

FINANCIAL BACKING FOR "BOFFINS"

(An extract from some correspondence on file)

It is surely true that most people are frightened away from Science and Technology by media hype which portrays scientists in general as mad individuals or bumbling boffins - and an extraordinary number of people really believe this is true! School teachers, most of whom have never experienced life in the exciting, competitive commercial world, apparently don't do much to correct the idea and they teach science as dry, academic and **largely irrelevant**. Recently we have seen a naïve "Green" culture that makes matters even worse by preaching that Technology itself is basically harmful and that it is therefore evil. Thoughtful young people are thus discouraged from getting involved with anything scientific or technical. Something must be done at once to correct these damaging ideas and to make every person realise that, in fact, human life now depends absolutely on science and technology.

It seems to me that scientific understanding - the firm foundation of structured knowledge by which we understand how the universe actually works - lies beneath every engineering achievement; and that the whole nature of our civilisation now depends on engineering technology. When I first left University I was asked to run a series of lectures to the apprentices at my company, to create for them a broad vision of the business world of which they were a part. My company made electronic equipment, so one of the things I asked them to do was to write an essay describing a modern world into which a Michael Faraday had not yet been born.

You try it!

It is now almost impossible even to imagine a world with no electric power, no lighting, no electronics, no instrumentation or controls, no radar, no radio communications, no TV, hi-fi or games, no fuel for vehicles or planes, no chemicals or synthetic fertilisers, no tractors or milking machines; no drugs or sterile surgery. It is difficult to name anything around us today whose very existence does not depend on electric power and the related network of engineering technologies.

Engineering is the commercial application of scientific knowledge. It is the basis of all manufacturing industry and it is essential to all food production and distribution.

Clearly, the creation of all wealth and the stability of the whole human environment hangs on the progress of scientific knowledge and the continuing development of technology.

The general population must be made to understand this. I don't mean that every person needs to have some scientific qualification - I mean that everyone should understand what science actually is - why it matters to them personally. They need to know about the fundamental importance of science and the key role of engineering technology in every part of life. I have found that most people are unimaginative and do not easily see the future implications of technology; but they can be made to look around and to realise that if an "everyday" engineering achievement is removed - if it had not yet been invented - their personal world would be very different and the poorer for it.

What financiers have to be told, frequently and in a most convincing way, is that it is the professional design of innovative products and new processes, the application of sound science to market needs, that drives the engines of wealth creation and intercommunication. In short, all wealth stems from the continuing progress of science and invention.

What is truly appalling is that the people who control the purse strings of British finance do not see it this way. They have had a very different sort of education and they think of science and technology as a peripheral activity - a sort of nuisance preventing things from continuing the way they are. Too many financial decision-makers think that engineering innovation is carried out by "mad boffins" - financially-irresponsible individuals with no contact with present reality. They believe that technology development is therefore an unmanageable, high-risk, low-reward business. As a direct result of this attitude complex and innovative young companies like mine are extremely difficult to get going; it is almost as though innovative companies have to present themselves as old, stable and boring to attract institution funds.

But we are what the very essence of what science and engineering is all about - the creation of new wealth and employment from vision and brain-power, using all the latest scientific knowledge at the very edge of what is possible; making new concepts become real; turning theory and understanding into a profitable enterprise for the benefit of everyone. More start-up companies like mine mean more jobs for science and engineering graduates - more jobs for people who have bothered to work their way through a tough and disciplined education so that they can have the fun of professional, creative work on a good salary. We are the "market pull" which generates the interest in young people to follow a science or engineering career. Youngsters should be told what life is like in our exciting business.

Because the British financial decision-makers don't understand science and technology they have no way to make a personal assessment of a financing proposition on behalf of their investors. They realise that they can be misled and so as to avoid the risk of losing money they treat all propositions as equally highly suspect. Unfortunately the result is that sound science and engineering does not often get the backing it deserves. The lack of funding thus enforces a slow-growth strategy on the company and this delays the progress of technical and market development.

We are not a Silicon Valley society; few early-stage high-technology opportunities are created in Britain and our nation, in spite of its reputation for Nobel prizes and ingenious invention, is drifting into a backwater. We are being overtaken very rapidly by the younger, more adventurous and imaginative societies on the Pacific Rim.

Yours sincerely

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