

ISSUE 54 SPRING 2017

resource

The Newsletter of Scotland's National Academy



*Nicola Benedetti elected
Honorary Fellow of the RSE*

Image © Simon Fowler

Also featured in this issue:

Sixty-one new Fellows welcomed to the RSE

Brexit – what next?

Working Group on Parliamentary Reform



*The Royal Society
of Edinburgh*

KNOWLEDGE MADE USEFUL

RSE welcomes new Fellows in 2017

The Royal Society of Edinburgh (RSE) is delighted to announce that HRH The Duke of Cambridge has been elected an RSE Royal Honorary Fellow. The RSE looks forward to a long and fruitful relationship with HRH, as it has with its Patron, Her Majesty The Queen, and the other Royal Fellows.

Sixty other distinguished individuals were also elected Fellows this year. Hailing from sectors that range from the arts and business to science and technology, they join the current RSE Fellowship whose varied expertise supports the advancement of learning and useful knowledge in Scottish public life. The RSE is heartened to see a continued increase in the number of new Fellows from the arts, business and professional spheres and by the fact that 42% of the new Fellows are women.

President of the Royal Society of Edinburgh, Professor Dame Jocelyn Bell Burnell, commented, *“Each newly elected Fellow has been nominated on his or her exceptional and extensive achievements; it is a great honour to welcome such a range of outstanding individuals to the Fellowship. In joining the RSE Fellowship, they will strengthen the Society’s capacity to advance excellence across all areas of public life in Scotland and further afield.”*



ROYAL HONORARY FELLOW

HRH Prince William

The Duke of Cambridge KG KT

HONORARY FELLOWS

BENEDETTI, Nicola

Violinist

SARGENT, Anneila Isabel

Ira S. Bowen Professor of Astronomy,
California Institute of Technology

WALPORT, Sir Mark Jeremy

Chief Scientific Adviser to HM Government,
Government Office for Science,
and Chief Executive designate, UKRI

BARONESS YOUNG OF OLD SCONE, Barbara

Life Peer, House of Lords

CORRESPONDING FELLOWS

BAER, Thomas Michael

Executive Director, Stanford Photonics Research Centre,
Stanford University

GAO, George Fu

Professor and Director, CAS Key Laboratory of Pathogenic
Microbiology and Immunology, Chinese Academy of Sciences

LIU, Congqiang

Professor, Institute of Geochemistry,
Chinese Academy of Sciences

PRICE, Neil

Distinguished Professor of Archaeology,
Uppsala Universitet

JAMISON, Kay Redfield

The Dalio Family Professor in Mood Disorders,
Johns Hopkins University

FELLOWS

AITMAN, Timothy John

Professor of Molecular Pathology and Genetics and
Director of Centre for Genomic and Experimental
Medicine, University of Edinburgh

ANGIOLINI, The Right Honourable Dame Elish Frances

Principal of St Hugh’s College,
University of Oxford

BENSON, David John

Sixth Century Professor of Pure Mathematics,
University of Aberdeen

BOSWELL, Christina Anne

Professor of Politics,
University of Edinburgh

BREWSTER, Stephen Anthony

Professor of Human–Computer Interaction,
University of Glasgow

BRINK, Stefan

Sixth Century Professor of Scandinavian Studies, Univer-
sity of Aberdeen

BRUCE-GARDYNE, Lucinda Emma Kate

Founder and Research and Product Development Director,
Genius Foods Ltd

DALBY, Matthew John

Professor of Cell Engineering, University of Glasgow

DUFF, Peter Robert

Professor of Criminal Justice, University of Aberdeen

FACCIO, Daniele
Professor in Physics, Heriot-Watt University

FAIRBAIRN, James Bennett
Executive Director, Howden Group Ltd

FLETCHER, Lyndsay Fletcher
Professor of Astrophysics, University of Glasgow

GAMMELL, Sir William Benjamin Bowring
Chairman, Genius Foods Limited; Chairman,
Winning Scotland Foundation; Director, Figured Ltd

GILBERT, Martin James
Chief Executive, Aberdeen Asset Management

GILLESPIE, Stephen Henry
Sir James Black Professor of Medicine,
University of St Andrews

GRICE, Sir Paul Edward
Chief Executive, Scottish Parliament

HAAS, Harald
Professor of Mobile Communications,
University of Edinburgh

HALL, Hazel Jane Read
Professor of Social Informatics,
Edinburgh Napier University

HANNAFORD, Philip Christopher
Vice-Principal (Digital Strategy),
University of Aberdeen

HORN, David
Professor of Parasite Molecular Biology,
University of Dundee

HUNT, Kate
Associate Director, MRC/CSO Social and Public
Health Sciences Unit, University of Glasgow

INNES, Elisabeth Ann
Principal Scientist and Director of Communication,
Moredun Research Institute

KELLY, Dame Barbara Mary
Chairman, The Robertson Trust

KINLOCH, Maggie
Freelance Theatre Director

McCONNELL, Bridget
Chief Executive, Glasgow Life

MCCORMAC, Francis Gerald (Gerry)
Principal and Vice-Chancellor, University of Stirling

MCDERMID, Valerie Lesley Campbell
Author

McKEOWN, Neil Bruce
Crawford Tercentenary Professor of Chemistry,
University of Edinburgh

MACPHERSON, Fiona Elizabeth
Professor of Philosophy, University of Glasgow

MACPHERSON, Lorna Margaret Davidson
Professor of Dental Public Health,
University of Glasgow

MARTIN, Ursula Hilda Mary
Professor of Computer Science, University of Oxford

NAUGHTIE, (Alexander) James
Special Correspondent and Books Editor, BBC News

NORMAN, Jane Elizabeth
Professor of Maternal and Fetal Health,
University of Edinburgh

O'CARROLL, Ronan Edward
Professor of Psychology, University of Stirling

PERMAN, Raymond John
Director, David Hume Institute

RAMPEN, William Hugh Salvin
Chairman and Founder, Artemis Intelligent Power Ltd

REID, Derryck Telford
Professor of Physics and Head of Institute of Photonics
and Quantum Sciences, Heriot-Watt University

REID, Jane Margaret
Professor of Population and Evolutionary Ecology,
University of Aberdeen

ROBERTSON, James Roy
Medical Practitioner, Muirhouse Medical Group

ROUSE, John William
Professor in Chromosome Biology, University of Dundee

SHARP, Joanne Patricia
Professor of Geography, University of Glasgow

SMITH, Andrew David
Professor of Organic Chemistry, University of St Andrews

STEELE, Robert James Campbell
Professor of Surgery, University of Dundee

STEWART, Iain Simpson
Professor of Geoscience Communication
and Director of the Sustainable Earth Institute,
University of Plymouth

TETZLAFF, Doerthe
Professor in Hydrology and Landscape Ecology,
University of Aberdeen

TUDHOPE, Alexander William
Head of School of GeoSciences and Professor
of Climate Studies, University of Edinburgh

WALKER, Greg
Regius Professor of Rhetoric and English Literature,
University of Edinburgh

WARK, Kirsty
Presenter, BBC Newsnight

WATT, Alison
Painter

WILLIAMS, Richard Andrew
Principal and Vice-Chancellor, Heriot-Watt University

WILSON, Jeremy David
Head of Conservation Science,
RSPB Scotland

RSE Office-Bearers – April 2017

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Professor Stuart Monro OBE

Chair of Audit and Risk

Dr Robert Black CBE

Chair of RSE Scotland Foundation

Professor Donald Ritchie CBE

Chair of RSE Scotland SCIO

Professor Peter Holmes OBE

Congratulations to RSE Fellows recently honoured ...

In Her Majesty The Queen's New Year Honours List 2017:

Order of the British Empire: Commander (CBE)

- Professor Christopher **Haslett**, Sir John Crofton Professor of Respiratory Medicine and Director of The Queen's Medical Research Institute, University of Edinburgh.

For services to Medical Research.

- Professor Jill **Pell**, Henry Mechan Professor of Public Health and Director of the Institute of Health & Wellbeing, University of Glasgow.

For services to Public Health Research.

Order of the British Empire: Officer (OBE)

- Professor James Charles **Neil**, Professor of Virology and Molecular Oncology, University of Glasgow.

For services to the Advancement of Biomedical Sciences.

- Professor Anne **Neville**, Chair in Emerging Technologies, University of Leeds.

For services to Engineering

**Professor Mandy MacLean**

has been named the 2017 recipient of the Reynold Spector Award in Clinical Pharmacology given by the American Society for Pharmacology and Experimental Therapeutics (ASPET). With this award, Professor MacLean is being recognised for her excellence in research on pulmonary arterial hypertension and her dedication to postgraduate teaching.

**Professor Joanne Scott**

has been appointed Professor of European Law at the European University Institute in Florence from 1 April 2017. She will be on special leave from the Faculty of Laws, University College London (UCL) where she has taught since 2005.

Professor Philip Schlesinger

Professor in Cultural Policy at the University of Glasgow, has been awarded a Robert Schuman Fellowship at the European University Institute. This award, for distinguished scholars, is made by invitation only. Based in Florence, the Fellowship will run from March to June 2018.



Policy Advice from RSE

The RSE and Brexit

RSE Brexit Strategy Group

Following a Referendum held on 23 June 2016, in which 51.9% of votes cast were in favour of leaving the EU, the UK Government stated its intention to invoke Article 50 of the Treaty on European Union (the formal procedure for withdrawing). The terms of the withdrawal have not yet been negotiated.

The RSE has set up a Strategy Group to provide advice on the implications of the UK leaving the EU. The Group, led by Sir John Elvidge KCB FRSE, former Permanent Secretary to the Scottish Government, held its first meeting in February 2017. Other key members include Professor Sir David Edward KCMG FRSE and Professor Dame Anne Glover DBE FRS FRSE.

Carrying out the detailed work on specific areas of policy, is a set of sub-groups, which will consider:

- **Constitutional law & government**
– chaired by Professor Paul Beaumont FRSE;
- **Economy & public finance**
– chaired by Professor David Bell FRSE;
- **Economic strategy, trade, key sectors**
– chaired by Mr Keith Cochrane CBE FRSE;
- **Research & innovation**
– chaired by Professor David Cole-Hamilton FRSE;
- **Migration, diversity, rights & social protection**
– chaired by Professor Christina Boswell FRSE.

Article 50 Triggered

Article 50 was triggered on Wednesday 29 March 2017 and in response, the RSE joined other National Academies in the UK and Ireland in issuing a statement on higher education, research and innovation. The full statement, now available on the RSE website, focuses on four key aspects:

- **People** – ensuring the UK remains open and welcoming to talented people from Europe and globally, and providing an indefinite right to remain to all EU staff employed in UK and their dependants;
- **Collaboration** – continuing to participate fully in European research and innovation programmes;
- **Resources** – committing to a target of 3% of GDP for combined public- and private-funded R&D, and providing greater incentives for private investment in research and innovation;
- **Regulation** – preserving mutual recognition of professional qualifications and preserving regulatory and standards equivalence where appropriate.

Dame Jocelyn Bell Burnell, President of the RSE said, “Now that Article 50 has been triggered, the National Academies urge the UK Government to commit to championing world-class higher education, research and innovation in the UK, by putting measures in place to ensure that the UK remains open to the world, welcoming talented people from Europe and further afield.”

Read the joint statement at: bit.ly/JointStatementArticle50

Referring to the proposed work of the Strategy Group, Sir John commented,

“Leaving the European Union will be a complex and momentous task. The RSE believes there is considerable knowledge and insight available through the expertise and impartiality of National Academies such as the RSE and our sister Academies throughout the UK and in Europe.

“We will seek to work jointly with them. Where there is evidence to support a separate Scottish perspective, we shall aim to articulate that and draw upon the expertise of our Fellows to develop both the arguments and potential ways of reaching positive results throughout the negotiations.”



Science Priorities for Brexit

The RSE also recently participated in discussions with Stephen Metcalfe MP, Chair of the Westminster Parliamentary and Scientific Committee, who collected advice and evidence from members of the UK research and innovation community.

His statement, *Science priorities for Brexit*, was published on 21 March and can be viewed on the RSE website at:

bit.ly/SciencePrioritiesforBrexit

Policy Advice from RSE

Parliamentary Reform

On 26 October 2016 the Presiding Officer of the Scottish Parliament, Ken Macintosh MSP, established an independent Commission on Parliamentary Reform, with the remit of examining how Holyrood could better engage with the Scottish public and work to deliver improved scrutiny.

In response to a 'call for written views' published by the Commission, the RSE published an Advice Paper addressing the three areas in which evidence was invited, namely: engagement, distinct identity and checks and balances.

Engagement

The Scottish Parliament has succeeded in being one of the most accessible and open legislatures in the world, and the RSE encouraged Holyrood to build on this success to reach out even further to the most underrepresented sections of the public.

Phrases such as 'participation', 'consultation', 'engagement' and 'outreach' are often used almost interchangeably in discussing the work of parliament. It is important that these different approaches and concepts are well defined and understood.

There is an opportunity for a greater level of involvement from civic society with parliament on what should be a cross-sectoral basis.

Distinct Identity

It should be acknowledged that the Government will inevitably set the political agenda and feature most prominently in the headlines.



Photograph: Andrew Cowan/Scottish Parliament ©2009 Scottish Parliamentary Corporate Body

The full paper on the *Commission on Parliamentary Reform: Royal Society of Edinburgh Response*, is available on the RSE website at:

bit.ly/ParliamentaryReform

A distinct and positive identity for the Parliament can be furthered through effective scrutiny in the chamber and in independently-minded committees.

The nature of party politics means there will always be adversarial debate. However, the policies proposed by parties and the policy-making process behind them can be more evidence based.

Culture change takes time. The RSE endorsed the induction and personal development programmes offered by the Parliament to MSPs, which encourage them to engage on policy development and offer them opportunities to do so through the Scottish Parliament Information Centre and the Scotland's Futures Forum.

Checks and Balances

In the absence of a Second Chamber, the need for independent committees to scrutinise government policy robustly is vital. With the increased fiscal powers, which will bring both spending and revenue raising under the remit of the Scottish Government, effective scrutiny around the budget is of paramount importance.

The increase in powers to the Scottish Parliament has put a strain on its ability to fulfil key functions. In future, it may be necessary to re-evaluate both the number of Members serving at Holyrood and/or the length of the parliamentary week in order to ameliorate this.

The RSE Working Group that produced the paper was Chaired by former Presiding Officer Sir George Reid FRSE, who commented:

"To date, the Parliament has struggled to hold the Government to account. The Presiding Officer asks what can be done to differentiate the legislature from the executive. The answer is: more informed and determined scrutiny."

STEM Education and Training Strategy

The Learned Societies' Group (LSG), which brings together the learned societies and professional associations in Science, Technology, Engineering and Mathematics (STEM) in Scotland, recently responded to the Scottish Government's draft STEM Education & Training Strategy. The LSG, which is facilitated by the RSE, is chaired by Professor Lesley Yellowlees CBE FRSE.

The LSG welcomes the Scottish Government's commitment to developing a systemic approach for guiding the provision of STEM education.

In its response, the LSG highlighted the following key points:

- At the Science and the Parliament event in November, the Deputy First Minister and Education Secretary, John Swinney MSP, stated that he is prioritising a focus on literacy, numeracy and health and wellbeing over science. While it is absolutely right that Government should articulate priorities, it needs to be alive to the consequences of this decision for STEM subjects, and the signal this sends out to learners, parents and schools, in particular.
- A key priority will be supporting learners so that they can see that STEM is for 'people like them'. The ASPIRES research project from King's College London shows that while most primary-school-age learners report liking science, very few aspire to become a scientist. This demonstrates the need to promote the message that STEM enables young people to keep their career options open, providing them with transferable skills that are highly sought after within and beyond STEM. It is clear that the need to address gender bias in subject choice requires holistic action, including whole-school interventions. In order to fully embrace diversity, the strategy needs to extend beyond encouraging more girls into STEM.



- Identification of appropriate and measurable criteria for assessing progress against outcomes will be central to realising the strategy. This will require extensive work as, currently, the outcomes are so broad as to make them unmeasurable. Many of the proposed actions to support STEM are couched in general terms, with references to 'using data', 'exploring how', 'funding activity' and 'maximising engagement'. This demonstrates the need for an implementation plan at a far more specific level of detail than that provided in the draft strategy. This should make clear the performance indicators, key time lines and staging posts and, crucially, who will be accountable for delivery, particularly as much of this effort will be led by bodies outwith Government.
- The strategy recognises that teacher competence has the greatest effect on student achievement. However, a lack of confidence in teaching the sciences is an issue for many primary teachers. This reinforces the importance of ensuring that primary teachers are able to access STEM-specific professional development opportunities. This has implications for initial teacher education (ITE). For those wishing to become primary teachers, consideration will need to be given as to whether science and mathematics should feature more prominently in the entry requirements.
- The Government needs to make full use of the expertise available to it, including the Scottish Science Advisory Council and the STEM Education Committee (STEMEC). Last year, the latter group submitted a comprehensive report to Government which sets out specific and evidence-based recommendations for improving the provision of STEM education in Scotland; however, the strategy refers to this only in passing.

The full LSG response to the Scottish Government's Draft STEM Education and Training Strategy is available on the RSE website at:

bit.ly/STEMEducationTrainingStrategy

Events for the Public @ RSE

**Monday 24 April 2017
at 6 pm**

LORD KELVIN PRIZE LECTURE

*From the Infinite to
the Infinitesimal:
Birth of
a Higgs Boson*

Professor Anthony Doyle
FRSE, Professor of Physics,
University of Glasgow

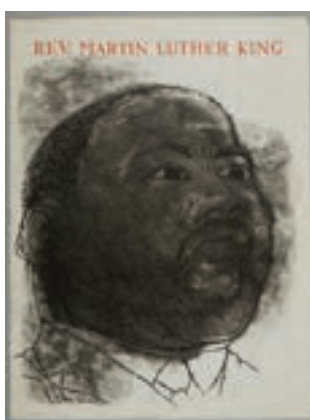


The sizes of objects are determined by a small number of physical parameters. We explore how the physics at large scales is determined by the properties of the smallest particles. The Large Hadron Collider (LHC) enables us to explore sizes less than a thousandth of that of the atomic nucleus. The discovery of the Higgs boson is reviewed, in which the unique role of this scalar field in determining the masses of these particles is emphasised. As we enter a new era in fundamental science, the talk explores how understanding infinitesimal scalar fields could change our view of the infinite Universe.

**Wednesday 10 May
2017 at 6 pm**

RSE GIFFORD DISCUSSION FORUM

*Religion Unbound:
Ideals and Powers
from Cicero to King*



The RSE is pleased to host a discussion forum, based around the themes of this year's University of Edinburgh Gifford Lecture Series.

- Professor Jeffrey Stout, Professor of Religion at Princeton University, is delivering the series and will be a member of the panel for the forum. Joining him on the panel are:
- Professor John Bowlin, Robert L Stuart Associate Professor of Philosophy and Christian Ethics, Princeton Theological Seminary;
- Professor G. Scott Davis, Lewis T. Booker Professor in Religion and Ethics, University of Richmond;
- Professor Cornel West, Professor of the Practice of Public Philosophy, Harvard University.

Further information on the University of Edinburgh Gifford lecture series can be found at: <http://edin.ac/2jvYrYI>

Artwork © Estate of Ben Shahn / Licensed by VAGA, NY

**Monday 22 May 2017
at 6 pm**

SIR JAMES BLACK PRIZE LECTURE

*NEW Drugs from OLD
Pathways – Teaching
Nature New Tricks*

Professor Thomas Simpson
FRS FRSE, Alfred Capper
Pass Professor of Chemistry,
University of Bristol



Engineering metabolic pathways in microorganisms can provide new antibiotics and other bioactive natural products. The mupirocins are antibiotics active against MRSA. Clinical applications are restricted by instability and toxicity. Using classical biosynthetic methods to understand how they are formed, combined with molecular genetic engineering, novel analogues in which both these limitations can be produced. Similarly, the biosynthetic pathway to the fungal metabolite, tenellin, isolated from *Beauveria bassiana*, has been engineered to produce the 'extinct' compound, bassianin, and many new compounds for biological evaluation.

**Monday 10 July 2017
at 6 pm**

LECTURE

The Global Cancer Burden: Necessity is the Mother of Prevention

Christopher P Wild,
Director, International Agency
for Research on Cancer,
Lyon, France

The number of new cancer cases worldwide is escalating. Combined with spiralling treatment costs, no country will be able to treat its way out of the cancer problem. Consequently, a higher priority must be placed on prevention. Much is known already, with typical estimates of 30–50% of cancers potentially preventable. However, the aetiology of some common cancers remains obscure, while studies to establish effective interventions are lacking. Discoveries in cancer biology offer exciting opportunities to study the causes, early detection and prevention of cancer to complement the benefits to be gained in personalised medicine.



This lecture forms part of an RSE Ordinary Meeting and so will be preceded by Society business, such as Fellows signing the Roll.

In association with the Scottish Cancer Foundation and the Cruden Foundation

Tuesday 10 & Wednesday 11 October 2017

TWO-DAY CONFERENCE

Spotlight on Scotland's Biodiversity

2011–2020 is the United Nations Decade on Biodiversity.

This conference, to be held over two full days, will examine Scotland's progress in achieving the Aichi biodiversity goals and themes will include:

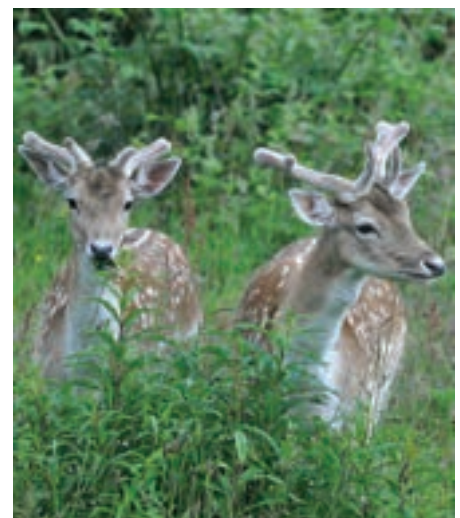
Theme 1: General introduction to Scotland's biodiversity.

Theme 2: Assessing Scotland's progress towards 2020 targets.

Theme 3: Short individual contributions (offers of 5- and 10-minute talks should be sent to events@theRSE.org.uk).

Theme 4: Scotland's contribution to safeguarding biodiversity internationally.

Full details of the Conference and the programme will be available shortly: please register your interest by contacting: events@theRSE.org.uk



Cervus elaphus – red deer.
Killiechronan, Mull

RSE Events are open to all and normally free to attend, but registration is required. To register, please contact the Events Team – 0131 240 2780 – events@theRSE.org.uk or go online at: www.rse.org.uk/events

Some events may carry a charge – please check individual details.

Many RSE events run to full capacity. If you book a place at any event but are unable to attend, it would be appreciated if you could inform the Events Team so that your place can be reallocated.

International Relations

The RSE initiates and supports a wide range of activities which enhance Scotland's involvement in global collaboration.

Through events, strategic partnerships and publications, the RSE promotes the reputation of the nation's research, innovation and culture.

Promoting collaboration

By forging effective partnerships with national academies and learned societies overseas, the RSE is helping to:

- Facilitate two-way international exchange programmes, enabling top Scottish-based researchers to collaborate with their counterparts anywhere in the world;
- Promote the exchange of early-stage researchers, giving them the opportunity to experience research activities in other countries;
- Raise awareness overseas of some of the best of the research and innovation being undertaken in Scotland;
- Stimulate collaboration between centres of excellence through joint international events; and
- Provide a forum for discussions on: international affairs; Scotland's place in the wider world; and international issues in science, the arts and letters, technology, industry and commerce.



Relations with China

The RSE and the Chinese Academy of Social Sciences (CASS) have a formal agreement, established to support research collaborations between Scotland and China. Under the terms of this agreement, the RSE and CASS organise a biennial workshop on a topic of interest to both countries and, for the first time, have issued a call for Joint Projects.

One of these workshops was held at the RSE in early November 2016, covering the following topics:

- Reform of public sector;
- Smart cities and sustainable development;
- Improvement of public health and healthcare;
- Fiscal policy.

Researchers from both Scotland and China presented on their work and it was clear from the discussion sessions that there is an appetite for further collaborations. This very successful workshop was held in Scotland for the first time and set the precedence for continued RSE-CASS relations.

The Joint Project funding is designed to facilitate international collaboration between researchers based in Scotland and China. CASS provides a similar level of funding to the Chinese counterpart. The funding may be seen as seed money to enable further collaboration and funding in the future.

Further information on this Joint Project scheme and the application process is available on the RSE website:

bit.ly/CASSRSEJointProjectScheme

RSE and CASS workshop speakers pictured (left) at the RSE - November 2016

MacCormick European Lecture

The annual MacCormick European Lecture is named after the late Professor Sir Neil MacCormick FBA FRSE, in recognition of the contribution made by him to Scottish and European politics and the international work of the RSE.

The 2016 Lecture was delivered by Irina Bokova, Director-General of UNESCO.

Following the lecture, RSE President, Dame Jocelyn Bell Burnell, chaired a searching Q & A session, after which a Vote of Thanks was offered by Diana Murray FRSE, Former CEO of the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS).

During her visit to the RSE, Irina Bokova took part in a *Quiz-a-Whiz* interview in which she talks about a typical day at UNESCO. This video can be viewed on the RSE website at: www.rse.org.uk/irina-bokova-typical-day-unesco

The full summary report and a video of the lecture are also available on the RSE website at: www.rse.org.uk/event/maccormick-european-lecture-2016



Cultural Cleansing – the Imperative of Protecting Cultural Heritage and Diversity

Humanity and heritage under attack

Irina Bokova stated that culture is now at the front line. Violent extremists pose a huge threat to identity, diversity and universal value; but there are reasons to be optimistic – there is a growing recognition of the need to protect intangible culture, as well as ancient monuments and artefacts, and the war for hearts and minds is an integral part of the struggle.

The fight to protect our cultural heritage has been the focus of UNESCO since the organisation was founded 71 years ago, emerging from the ruins of the Second World War as an “educational force for peace.”

Ms Bokova believes that we need soft power to build lasting peace, including the power of the sciences and cultural dialogue. There is always collateral damage, but now violent extremists are engaged in a “systematic war on culture.” They have openly targeted cultural heritage – e.g., the Buddhas of Bamiyan in Afghanistan and the mausoleums in Timbuktu. “All this calls for new policies and solidarity,” Bokova said, promoting the idea that people can unite around a common human heritage and universal values. “When any site is destroyed,” she continued, “we are all wounded.”

UNESCO is currently concerned about six endangered sites in Syria, including Aleppo and Damascus, as well as eight religious sites in Libya, plus many others in Yemen and Mali. Illegal excavations “on an industrial scale” are another threat to heritage, funding acts of violence. “All religions and voices of peace are targets,” said Bokova. The Internet is also a battleground for the extremists, who are conducting a successful global media campaign to recruit more supporters – an estimated 30,000 foreigners are now fighting in Syria, Afghanistan, Libya, Iraq and Yemen. Bokova also quoted a Jordanian minister who said that the extremists target heritage because they fear the power of history – and reject dialogue.

Bokova believes that culture is not just about bricks and mortar, but about identity and sense of belonging, security and peace building. And in the war for hearts and minds, deliberate destruction of cultural heritage is now recognised as a war crime, and some of the extremists are already in jail. Destruction of cultural heritage is also a human rights issue, embodied in a resolution of the Human Rights Council about “violation of cultural rights.”

“We must respond to poisonous propaganda” said Bokova. The extremists say there is no common heritage, so we must defend it. The extremists promote fear and division, so we must promote greater civic engagement and fight ignorance. No-one is born a violent extremist – they are made.” This is the new front line.

Humanism is in danger, but there are encouraging signs, such as a conference at the Gandhi Institute to draft guidelines to prevent violent extremism, and a meeting in Quebec to discuss global citizenship. “We must refuse to be divided into ‘us and them,’” said Bokova. “We need to promote lifelong learning for all, teach history and fight discrimination, and try to influence policy makers.” We must not lose this generation to violence, she added. We must promote civic engagement and train future leaders.

This is not a clash of civilisations, said Bokova, but a struggle between those who believe in a single community and those who seek to divide and believe in division, promoting armed conflict, legitimising discrimination and stigmatising minorities. To defeat these negative forces, we need to release new creative ideas. We need more cooperation and commitment. “Culture is a transforming power,” she concluded. “Where culture is reborn, people rise with it.” And Bokova has seen this in front of her eyes, as people regain their identity when sites such as the Mali mausoleums are restored. “We must look to the past as well as look to the future. This is our response to the violence – which we share with the spirit of the Scottish Enlightenment.”

Excerpt from summary report of Irina Bokova’s lecture – November 2016. by Peter Barr.

Leave a Gift of Discovery and Innovation

For more than 200 years, the Royal Society of Edinburgh has played a major role in Scotland's development. Throughout its proud history, kind gifts and commitments made by various benefactors in their Wills have grown and nurtured the Society; allowing it to make a major contribution to Scotland and its people.

One of the most important actions you can take now to protect the important work of RSE is to remember it in your Will. After you have taken care of the people closest to you, by leaving the RSE a gift you will join an important tradition of benefactors.

Your legacy will contribute to:

- providing expert advisors and commentators on contemporary issues;
- facilitating public debate;
- managing research and enterprise programmes;
- creating educational and outreach projects for youth and communities across Scotland; and
- developing international collaborations, for generations to come.

A gift – whether large or small – costs nothing now, but will make a substantial difference to the future of knowledge in Scotland and beyond.



The benefits for you and your loved ones

1. As a registered charity, a gift in your Will to the RSE can prove extremely tax-efficient as such gifts are not subject to inheritance tax.
2. This type of gift costs nothing in your lifetime, but has lasting impact when you are gone.
3. Everyone who makes a pledge in their Will is welcomed into the RSE President Circle and is invited to special events and receptions.

The difference your gift could make

Leaving a general gift ensures that the maximum benefit can be derived from your important donation. This type of gift allows the RSE to support areas of greatest need, now and in the future. In recent years, general legacies have assisted a number of new activities, including the launch of the RSE Young Academy of Scotland. Without such gifts from valued donors, this important and ambitious initiative could not have been created. (See image top right on facing page).

If you have a specific purpose in mind, you may wish to tailor your support. An example of such a bequest is the Lessells Travel Scholarship Scheme, which is available to Honours Graduates in all forms of Engineering from Scottish Universities. Read more about this bequest on the RSE website at:

www.rse.org.uk/awards/john-moyes-lessells-travel-scholarships/

Tips for leaving a gift in your Will

1. Getting started

While making a Will is usually straightforward and inexpensive, it is recommended that you seek professional advice. This ensures that your Will is legally binding and your wishes will be met. The RSE is happy to make suggestions of suitable professionals, should you consider leaving a gift to the Society.

2. Valuing your estate

Before you seek legal advice it is useful to think about the value of your assets. This can help when considering the impact that any Inheritance Tax may have on your loved ones.

3. Inheritance Tax

This tax is payable if your taxable estate is worth more than the IHT threshold. Further information can be found on HM Revenue and Customs website or by calling the Probate and Inheritance Tax helpline on +44(0) 300 123 1072

How do I find more information?

To find out more, or to arrange an appointment to discuss this type of gift, please contact Jennifer Adams.

Telephone: +44(0) 131 240 5023;

Email: legacy@theRSE.org.uk;

Mail: Jennifer Adams,
Legacies and Individual Gifts Manager,
The Royal Society of Edinburgh,
22-26 George Street,
Edinburgh
EH2 2PQ

If you have already written us into your Will – thank you!

Please consider letting us know so that we can invite you to join the RSE President Circle and thank and acknowledge you appropriately.



Founding members of the RSE Young Academy in 2011.

Friends of the RSE

In 2009, the RSE created a corporate engagement initiative entitled 'Friends of the Society'. Over the last few years, a number of carefully selected, prominent organisations have been invited to join the scheme, which was created to develop closer

relationships with key businesses in Scotland. The project provides the RSE and its corporate partners with a platform to explore areas of potential mutual interest and a number of beneficial projects are being and will be developed over time.

Find out more in online at: www.rse.org.uk/about-us/friends-of-the-society

FRIENDS OF THE SOCIETY
CORPORATE PARTNERS OF THE ROYAL SOCIETY OF EDINBURGH

























If you would like to know more about the Royal Society of Edinburgh's Friends of the Society initiative, or if your organisation may be interested in joining the scheme, please contact:
Westaly Duignan, Development Manager – 0131 240 2786 – wduignan@theRSE.org.uk

The RSE Young Academy of Scotland



Winter 2016 Plenary:

Brexit: What is in Scotland's National Interest?



In December 2016, the RSE Young Academy of Scotland (YAS) held their annual Winter Plenary Meeting with the theme, *Brexit: What is in Scotland's National Interest?*

Held at the Edinburgh Napier University campus, the afternoon panel discussion explored the implications of Brexit on Scotland and how YAS could contribute and influence this discussion in a positive way for Scotland.

The speakers on the panel were: Professor David Bell FRSE, Professor of Economics at the University of Stirling; Professor Christina Boswell FRSE, Professor of Politics at the University of Edinburgh; and Young Academy member, Emma Boffey, Lawyer at CMS Cameron McKenna.

The speakers covered a wide range of issues in their speeches; however, the key concerns raised were over immigration, business and research funding.

Questions to the panel sparked a conversation on EU research funding and Scotland's position as an attractive option for researchers and academics. The key apprehension highlighted was whether or not Brexit would have an impact on current and future academic research funding, and whether the type of research being funded would be changed.

Another area of concern was whether Scotland would be able to implement separate migration policies with regard to EU nationals, given the country's reliance on migrant workers in both the private and public sectors.

Another observation raised was the lack of a voice from the Scottish business and industry sectors over Brexit; with a service-reliant GDP, members highlighted the need for more recognition of this and a more credible and united voice for Scotland's private sector in the debate.

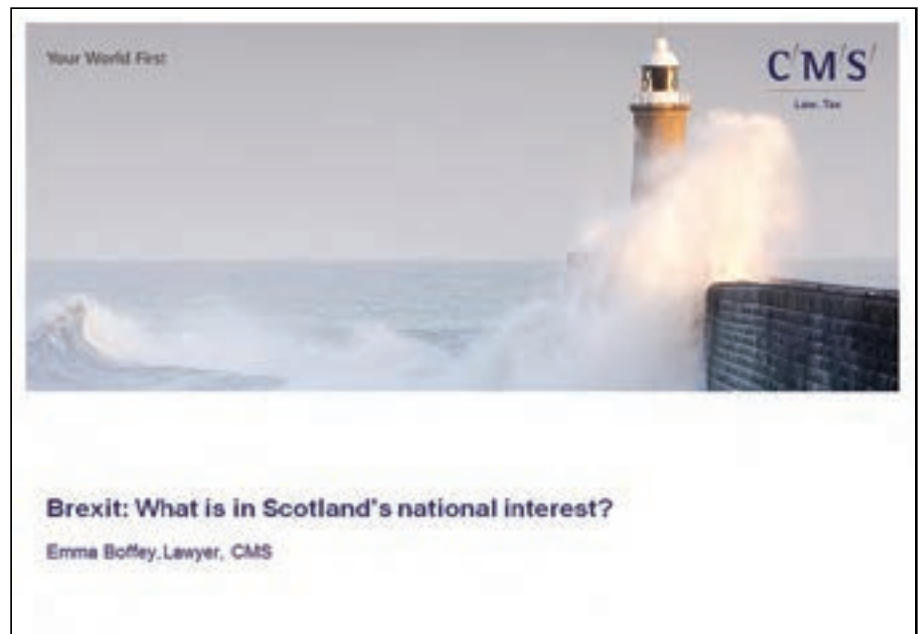
What emerged clearly from the day's proceedings was that the Young Academy of Scotland is in a unique position to provide a voice in the discussion, representing young academics and researchers; many members were already experiencing, first-hand, the effects of Brexit on their research and the associated worry.

Since the Winter Plenary, the YAS has issued a Position Statement on Brexit entitled *For a Progressive and Open Society*. The statement focuses on the YAS' desire to see Scotland retain its position and reputation amidst the Brexit discussions as an international, progressive and open society. The membership is currently working on a dedicated YAS report on the impact of Brexit on Scotland, to be published on the anniversary of the Referendum in June 2017.

The full Position Statement can be found on the YAS website at: <http://bit.ly/YASPositionPaperBrexit>



Emma Boffey, member of the fourth YAS cohort, appointed in Summer 2016



New Young Academy Working Group

The Young Academy of Scotland has recently established a new Working Group – Knowledge & Power – which is contributing towards Scotland’s Future Forum’s project, *Our Future Scotland*. The core aim of the Group will be to enhance communication between policy makers and expert bodies and to improve interactions between the centres of knowledge and centres of power.

The Group are working on a variety of projects and its two key themes will be: Citizenship and Sustainable Development; and Cultural Heritage. Some of the activities underway include a documentary on the notion of Scottish Citizenship in 2030; plans for a YAS–MSP shadowing scheme; and coordinating further YAS input and response to Brexit.

Existing Young Academy Working Groups are:

- Arts, Humanities & Society;
- Computing in Schools;
- Excellence in Education;
- Food & Drink;
- Health & Wellbeing;
- Industry;
- International Links;
- Open Data;
- Research the Headlines.

About the Young Academy of Scotland

The RSE Young Academy of Scotland fosters interdisciplinary activities among emerging leaders from the disciplines of science and humanities, the professions, the arts, business and civil society.

Established by the Royal Society of Edinburgh in 2011, the Young Academy of Scotland provides a platform for able and innovative young entrepreneurs, professionals and academics to develop a coherent and influential voice, and to address the most challenging issues facing society in Scotland and further afield.

The Young Academy provides a means of reaching beyond the professional environments in which members work, thus contributing to policy and practice in all areas. It provides an opportunity for its members to interact across disciplines and professions with decision makers, opinion formers and experts, business leaders, funding bodies, national institutions, the public and the media within Scotland, the UK and internationally.

The Young Academy of Scotland is part of a growing international movement in which national academies are establishing young academies across Europe and beyond.

For more information about the Young Academy of Scotland and its activities, visit the website: www.youngacademyofscotland.org.uk.

The Politicians and the Professionals 2017

In January and February 2017, as in previous years, the David Hume Institute (DHI) organised a series of events at which the leaders of the five political parties represented in the Scottish Parliament were invited to present their views on Scottish politics, particularly in the context of Brexit. The events were held at the RSE and supported by the Young Academy of Scotland (YAS), as well as by the Institute of Chartered Accountants in Scotland, the Law Society of Scotland, the Institute and Faculty of Actuaries and the Faculty of Advocates.

All of the talks were well attended and were followed by lively and probing Q&A sessions. At the end of each event, a member of the YAS had the opportunity to tell the audience about the YAS and some of its activities.



Scotland's First Minister, Nicola Sturgeon, Leader of the Scottish National Party, addressed a packed lecture theatre on *Brexit and Democracy in Scotland*. Eilidh Wiseman, President of the Law Society of Scotland, chaired the meeting and Dr Victoria Martin (left) and Dr Stella Chan (right) attended on behalf of the YAS.



Kezia Dugdale MSP, Leader of the Scottish Labour Party, spoke at the first of the events. The title for her talk was *Growing Scotland's Economy*. The event was chaired by Professor Alan Alexander OBE FRSE, General Secretary of the RSE. The YAS representative on this occasion was Professor Nasar Meer (pictured above).



Patrick Harvie MSP, Co-Leader of the Scottish Green Party, spoke on *How to prevent a good crisis going to waste*. Dermot Grenham of the Institute and Faculty of Actuaries chaired the meeting and James Blake (pictured on left) represented the YAS.



Ruth Davidson MSP, Leader of the Scottish Conservative Party, addressed the audience on *A Scottish Government with the powers to act*. Alan Watson of the Institute and Faculty of Actuaries chaired the meeting. Professor Stuart Reid (pictured above on left) spoke on behalf of the YAS and Dr Paul Brennan (right) also represented the YAS at the event.

Willie Rennie MSP, Leader of the Scottish Liberal Democrats, spoke on *Sticking with a liberal, open economy when everyone else is walking away*. This meeting was chaired by Charlotte Barbour from the Institute of Chartered Accountants of Scotland (ICAS). Dr Karly Kehoe spoke about the YAS (pictured on right of Mr Rennie) and Dr Stella Chan (left) also attended the meeting.



Full transcripts and recordings of all five events are available to read and/or listen to on the DHI website at:
www.davidhumeinstitute.com/news/

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ReSourceE: ISSN No 1473-7841

The Royal Society of Edinburgh, Scotland's National Academy, is Scottish Charity No. SC000470

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