

# The future is with us now

**J**AMES WATT? Oh yes, wasn't he the chap who watched the kettle boil and invented the first effective steam engine? Inventions once seemed as clear-cut as that and inventors themselves were readily identified with them.

Today, few members of the public even know the meaning of terms such as "blue-sky" research — or genetic engineering, a new field requiring us to make giant ethical decisions about the future of mankind. Less than ever are today's "inventors" household names.

As never before in our planet's history, science, through technology, has become the major engine of change. At the same time, the new frontiers of discovery grow ever more remote from the man in the street: frequently neither their worth nor their future applications are as apparent as, for example, our everyday encounters with medicine or telecommunications.

It is crucial for everyone to appreciate the role science has to play in any nation's well-being. With Britain's internationally respected tradition for innovation, we must see that enough young people are attracted into scientific careers, if we are to maintain our position.

But present trends sound several warnings.

**T**HE VERY credibility of science in the public eye is at stake. Almost half the respondents to a Gallup poll conducted for The Daily Telegraph last month believe, wrongly, that nuclear power causes acid rain; another survey shows that one person in three thinks, wrongly, that the Sun orbits the Earth.

How can there be informed debate and decision-making when such ignorance is so widespread?

On page XII of this edition, distinguished Nobel prizewinners urge television and the media to contribute more actively to public awareness of science. Sir Alan Hodgkin accuses politicians and media of apathy; Sir Nevill Mott suspects that science goes unappreciated in Whitehall.

Verdicts on our prospects as a nation diverge, but a signifi-



By Dr Roger Highfield

*Telegraph Science Editor, the first scientist to bounce a neutron off a soap bubble, and winner of the 1989 British Press Award as Specialist Writer of the Year*

maths and English (the other core subjects of the National Curriculum), because design and technology embrace areas such as cookery and craft and business studies.

Science in its own right deserves better recognition. A minimum of, say, 75 hours of a teacher's training ought to be devoted to science alone.

In the jobs market we are seeing too many graduates, having embarked on science and engineering at university and polytechnic, being attracted away from careers in industry or academic research by the richer pickings offered in non-scientific occupations.

When a doctorate is almost the common currency for employability anywhere in the international science community, a typical British graduate who chooses to pursue such a qualification must survive at least three years on an annual grant of only £3,725. By contrast, the same graduate can expect starting salaries averaging £10,000 elsewhere in the marketplace.

**A**S FOR the eternal question of finance, a survey commissioned by the ABRC shows that Britain is spending between £150 million and £200 million per year less on academic research than its competitors, even allowing for a recent boost of £100 million to Britain's science budget.

Industry, too, lags well behind competitors in terms of manufacturing investment per employee.

It is as though City institutions, private investors and government were oblivious to scientific endeavour as an investment in the nation's long-term prosperity.

Urgent action is needed to inform the public and to foster a supportive climate of opinion. Every one of us needs to further our understanding of how science and technology will continue to enrich the lives of father, mother and child alike.

To this end the British Association, the body that takes the lead in promoting science, sets its seal on the next decade by publishing a Charter for Action in this special edition.

WHAT OUR  
MPs KNOW

## Leading from behind

By Roger Highfield

**I**F SCIENTISTS complain that their affairs go unappreciated in the corridors of power, it is no wonder. A trawl through the records of our 650 MPs by The Daily Telegraph could find only 48 who had any obvious scientific background — in the most generous definition of the word.

That works out at one MP in 13 who might be expected to understand the role technology plays in everyday life — a dismal figure when compared with the one student in three who embarks on a science-related higher education course.

Last week Dr Gordon Dodds, a lecturer in the Department of Electrical Engineering at the Queen's University of Belfast, became the first "Westminster Fellow" at the Parliamentary Office of Science and Technology (Post). His appointment, the first of several, results from an initiative by the British Association, the Royal Society and the Royal Institution.

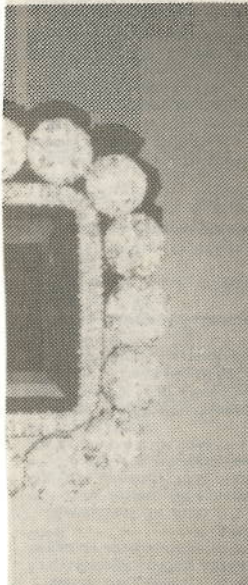
He joins the director of Post, Dr Michael Norton, in providing information to MPs in both Houses on the scientific and technological implications of major issues like food irradiation, embryo research, the greenhouse effect and...

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