

MRS THATCHER'S BRITISH TECHNOLOGY WALL



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The complete version of this article can be found at <http://www.scienceinparliament.org.uk>

Economic growth is the tonic that will avert a double dip recession and put a smile on the faces of this Conservative Chancellor and many others. With the same incantation coming out of Washington one would think that it was a universal problem, but not so. India and China are forging ahead with 8%+ growth, Brazil and Russia are not far behind accompanied by a host of emerging economies. We are told that advanced economies like ours come up against a technology wall, where advanced economies are limited to growth figures of 1% or less with the excuse that all growth is dependent on innovation around new technologies unlike developing countries which are still building the basics of their economies. Where has this Technology Wall come from? It was Mrs Thatcher with Lord Waldegrave who polarised scientific research with the

"Realising our Potential" programme reorganising the Research Councils and effectively University Research by insisting that research was of industrial relevance. John Mulvey of the Campaign for Science noted that "there was no more money and what there was would have to be spent differently."

New Scientist remarked that: *"Cash-strapped research councils have had to turn down top-priority research proposals or even terminate leading projects because they have to spend their money on 'second-rate' projects that simply meet government-imposed criteria, say sources within Britain's research councils. They blame this state of affairs on a system of government-inspired grants designed to promote collaboration between academic researchers and industrialists."*

In 1995, more than 70 per cent of the MRC's "alpha-rated" research proposals, which included projects at the cutting edge of science, had to be turned down for lack of funds. In the previous year only 10% were turned down. The funding went into "industrially relevant" research.

The thinking behind "Realising our Potential" was that fundamental research is international. 'Why should Britain pay for it if we can just read about it in the journals and exploit what everyone else is doing? What we need is just those people close to industry who can read the journals and tell industry what to do.' As

Nature commented at the time "the changes indicate that the Government thinks scientists should be on tap and not on top". But hopefully someone has learned in 20 years that it doesn't work like that. Only people working in a creative way with science are likely to see its potential for science outside narrow sectional interests. There is lots of science that would generate new industries and jobs but it would compete with the establishment.

Look at leading edge robotics: driverless vehicles eg driverless cars, taxis and trucks. They are all well within the capability of UK research effort to corner the world market with IP, vehicle organising structures, communications systems and legal developments. It would be much cheaper for other countries to learn from us and pay us than to develop their own and so generate a world industry led by the UK.

Driverless vehicles would completely change our lives. They would end the catastrophe of half a dozen people being killed on UK roads with 400 seriously injured every day.

Driverless vehicles would blur the divide between public and private transport. Of course you could still have your own car parked in your garage. Climb into it in a morning and tell it that you wished to go to work. At work you might wish to avoid large parking charges and get it to drive to a pound for the day, returning when you had finished work, or you might hire it to a taxi firm to make it available for

others to use for the day, or you might not bother with your own car.

Driverless vehicles have been produced and tested by the main international vehicle manufacturers, but they do not fit in with their marketing philosophy which, almost without exception, is to enjoy the driving experience. Of course governments have committees to advise them on these things and they have representation from industry and from the now "industrially orientated academia." Any Government advisory committee considering driverless vehicles will only reflect the industry view.

What about roads? The same applies to intelligent roads, the model of the road building industry, and to care for old people focused on care homes, and these are just the bits I see as a robotics and instrument scientist.

Innovation and creativity needs independent thought and support for the ideas. Yes we need the links into industry; they are very good, but Waldegrave and Margaret Thatcher threw out the baby with the bath water and now we will have to start winning back the 20 years we have lost knocking down the technology wall with a diverse broad-based healthy independent research structure. Most advanced countries are now increasing their science spend and they too have banking problems but they wish to climb over the technology wall. The British Government seems to be happy to be walled in.

