)

The role of a technical director in a conglomerate such as GEC is a little like that of a conductor of an orchestra put

together from musicians whose reputations have been earned as soloists. Roberts reckons to provide searching technical audits of designs emanating from member companies while seeking to sell to them the benefits of research commissions with the central organization.

One of his innovations is a system for encouraging the transfer of technology within the group, partly by means of technical newsletters produced in-house. Intra-group seminars are now commonplace.

Microelectronics is the most obvious theme in Roberts's message to GEC. The Hirst Research Centre at Wembley, architecturally a monument to the 1920s, is being converted internally into a labyrinth of air-conditioned cells for depositing films of this or that on wafers of silicon or other semiconductors. The equipment appears to come in units costing £500,000 a cell, and the transformation is clearly far from complete.

Even so, the technical people are hoping that the British Government will let their company acquire British Aerospace. Unlike the London Stock Exchange, they take the line that in the fields in which they operate, size is still an asset. □