## REFLECTIONS

ON THE

#### DECLINE OF SCIENCE IN ENGLAND,

SOME OF ITS CAUSES.

AND ON

87

#### CHARLES BABBAGE, ESQ.

LUCAMAN PROPERSON OF MATHEMATICS IN THE UNITERSTIT OF CAMERIDON, AND MERGER OF SEVERAL ACADEMIES.

LONDON:

PRINTED FOR B. FELLOWES, LUDGATE STREET; AND J. BOOTH, DUKE STREET, PORTLAND PLACE.

1830.

## **RECENT SCIENCE EDUCATION REPORTS - UK**

Wellcome Trust 2010: Making STEM happen in secondary schools

Wellcome Trust 2011; Primary Science Survey Report

Wellcome Trust 2012: Review of Informal Science Learning

**Ofsted 2011:** Science Education in England.

**Ofsted 2011:** Maths and Science Education: The Supply of High Achievers at A level.

House of Lords Science and Technology Committee 2012: Higher Education in Science, Technology, Engineering and Mathematics (STEM) subjects

Association for Science Education 2011 Outdoor Science Working Group Report

Scottish Government 2012 Science and Engineering Education Advisory Report

**Royal Society 2010** Science and mathematics education 5-14

Royal Society 2011 Preparing for the transfer to STEM higher education.

# GOOGLE: **1** - 10 of about **36,400** for "<u>scientists find gene</u> for".

- <u>Scientists find gene for emotional memory</u>
- <u>Scientists find gene for short sleepers</u>
- Scientists find gene for divorce -
- Scientists find gene for depression
- Scientists find gene for religiosity
- Scientists find gene for sweet tooth
- Scientists find gene for cocaine addiction
- Scientists find gene for weight-gain
- Scientists find gene for human language
- Scientists find gene for premature ejaculation

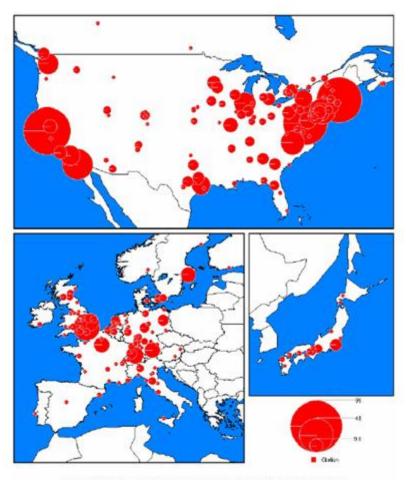
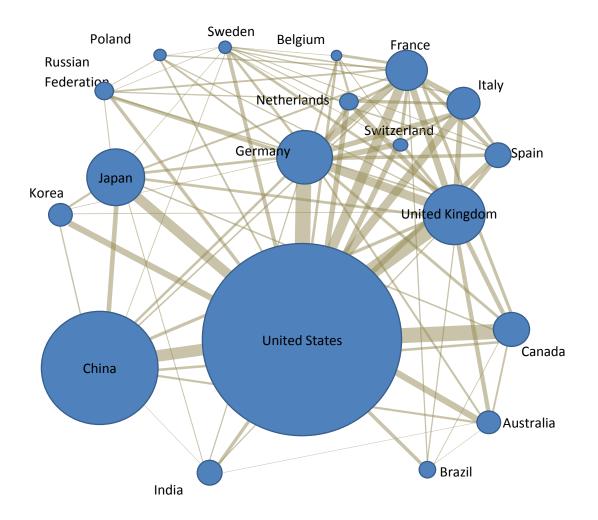
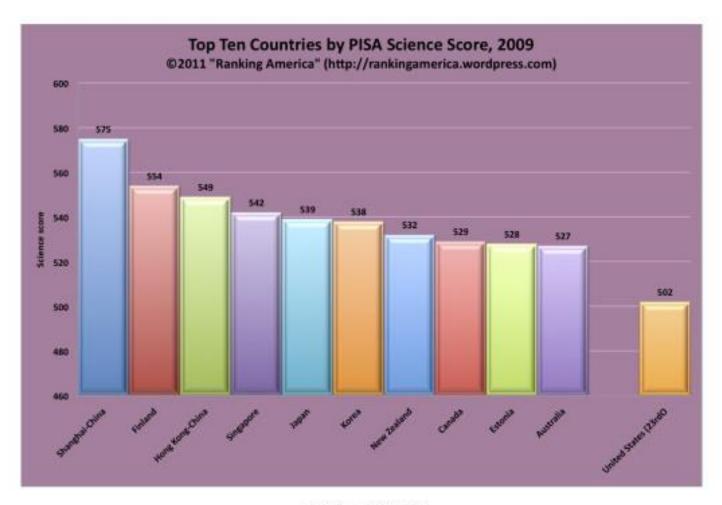


Figure 2: The geographical distribution of the highly cited

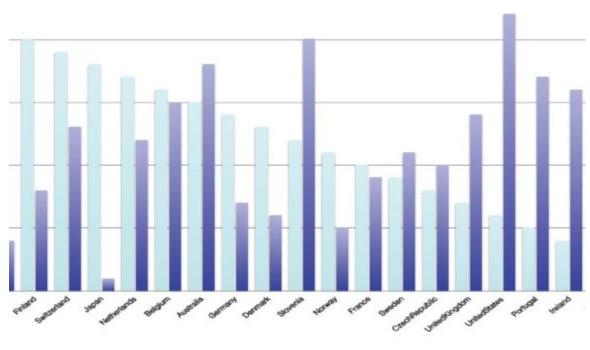




Data from OECD/PISA http://www.pisa.oecd.org/dataoecd/54/12/46643496.pdf

## **UK COMES IN AT NUMBER 16**

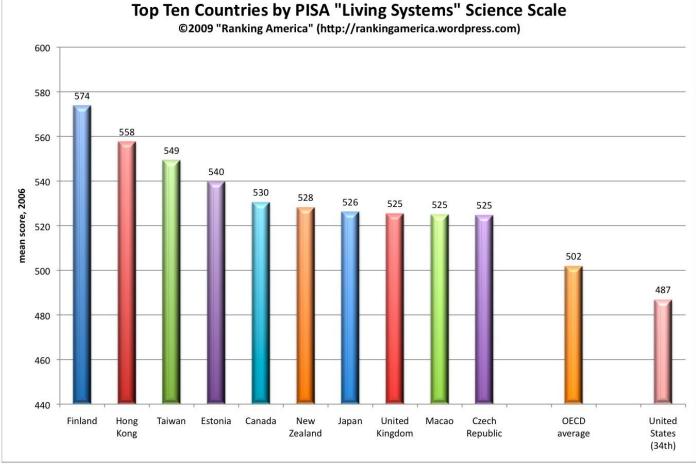




Math =Ent Cap

### WE ARE PARTICULARLY BAD AT MATHS (PALE BLUE)

## Data from PISA BUT WE ARE GOOD AT NATURE STUDY (ETC)



## **UK ATTITUDES TO SCIENCE 2010**

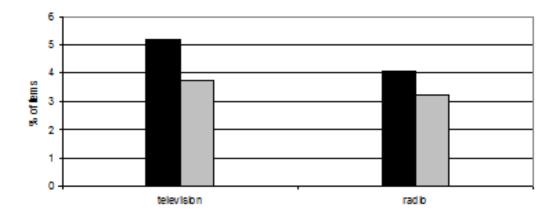
Science plays a major part in my life 79% I am amazed by the achievements of science 82% The public is well informed about science 20%

I am very interested in medical discoveries 57% I am very interested in sport 32% I am very interested in politics 15%

I receive most of my information on science from television news and documentaries 84%

## News – science and science-related as proportion of total

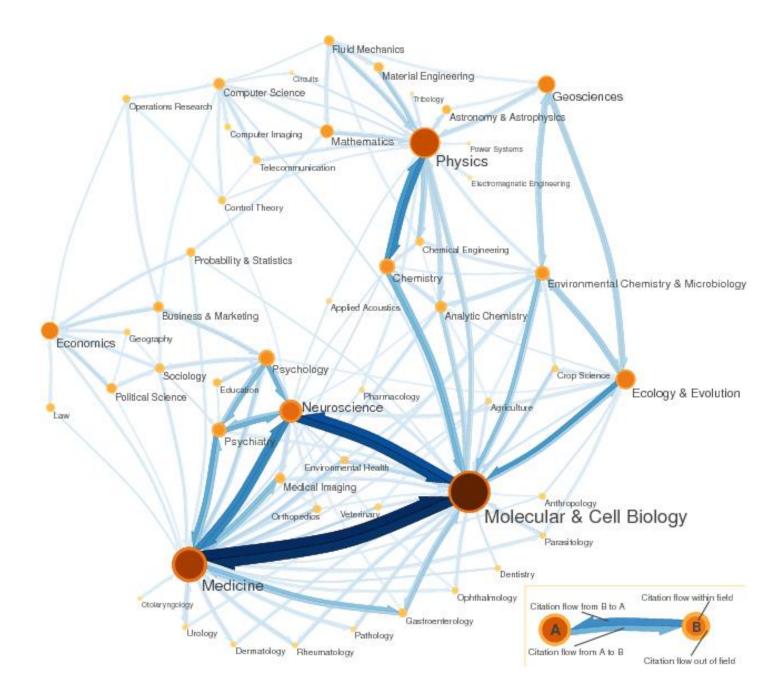
BBC broadcast news items covering science as a proportion of all such items N(tv)=3464, N(radio)=4390.



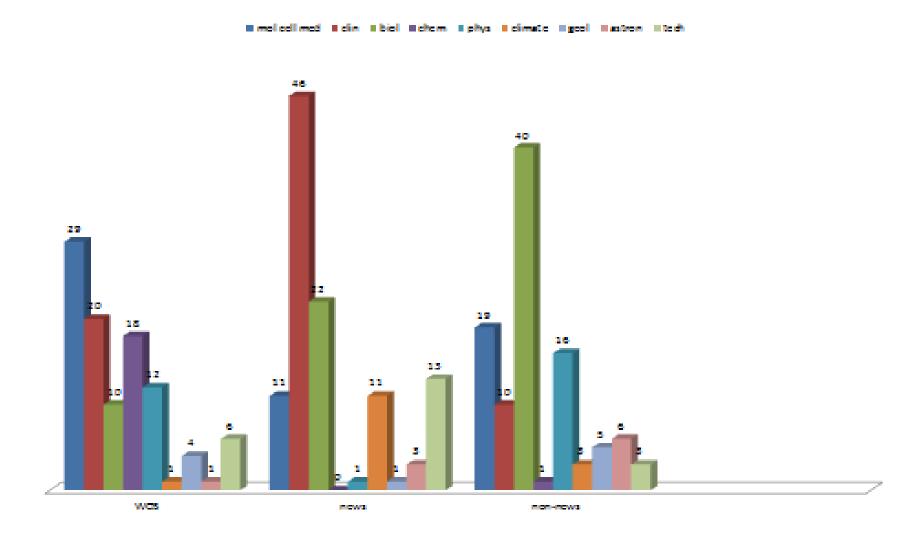
science alludes to science

## Journals named in news items

	Number of items cited in	
British Journal of Obstetrics and Gynaecology	1	
British Medical Journal	13	
Archives of Disease in Childhood	1	
European Journal of Neuroscience	1	
Lancet	15	
Nature	6	
Proceedings of National Academy of Sciences	2	
Stem Cells and Development	1	



# Scientific fields: Web of Science, News, Non-News molec/cell, clinical, biol, chem, phys, climate, geol, astron, technol

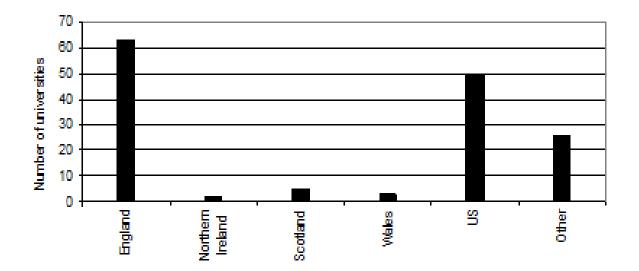


# Distribution of subjects in science (%) and a sample of science literature, TV News and TV Documentaries UK

ΤΟΡΙϹ	TOTAL PAPERS (%)	NEWS ITEMS	DOCUMENTARIES
Molec/Cell Biol	27	22	19
Clinical	20	46	10
General Biol	10	22	40
Chemistry	25	1	2
Physics	12	2	20
Astronomy	2	3	5
Climate Change	2	22	5

# Science is English ...

Location of universities given as the institutional affiliation of contributors in BBC broadcast and online science news



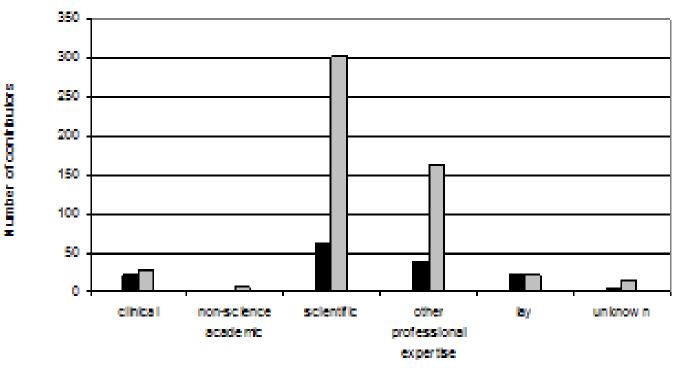
## ....and not just English, but Southern English

No of news reports

University of Cambridge	32
University of Oxford	25
University College London	25
Imperial College London	22
University of Bristol	14
Natural History Museum	13
King's College London	12

University of Manchester 9

# And is done by one sex ..



i female i Dimale i

Enquiry into UEA "climategate" Report, 1, 2, 3 – News, 3, 2, 1 or 3, 1, 3

1 "... we find that their [the CRU scientists'] rigour and honesty as scientists are not in doubt."

2 "... we did not find any evidence of behaviour that might undermine the conclusions of the IPCC assessments."

3 "But we do find that there has been a consistent pattern of failing to display the proper degree of openness..."

# Some of my fans .....

## **David Rose Daily Express 24th July 2011**

.... when it comes to climate, he seems to want BBC coverage to be subject to quasi-Stalinist thought-policing ....

## **Christopher Booker Daily Telegraph 23 July**

Astonishingly, rather than merely defending the BBC's coverage, he also launches an attack on it for giving too much publicity to "deniers" or "denialists" – pejorative terms that he uses no less than nine times in seven pages – whom he lumps in with astrologers, enthusiasts for alternative medicine .... <u>Christopher Booker Daily Telegraph</u> 8th December ... in a bid to justify its conduct, the BBC Trust commissioned Steve Jones, to review its science coverage, notably on climate change. Professor Jones made the astonishing claim that the only problem with the coverage of climate change was not that it was too biased, but that it wasn't biased enough.

James Delingpole Daily Telegraph July 21st, 2011 I'm extremely grateful to Dr Jones for writing his report because it offers such a sustained and brilliant rebuttal to the threadbare notion that our state broadcaster is in any way capable of being fair and balanced.

## Melanie Phillips Daily Mail 20 July 2011

Astonishingly, he suggests that on issues like this where he says there is a 'scientific consensus' ... This is a wickedly cynical propaganda strategy to promote a false belief .

<u>Nigel Lawson, Sunday Times</u> 16<sup>th</sup> October 2011 A substantial section of Jones's assessment was devoted to the important issue of global warming. Regrettably, that section was characterised chiefly by ignorance and intolerance.

## Andrew Orlowski The Register 21 July 2011

Many Conservative MPs – I've spoken to several – are itching to abolish the BBC Trust. The body's unquestioning acceptance of Dr Jones' breezy report may have given them all the ammunition they need.

# **Smoking and Warming**

Brown and Wilson Tobacco company internal memo – "Doubt is our product since it is the best means of competing with the body of facts that exists in the mind of the general public. It is also the means of establishing a controversy".



The BBC's fixation on 'balance' skews the truth

## Catherine Bennett

"In his 2011 <u>report</u> on BBC science coverage, the geneticist Professor Steve Jones criticised the "over-rigid" insistence on due impartiality that could give "undue attention to marginal opinion". But once again, in referendum coverage, the corporation actively required its journalists to supply this phony balance, even when that meant, as Jones put it on science, "allowing rhetoric to give the appearance of debate"



NIGEL LAWSON: "WELCOME ON THE BBC TO DISCUSS BOTH CLIMATE CHANGE AND 'POST-BREXIT GLORIES".