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Computers

The fettered giant

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During the last four weeks I have written a series of articles discussing the chaotic state of a high technology industry, and the feeble government departments associated with such industries. Those articles were the tip of an iceberg, a simplification of a complex subject. Some of the rest of the iceberg is discussed in my book, and yet more is only now coming to light as, carrying my computer invention with me, I stumble around the murky alleys of government and industry. Perhaps the most valuable contribution of my CAM invention will be to shine a searchlight into the world of high technology in government, industry and university. A pretty awful mess it has exposed.

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The key discovery that has been made is that, contrary to the conventional wisdom, no parties are motivated primarily by profit. Loyalty to a particular group, fear of appearing foolish, and a number of other motivations are stronger than the profit motive. (Professor Basil Bernstein's writings are relevant here.) This is a valid, though unrecognised, position, because massive profit is necessarily highly disruptive of the established order, and order is what nearly all of us cling to.

The rejection of high profitability is enshrined in a cliché of business management and accountancy, the well known principle that any business proposal claiming more than a reasonable (say 50 per cent) return on capital invested must be rejected as unsound. (Later in this article I shall discuss the methods used by technocrats to mask the larger potential of a very good idea.) To put it another way, "Society will not believe a project aiming at 1,000 per cent return on capital invested." This can be rewritten, "Society will not tolerate a project aiming at 1,000 per cent return on capital invested."

The reason why the latter phrasing is valid, is because the whole system of business finance and management is built on the thesis that massive return on capital invested will not occur. From this principle it naturally follows that control of business and industry should be in the hands of accountants (Weinstock) and the like, men versed in marginal alternatives in a financial picture, because since we have outlawed massive profitability, this is all the freedom of action that remains to us, freedom to reduce our rental or labour costs by perhaps 20 per cent, or avoid an increase of some such small percentage.

However, in Britain we say that our only resource is brain-power. The return on capital invested is

50 per cent or less, the return is by definition on *capital,* not on brainpower. If the investment were in *brainpower,* the return on *capital* used must exceed 500 per cent, otherwise we are back to a capital-intensive (not a brain-intensive) enterprise. It follows that the traditional (50 per cent return) approach to business and industry will always stifle the very industries that Heath, Wedgwood Benn, Walker *et al* say we must get into, industries centred on brainpower, inventiveness, rather than on capital, which we lack. Unfortunately, any move towards high technology (and other brain-intensive) enterprise would break the present stranglehold of traditional (non-technical) management upon industry, and lead to a rapid decline in their social standing, salary and security. Whereas

ing, salary and security. Whereas today an engineer earns £2,000 and a non-technical manager £4,000, these rates would be reversed in a brain-intensive industry.

It is not surprising that a non-technical administrator or financier of the traditional kind feels more loyalty to his own social group than he feels to the 'country' (a vague concept in any case), and he will automatically move to stifle brain-intensive industries. It is normal for a group whom history is passing by to carry out a vigorous defensive rearguard. This is not particularly pernicious of them, because they have a responsibility to their families to try to protect their position, and because of ignorance they cannot in any case conceive of the explosive profit potential of high technology, that is, brain-power.

Technocrats looking for finance for a new venture understand these problems, and do not claim more than a small (50 per cent) projected return on investment. Also, they accept the intrusion into their enterprise of large numbers of personnel of the old kind (accountants, lawyers, salesmen, and generally quantities of bodies), many of them into top positions, and allow their new, brain-intensive enterprise to be made to look as much as possible like an old-style enterprise, perhaps one manufacturing cardboard boxes or shoes. Unfortunately, the old-style people and activities, once established in the enterprise, will have a natural fear of the brain-intensive activity operating in one corner, and what I call the 'management-technocracy guerrilla war' begins (see *Computer Worship* Pitman £1.80).

One of the anomalous results of this rule, less than 50 per cent return on capital invested, is that it is far easier to raise £200,000 for an enterprise than £40,000. This is because, even if successful, the rule says that the latter investment will lead to less than £20,000 per annum income, and a banker's overheads are too large to service economically such a small enterprise. This is why all experts in the field of high technology financing told me that I should go for £200,000 finance, not £40,000. However, I persisted in asking for £40,000, and this is what has caused such apprehension all round. (No one has rejected my figures, however.)

Politicians need to appear to support new invention and industry, and for this purpose government departments are set up. Now if such a department were staffed by competent technocrats, they would have the arrogance to believe in their trade, and from time to time they would support a "£40,000 in, £5 millions per annum out" proposal.

Walker, Secretary of State for Trade and Industry, earned his spurs as an asset stripper, which by conventional business standards is quite dynamic. However, compared with the (as yet virtually unexploited) potential of high technology, asset stripping is mundane. So among politicians, even Walker will have an accountant's fear of high technology as a potential hostile power base.

As a defence against high technology and the technocrats within the departments under their care, a politician will either introduce or allow gross technical incompetence, as appears to be the case in the NRDC, or, failing this, stifle the technocrats by interposing an impenetrable buffer between the technocrats lower down and the political power to act higher up. For instance, if Walker allowed highly competent technocrats from his department, like E. A. Newman or D. O. Clayden, in the same room as himself for three hours, he would come out much the worse and the power structure would be permanently altered. An admirable buffer between upstart technocrats and political power would be a military man, since the primary function of a military man is to keep the people below him and the people above him apart.

To sum up: The essence of accountancy and the pin-striped rest is balancing the books. The essence of uncontrolled hi-technology is un-balancing the books. Never the twain shall meet.