

# The Missing Link

How things people need are  
*conceived – designed –  
made – and sold*

**T**he British economy is doing well, better than at any time since the Second World War, and even before that. Nevertheless it could do significantly better.

Almost daily we read that productivity is lower than it should and could be.

We read about the shrinking manufacturing sector (some even wonder if this matters – it *does*), and we read about the increasing shortage of highly trained technicians of all disciplines which will further exacerbate this situation. We even read about the need to relax immigration laws to meet the ever-increasing demand for skilled people.

Many of these and related issues are actively being addressed, not least by Government. Two very recent examples are the Green Paper on Vocational Training, and the Davies Report on Enterprise Education, both timely and constructive.

Yet in all this activity, analysis, and proposed measures, there is something missing.

That is that, although it should be evident that all man-made ‘things’ we see around us, which we use, on which we depend, are *conceived – designed – made – and sold*, by someone, by people, somewhere, we are not as a nation as actively involved in every link in that chain to the extent that we could and should be. Each link is a major activity of vital importance to the economy, even to a developed, high wage cost economy. The whole activity makes an enormous contribution to the social and economic well-being of the nation.

Unfortunately, in Britain today we tend to ignore, or simply not ‘join up’ by thought and by deed, each link in that chain, and hence deny ourselves a social and economic activity of major importance. While much is being done to correct this situation, for example

design courses have become very popular, British designers being much sought after, the courses are heavily oriented towards computers and electronic design, especially games. We need to widen the scope of the demand for design teaching.

Perhaps what might have a significant impact on the public’s mind, and particularly on the minds of the young, is to instil a fundamental thought process, a curiosity, of how things are *conceived – designed – made – and sold*, that will not only lead to understanding how this happens but can also be related to all learning and experience.

Overleaf is an attempt at such a thought process designed to stimulate curiosity and as a consequence realisation that *conceiving – designing – making – and selling* ‘things’ is a hugely creative, challenging activity, offering enormous opportunity and fulfilling careers at all levels of capability.

### A thought process to arouse curiosity in the young

Look around you wherever you are, indoors or out. Everything you see which is man-made, from the prosaic and seemingly simple, such as paint on walls and the trainers on your feet, to the obviously complex aeroplane in which you may be sitting and the laptop computer that you are using, has been *conceived – designed – made – and sold*, by someone, by people, somewhere.

- Be curious as to how these 'things' come about.
- And be curious about the means of making them – the manufacturing process, the machines involved, the instruments, the hardware, the software, to operate and control them – have themselves been *conceived – designed – made – and sold* – by someone somewhere.
- Furthermore, you can be sure that at this very moment someone – people – somewhere, are *conceiving – designing* – and planning to *make* – and *sell*, better things; things that already exist, and new ones which will replace them. Things that have more functionality, are more effective, aesthetically more pleasing, more user- and environmentally friendly, to name some of the ways in which things are constantly improved and replaced.
- Things and better things do not appear out of thin air. The whole range of the 'joined-up' activity, from concept to sale, that results in them being to hand for your use and pleasure is a vast field of activity offering almost limitless opportunity for endeavour, enterprise, and achievement, in every link of the chain.

One hesitates to propound such a self-evident statement, but it does seem to be necessary to make it explicit. And it would seem to be particularly necessary to aid and equip teachers to inculcate this thought process into the young, and for them to illustrate how it links up with all knowledge and learning.

It needs to be a prime task of the many admirable initiatives which set out to link business and industry to education, to promulgate this message by vivid and inspiring illustrations from their businesses.

From a more profound understanding of this basic message it will then become more evident for example that:

- Knowledge of, or being able to summon up knowledge of, science, engineering, technology, and information technology, will hugely broaden opportunity and effectiveness in the whole chain of activity.
- Design capability is of major importance, design in the fullest sense of the word – aesthetic and functional – applied both to products and to the processes, machines and devices that make them.
- Enterprise applies not only to the building of successful businesses in

any of the multiple activities within the chain – *conceive – design – make – sell*, but also to the activity itself, for example, in the quest for the necessary knowledge and experience that underpins all aspects of the activity.

- It is not inexorable that all manufacturing will drift to low wage economies. Where things should be made is determined by many interrelated factors of which the cost of labour is but one. Modern manufacturing technology increasingly demands a highly skilled and trained workforce, at all levels. The complexity of modern manufacturing, what should or should not be contracted out, what should or should not be made close to the design centre, to the market the product serves, is very well chronicled in a series of articles over the last twelve months by Peter Marsh in the *Financial Times*. 'The Return of the Expensive Worker' is illustrative of these illuminating articles.
- The people involved in *conceiving – designing – making – and selling* 'things' require to be sustained by a dynamic service sector. Conversely the service sector is totally dependent of a host of 'things' produced by the industrial sector. They are

interdependent. It is misleading to represent them otherwise.

Sustainable social and economic well-being in Britain cannot survive on the so-called 'service sector' alone. Perhaps by awakening the interest of the young in how 'things' are *conceived – designed – made – and sold*, ever more and better 'things', they may become more deeply involved in the process than is the case at present. It would be to their lasting benefit and to that of the nation so to do. ■

**Sir Robert Malpas studied Mechanical Engineering at Durham University. After thirty years with ICI he became the main board director for technology in 1975. In 1978 he became President of Halcon International New York. He was also a managing director for BP plc in 1983, Chairman of PowerGen in 1989, and Chairman of the Cookson Group in 1991. In 1996 he was appointed Co-Chairman of Eurotunnel and in 1993 became Chairman of The Natural Environment Research Council. He was knighted in June 1998.**

