



A past with the power to change the future

AT THE BA'S ANNUAL MEETING OF 1860,
CHARLES DARWIN'S THEORY OF EVOLUTION
PROVOKED CONTROVERSY AND OUTRAGE.

HOW WILL EIGHT-YEAR-OLD CHARLIE MAKE HIS
MARK ON SCIENCE?

Front cover photography: boy holding DNA chip used in genome analysis.



THE BA IS FOUNDED IN YORK

David Brewster and other scientists found the organisation and establish its constitution.

1831

FOREWORD



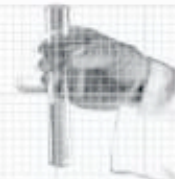
In summer 2003, as I was due to take over the reins as President of the BA, the year-long strategic review, initiated by the then new Chief Executive, Roland Jackson, drew to a close. One of the immediate outcomes of this review was the birth of a new message: connecting science with people.

Of course, this was more a re-statement of what we do best – in fact, what we have been doing every year since 1831 when the BA was established as the British Association for the Advancement of Science. Since that date, we have been opening doors to science, engaging with people of all ages, promoting dialogue between scientists, policy-makers and the public – connecting science with people.

In addition to the BA's flagship events – namely, the BA Festival of Science and National Science Week – throughout the period 2003-4, we have been working hard to reach out to new audiences, with initiatives targeted at inclusion, particularly for people from ethnic minority backgrounds, and increasing dialogue between science and the public.

As we move forward into 2005, we will be stepping up our efforts to actively encourage scientists, policy-makers and key players to open up science. Only by entering into a real dialogue will we maintain the respect and gratitude of society which much science and many scientists already have in abundance. And only by engaging our young people in the debate will we secure the future of science by recruiting the brightest and best as the next generation of both visible and invisible scientists.

Professor Dame Julia Higgins, DBE, FRS, FREng
President, the BA (2003-4)



A JOULE AMONG SCIENTISTS

James Joule generates the formula for heat by an electric current – and gave his name to the “joule”. He becomes BA President in 1872 and again in 1887.

1840



“DINOSAUR” ENTERS OUR VOCABULARY.

Richard Owen, the visionary behind the Natural History Museum, invents the term “dinosaur” from the Greek for “great lizard”. He first uses it at the BA’s Annual Meeting in this year.

1841

Science. Discuss.

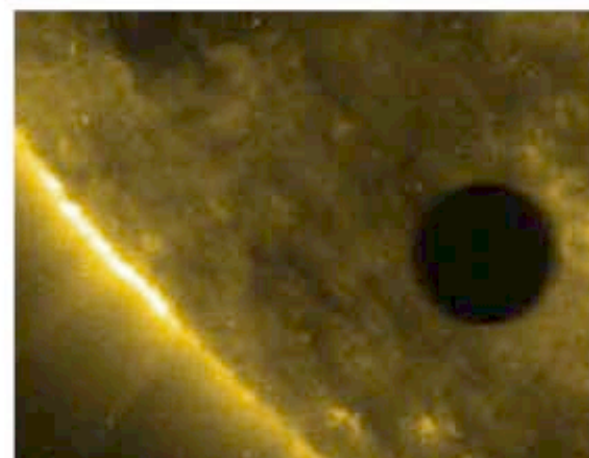
Provoking discussion about scientific ideas across the UK has been a central objective of the BA ever since 1831, when its first meeting took place in York – “the most central city for the three kingdoms”.

Ever since, we have promoted scientific debate in every corner of the country by supporting a network of volunteer-driven Branches around the UK. This year, regional activity flourished, with new Branches in Oxford and Cornwall bringing the total to 33 – double that of just a few years ago.

The dedication of our regional volunteers is a priceless asset to the BA. Without it, people around the country would not have had the chance to experience guided viewings of the transit of Venus, Q&As with Beagle 2 lead scientist Colin Pillinger, or heated discussions on Human Genetic Testing.

Our volunteers are supported by salaried Regional Officers, who give them the support they need to put on events of this high quality and wide appeal. Another of their priorities is to develop fruitful partnerships

between their Branches and local organisations, such as the Stratosphere Science Centre in Aberdeen, Daresbury Laboratory in Warrington and GSK in Cumbria.



In addition, the BA continues to produce its Science & Public Affairs magazine, with topical articles and debates on everything from dementia in the workforce to coping with biological attacks.



If any of our events could sum up what the BA is all about, it would be National Science Week. Our volunteers and partners around the country whip up the scientific passions of people in their local community by putting on inspiring and unmissable events, making this the definitive example of our regional network in action.

This year, over a thousand events took place across the UK. The highlight had to be Spring into Science, a partnership project with the Woodland Trust, in which people from all around the country got together to record the first signs of spring in their neighbourhood. The project was launched back in January by Big Brother contestant and physicist Jon Tickle, who helped capture significant media interest and public attention.

“ We must both inspire young people and encourage public engagement with science. We need a strong dialogue that leads to improved mutual understanding between scientists and the public. That is why National Science Week is so important.”

Tony Blair, PM



Another unforgettable moment was the model of a polyglycine molecule made by Nottingham students, which, at 20 metres long, broke the world record. As 14-year-old Thomas Hunt put it: “I didn’t expect it to be as much fun as this. We do some experiments at school, but no record attempts.”

Working closely with Education Action Zones and the government’s “Excellence in Cities” programme, we managed to encourage a wide range of schools,

some facing extremely challenging circumstances, to participate in both Spring into Science and National Science Week.

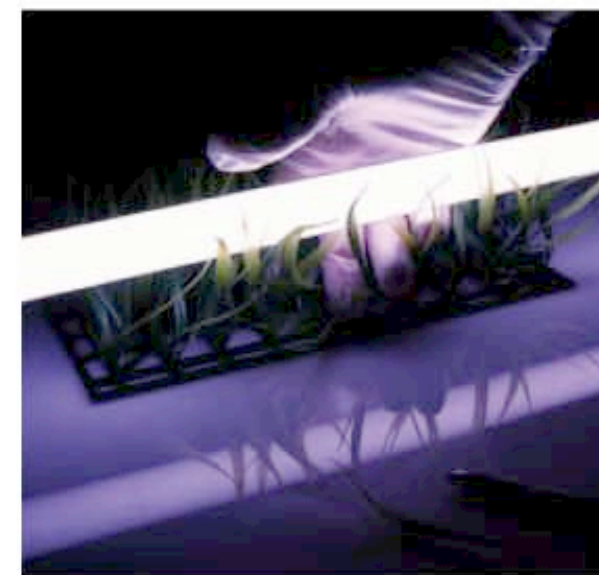
Throughout the week, the Ig Nobel Prizes were also on tour around the country, treating audiences to an outlandish stage show in which the mysteries of biscuit dunking and scrotal asymmetry were entertainingly revealed.

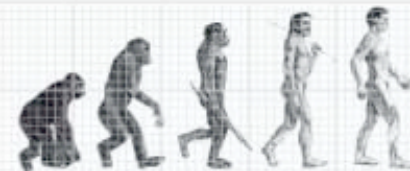
THE DANA CENTRE

In November, our very first dedicated events space was opened – the vibrantly designed Dana Centre, in London, a partnership with the Science Museum and the European Dana Alliance for the Brain (EDAB). Here, burning questions about science and society are up for debate, with dissenters welcome and the audience firmly in the driving seat.

The Dana Centre is now official home to the x-change – audience-led informal debates on the key scientific issues of the day, such as obesity, nanotechnology and air

pollution. In April, Clive Cookson, Science Editor at the Financial Times, took part in an x-change that looked at genetic modification, and which, in the range of views aired and the passion with which they were defended, recalled the brilliant debate on The Origin of the Species held at the BA in 1860.

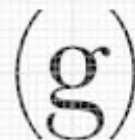




DARWIN DEBATE GOES DOWN IN HISTORY.

At one of the most famous Annual Meetings in the BA's history, Huxley and Wilberforce debate Darwin's controversial theory of evolution.

1860



THE METRIC SYSTEM SEES THE LIGHT.

A BA Committee, including Lord Kelvin, introduces the basic units of the metric system, including the metre and the gramme.

1861

A dedicated volunteer of science: Sir Walter Bodmer Award for Volunteers 2004 joint winner

Colin Axon joined the BA in 1980 and was immediately an active committee member. He was instrumental in setting up the Bristol & Bath Branch in 1995 and has since worked tirelessly to keep the branch active and vigorous. His major contributions are the special projects that he has masterminded: The Bath Scientific Trail, a science-based play "The Music of the Spheres", and the Science and Engineering Societies Forum.

"The BA has been great at letting me try out all sorts of ideas, but I couldn't have made all the various projects work without the help of many others", says Colin. "However, the best reward is from people who come along to events or take part in our activities and go away with a smile."

A PASSION AS BIG AS HUMANITY

This year has also seen us consolidate our commitment to global co-operation. We have forged close partnerships with the European Science Open Forum (ESOF) and the European Science Events Association (EUSCEA). We also brought our perspective on connecting science with people to the Shanghai Association for Science and Technology, and to the International Conference for Public Communication of Science and Technology in Barcelona. Our young people's activities have been enjoyed by schoolchildren as far afield as Hong Kong and India.

All this activity underlines our commitment to rolling back the frontiers of public engagement with science – whether these frontiers are regional, national or global.



"One of the problems with science at the moment is that it is not always trusted. We have often tended to communicate by lecturing the public. We expect that through the work of the BA, however, not only will the public be given a voice on scientific issues, but hopefully scientists will begin to listen more carefully."

Lord Winston

Because every great scientist was a child once.

Children are, quite naturally, fascinated by the world around them. But this instinctive fascination needs to be nurtured if it is to develop into a genuine passion for science.

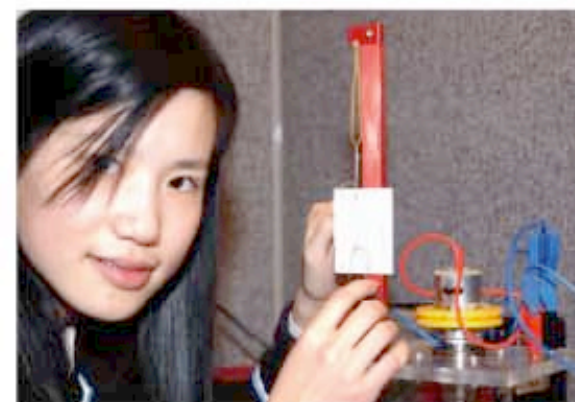
At the BA, we are constantly developing new ways of engaging young people. This year we attracted high rates of participation to our popular award schemes, including BA First Investigators, BA Young Investigators and the newly-revitalised BA CREST Awards. The 2004 BA CREST Science Fair, hosted at the Royal Society in February, celebrated the achievements of those who got involved and was attended by 120 students. Six young people went on to take part in international fairs in the US, Budapest and Sweden, showing how – with the right support – there is no age barrier to global communication between scientists.

The frontline custodians of this country's future scientific talent are, of course, teachers – and the BA supports them in every way possible. This year, we increased and refreshed the resources and ideas packs available

to teachers (much of which is now downloadable from our website), as well as ensuring our science education conference enthused and inspired all attendees.

Inspiring teachers inspiring children: Sir Walter Bodmer Award for Volunteers 2004 joint winner

Pupils at St Mary's Primary School, Bridgend, know there's nothing boring about science. Why else would over 100 of them stay after school for the weekly science club? In June this year, the dedicated teachers who run the club were awarded the BA's Sir Walter Bodmer Award for Volunteers. They were nominated by the pupils themselves, including 11-year-old Thomas Burke, who told us that "everyone loves the science club. The hard work of our teachers has shown us how much fun science can be."





THE BA SETS OUT ETHICAL "BEST PRACTICE".

The BA publishes guidelines to minimise animal suffering and discourage dubious experimentation.

1871

Ar

ISOLATION OF ATMOSPHERIC GAS

During the BA meeting Lord Rayleigh and Sir William Ramsay announced the discovery of the inert gas argon. They later received the Nobel Prize.

1894

Loudspeakers, clearspeakers: the BA meets the media.

“We as scientists need a greater understanding of the workings of the media, and we need to use them to get good copy for ourselves and not just bad press!”

Orla Kennedy, Media Fellow
Daily Telegraph



DEVELOPING SCIENTISTS AS COMMUNICATORS

One of the BA's most important goals, which we have striven for continuously since we were founded 173 years ago, is to promote public engagement with science. The BA understands the importance of the media in facilitating this engagement.

The media are a vital tool for talking about new research and opening up debate as to its social implications. But scientists first need to be able to trust journalists and understand how they work.

The BA funds several Media Fellowships each year, enabling scientists to work alongside journalists in print, on-line and broadcast media for periods of three to six weeks. This year, we secured funding for nine fellowships at such diverse organisations as the Guardian, the Financial Times and BBC Radio. We have also begun to evaluate the project's success over the past 17 years, looking in particular at what has been learned and how Fellows' experiences have changed.

EXPERIMENTAL WRITING

The BA also supports the Daily Telegraph BASF Science Writers Award, which is an opportunity for young science journalists between the ages of 16 and 28 to showcase their writing skills and scientific passions.

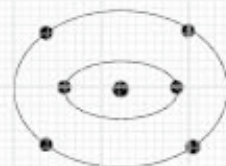


This year, the winner in the 16-19 age group was Clare Neve, who wrote a thought-provoking article on whether stretching really makes a difference in athletic performance. Claire Bithell won in the 20-28 age group, with her intriguingly-entitled piece "The mystery of the very sleepy Sultan" about the first documented case of African sleeping sickness.

PERSPECTIVES

At the 2003 BA Festival of Science, we introduced Perspectives, a competition aimed at providing young scientists with the opportunity to discuss the social implications of their research. The winner, Claire Churchill, captured the imagination of the UK's national media at a packed press conference.





THE ELECTRON IS DISCOVERED.

J.J. Thomson's study of the cathode rays results in the identification of the electron, which is announced to the world at a BA lecture.

1899



THE BA'S FIRST FEMALE PRESIDENT IS INAUGURATED.

Kathleen Lonsdale pioneers work on the x-ray crystallography and remains a leading scientist in her field for over 40 years.

1968

At the forefront of science communication.

SCIENCE COMMUNICATION CONFERENCE

Jointly organised with the Royal Society, this event set itself an ambitious agenda – to develop a national strategy for science communication. Record numbers attended, allowing a rich diversity of voices and opinions to feed into the proposed strategy. The conference recommendations were later distributed to key policy makers including members of Government.

“The BA is undoubtedly one of the UK’s leading organisations in the field of science communication and public engagement, which is why the Royal Society works closely with it to deliver the Science Communication Conference.”

David Boak, Director of Communications, Royal Society

WORKING LUNCHES

The BA’s lively working lunches give people interested in science communication the perfect opportunity to network and exchange ideas. In keeping with our commitment to reaching every corner of the UK, a successful lunch was held in Orkney on the appropriate theme of ‘science communication in remote areas’.

COGNITIVE SYSTEMS

Cognitive systems – systems which are actively able to process information – are an emerging field in science, and one which will have far-reaching social implications. The BA wants to make sure people can voice their feelings before research and investment have progressed so far they feel excluded.

To make sure this happens, we need to develop a language which everyone can use to talk confidently about this new field. In partnership with the Office of Science and Technology, we ran a pioneering and illuminating series of workshops, bringing together scientists and members of the public, to outline a clear and collectively-endorsed frame of reference.

DISC (DELIVERING INCLUSION IN SCIENCE COMMUNICATION)

This project, run jointly with the Afro-Caribbean Network for Science and Technology (ACNST), will organise a series of consultation events to assess the specific barriers keeping different ethnic communities from full participation in scientific debate.

Football (and science). Islam (and science). Urban regeneration (and science).

HOW THE 2003 BA FESTIVAL OF SCIENCE GOT THE NORTH WEST TALKING.

Many people would not automatically put the words “fun” and “science” together. But the BA’s annual flagship event, the Festival of Science, is a celebration in the truest sense of the word.

The 2003 Festival event was no exception. Reaching new audiences, forging new alliances and achieving exceptional media coverage, it took forward the tradition established by our great Annual Meetings of the nineteenth century. Although the hub of the Festival was the University of Salford, we also put on a wide-ranging programme of city events, which took place around Salford and Manchester. The participation of local people reached unprecedented levels, with 900 people attending “Science on a Sunday” at Manchester’s Museum of Science and Industry. We also attracted an enthusiastic response from Salford’s Muslim community with our event

devoted to “Science and Islam”. The Festival as a whole had a strong local focus, with events on urban regeneration and football resonating closely with the region’s core concerns.



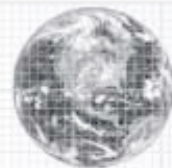
The quality of the Festival meant that we attracted reams of media coverage, including front-page articles in the Daily Mail and Daily Express, and extensive write-ups in all the broadsheets. Our 2004 Festival is in Exeter, where we will offer an even broader programme of events around the university,

the city and beyond – sure to inspire local people to discover science for themselves.

“The BA Festival is the most important date in the calendar of every UK science journalist. It provides a profusion of stories and ideas about everything from science policy to medical research, astronomy to zoology.”

Clive Cookson, Science Editor, the Financial Times.





THE GREENHOUSE EFFECT HITS THE HEADLINES.

J. Houghton examines the evidence and debates this global phenomenon at the BA Annual Meeting.

1989



SEVEN DAYS THAT WAKE THE NATION UP TO SCIENCE

Supported by William Waldegrave, Minister for Science and Technology at the time, the BA launches an annual week of nationwide scientific exploration which later becomes known as National Science Week.

1994

Site of special scientific interest.

In April 2004, we launched our "new look" website, carefully redesigned to be as user-friendly and accessible as possible. It now offers our key audiences up-to-the-minute news and events listings, as well as providing teachers and communicators with free downloadable resources. People who like to receive news hot off the (virtual) press can sign up to receive our free e-newsletter which is delivered to inboxes all over the world at regular intervals.

The site also has its lighthearted side: our on-line vote of top ten screen scientists, run in partnership with bbc.co.uk/cult and featuring Dr Who, Dana Scully, Q, the Muppets scientists and Dr Strangelove, proved quite a phenomenon, attracting over 40,000 votes.

Our new website and e-newsletter service are just the latest stage in a concerted campaign to get the web working hard for us. In 2003, we also launched www.sciencelive.net for teachers and youth group leaders, giving them a quick and easy way to arrange visits from science presenters.



The BA (British Association for the Advancement of Science) is the UK's only nationwide, open membership organisation dedicated to connecting science with people, so that science and its applications become accessible to all. The BA aims to promote openness about science and to inspire all sections of the population to engage with science and technology and their social implications. The BA is grateful to its network of members, supporters and sponsors, who make its work possible.

To find out more, or to join our network of friends and supporters, visit: www.the-ba.net

SUMMARY STATEMENT OF FINANCIAL ACTIVITIES



Resources Expended (con't)	Unrestricted Funds £k	Restricted Funds £k	Total 2003 £k	Total 2002 £k
Management, Administration & Fundraising:				
Fundraising, marketing & public relations	126	-	126	101
Planning & control	236	-	236	214
Re-location & equipping new head office	-	100	100	-
TOTAL RESOURCES EXPENDED	807	1,908	2,715	2,892
Net (outgoing)/incoming resources before transfers	781	(796)	(15)	44
Transfers between funds	(796)	796	-	-
Net (outgoing)/incoming resources	(15)	-	(15)	44
Net Gains/(Losses) on investment assets	55	-	55	(11)
Net movement in funds	40	-	40	(67)
Balances brought forward at 1.1.03	630	18	648	715
Balances carried forward at 31.12.03	670	18	688	648
Summary Balance Sheet as at 31 December 2003				
Fixed assets			559	496
Current assets			709	900
Liabilities			(580)	(748)
Net current assets			129	152
Total assets less current liabilities			688	648
Restricted Funds			18	18
Unrestricted Funds			670	630
Total Funds			688	648

Auditors' Statement

We have examined the summarised financial statement comprising the summary statement of financial activities and balance sheet set out on pages 13 to 14.

Respective responsibilities of trustees and auditors

The trustees are responsible for preparing the summarised financial statements in accordance with the recommendations of the charities SORP.

Our responsibility is to report to you our opinion on the consistency of the summarised financial statements with the full financial statements, on which we reported to you on 12 March 2004 and Annual Report. We also read the other information contained in the summarised annual report and consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the summarised financial statements.

Basis of opinion

We conducted our work in accordance with Bulletin 1999/6 "The auditors' statement on the summary financial statement" issued by the Auditing Practices Board for use in the United Kingdom.

Opinion

In our opinion the summarised financial statements are consistent with the full financial statements and the Annual Report of British Association for the Advancement of Science for the year ended 31 December 2003.

BAKER TILLY
Registered Auditor
Chartered Accountants
2 Bloomsbury Street
London WC1B 3ST
12 March 2004

BA Council

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President Dame Julia Higgins

President-elect Lord Robert Winston

Ex-President Sir Peter Williams

Treasurer Professor William Gosling

Executive Vice-Presidents Mr Colin Johnson, Professor Helen Haste

Appointed by the Royal Society Mr Stephen Cox, Sir Michael Berry

Appointed by the Student Group Mr Joe Bailey

Elected Members (elected by):

Dr Eric Albone (Members)

Dr Jim Al-Khalili (Members)

Professor Arthur Allison (Members)

Dr Anne-Maria Brennan (Sections)

Dr Neville Evans (Members)

Professor John Holloway (Members)

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Dr Robert Marchant (Branches)

Dr Jacqueline Mitton (Sections)

Ms Dianne Stilwell (Members)

Dr Elizabeth Webster (Branches)

Ms Lorelly Wilson (Sections)

Senior Staff

Sir Roland Jackson Bt, Chief Executive

Jill Nelson, Director of Programmes

Philip Wilson, Director of Development and Fundraising

John Gagg, Director of Finance and Administration

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