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UNIVERSITY OF
CAMBRIDGE

NOTICES

Calendar

- 2 December, *Friday*. Full Term ends.
6 December, *Tuesday*. Discussion at 2 p.m. in the Senate-House (see below).
19 December, *Monday*. Michaelmas Term ends.
20 December, *Tuesday*. Discussion at 2 p.m. in the Senate-House.

Discussion on Tuesday, 6 December 2016

The Vice-Chancellor invites those qualified under the regulations for Discussions (*Statutes and Ordinances*, p. 103) to attend a Discussion in the Senate-House on Tuesday, 6 December 2016, at 2 p.m. for the discussion of:

1. Joint Report of the Council and the General Board, dated 21 November and 18 November 2016, on the consideration of student complaints of harassment and sexual misconduct (*Reporter*, 6445, 2016–17, p. 132).

Office of Registry

28 November 2016

Dr Jonathan Nicholls retires from the office of Registry on 31 December 2016. Following advertisement and a search process supported by recruitment consultants, the Council has decided not to appoint substantively to the office of Registry at this time. The Council has agreed to appoint Emma Rampton, currently Academic Secretary, as Acting Registry under Statute C VI 5 for a period of two years with effect from 1 January 2017. This will allow the Vice-Chancellor-Elect to start a new process for the appointment of a permanent Registry at a time of his own choosing in the first year of his tenure.

Ballots of the Regent House: Voting now open

The following ballots are currently open for voting by members of the Regent House:

- Ballot on Grace 3 of 13 July 2016 regarding the public display of class-lists and related matters.
- Election to the Council of two candidates in class (b): Professors and Readers.
- Election to the Council of four candidates in class (c): Other members of the Regent House.

Voting information, including fly-sheets and candidate statements, is available online at <http://www.governance.cam.ac.uk/ballots/voting/Pages/Ballot-MT2016.aspx> [raven only]. Voting closes at 5 p.m. on Thursday, 8 December 2016.

EU Public Procurement Regulations

21 November 2016

The Council, on the advice of the Finance Committee, has declared that the University continues to remain outside the scope of the EU Public Procurement Regulations as it is less than 50% publicly funded. The calculation is carried out annually to ensure that it remains possible to make the declaration. It is the Council's intention that the University's procurement procedures should continue to follow the good practice set out in the regulations and in the University's Financial Regulations (*Statutes and Ordinances*, p. 1004; see also <http://www.finance.admin.cam.ac.uk/policy-and-procedures/financial-regulations>).

IT Review: Report of the Progress Review Group

28 November 2016

In July 2013, the recommendations of a Joint Report of the Council and the General Board on IT infrastructure and support, as amended by Notice, were approved by ballot (*Reporter*, 2012–13; 6302, p. 418; 6308, p. 547; 6315, p. 678). The University Information Services (UIS) was constituted as an institution under the supervision of the Council, replacing the University Computing Service and the Management Information Services Division of the University Offices, under a new office of Director of Information Services, and the Information Services Committee (ISC) was established as a new committee, reporting to the Council and the General Board, to oversee the work of UIS.

The Information Services Committee, in April 2016, commissioned a progress review to 'assess the extent to which the aims and recommendations of the Review of IT Infrastructure and Support have been realized and to report to the ISC on any changes in approach or additional actions that are needed to deliver fully the intentions set out in the Review.' The report of the Group tasked with the review has been received by the General Board and the Council and is now available at <http://www.admin.cam.ac.uk/cam-only/reporter/2016-17/weekly/6446/IT-Review.pdf>. The Council and the General Board note the considerable progress that has been made and the ongoing challenges, and support the findings. In particular they accept the recommendation that the role of the ISC should be refocused so that it can drive the development of an Information Services Strategy for the University.

Discipline Committee

24 November 2016

The Discipline Committee met on 30 September 2016 to consider a charge brought by the University Advocate on a complaint by the Senior Proctor against an undergraduate member of the University in relation to a Tripos examination. The Committee consisted of: Dr L. A. Merrett, *T* (Chair); Ms N. Blanning, *JN*; Dr P. J. Barrie, *EM*; Dr A. Winter, *CHR*; and Dr S. T. C. Siklos, *JE*. Dr C. A. East acted as Secretary to the Committee, with Ms J. Farmer-Eynon assisting. On the application of the Charged Person, the Committee consisted of senior members only and sat *in camera*.

The Charged Person was charged with two offences contrary to Regulation 7 of the General Regulations for Discipline, namely that they had used unfair means in an examination as part of a Tripos examination in 2016, specifically that the Charged Person had had in their possession without authorization material relevant to the examination, namely a mobile telephone containing stored files of revision notes, and had made use of these in the examination. The Charged Person pleaded guilty. The University Advocate outlined the circumstances of the case and the Charged Person's representative presented the Charged Person's case and addressed the Committee in mitigation.

The Committee listened to the case in mitigation and noted that the Charged Person was hard-working and normally well behaved. Note was taken of the guilty plea made and the remorse expressed. The Committee hoped that the Charged Person would learn from the mistake made. However, the Committee needed to make clear the serious nature of the offence. The Charged Person had deliberately taken a mobile phone into an examination and deliberately used material that should not have been used. Taking all factors into account, the Committee ordered that the mark for the paper be reduced to zero and that, given the seriousness of the offence and the deliberate nature of the actions, the Vice-Chancellor would be advised to issue an amended class-list placing the Charged Person in Class III for the Part IB examination in place of the original classification, in accordance with Statute D II 16.

VACANCIES, APPOINTMENTS, ETC.

Vacancies in the University

A full list of current vacancies can be found at <http://www.jobs.cam.ac.uk/>.

Clinical Lecturer in Experimental Medicine (Medical Oncology) in the Department of Oncology; salary: £31,614–£54,741; closing date: 28 December 2016; further details: <http://www.jobs.cam.ac.uk/job/12268>; quote reference: RD10863

Herchel Smith Postdoctoral Research Fellowship (four posts) (fixed-term) in the Academic Division; salary: £29,301–£38,183; closing date: 16 January 2017; further details: <http://www.jobs.cam.ac.uk/job/12194>; quote reference: AK10796

Deputy Head of the Office of Student Conduct, Complaints, and Appeals in the Academic Division; salary: £39,324–£49,772; closing date: 5 December 2016; further details: <http://www.jobs.cam.ac.uk/job/12187>; quote reference: AK10788

The University values diversity and is committed to equality of opportunity.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Appointments, reappointment, and grants of title

The following appointments, reappointment, and grants of title have been made:

APPOINTMENTS

University Senior Lecturer

Computer Laboratory. Dr Paula Joy Buttery, B.A., M.Phil., Ph.D., *CAI*, appointed from 1 October 2016 until the retiring age.

University Lecturer

Engineering. Dr Teng Long, Ph.D., *CLH*, B.Eng., *Birmingham*, appointed from 7 November 2016 until the retiring age and subject to a probationary period of five years.

Senior Assistant Treasurer

Finance Division. Ms Tracy Michelle Andrews appointed from 3 November 2016 until the retiring age and subject to a probationary period of nine months.

Technical Officer

Materials Science and Metallurgy. Dr Giorgio Divitini, Ph.D., *CHU*, B.Sc., M.Sc., *Università degli Studi di Milano, Italy*, appointed from 1 November 2016 until the retiring age and subject to a probationary period of nine months.

REAPPOINTMENT

Head of Department

Radiology. Professor Fiona Gilbert, *N*, reappointed from 14 November 2016 until 13 November 2021.

GRANTS OF TITLE

Affiliated Lecturers

Classics. Dr Olympia Bobou, Dr Sophia Margaret Connell, *SE*, Dr Thomas Peter Hooper, *PET*, and Dr Patrick James, *CL*, have been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018. Professor Theodore V. Buttrey, *CLH*, Dr David Barrie Fleet, *CC*, Dr Marguerite Hirt Raj, Dr Sara Susan Owen, *F*, and Dr Terence Rodney Volk have been granted the title of Affiliated Lecturer from 1 October 2016 for a further two years.

Divinity. Reverend Dr Yak-hwee Tan has been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018. Dr Elizabeth Rachel Phillips, *ED*, Dr Philip Pattenden, *PET*, and Dr Jeff Benton Phillips have been granted the title of Affiliated Lecturer from 1 October 2016 for a further two years.

Economics. Dr Sriya Iyer, *CTH*, has been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018.

Engineering. Dr Pieter Robert Hendrik Desnerck, Dr Daniel Popa, *EM*, and Dr Michael William Weightman have been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2017. Dr Simon Smith has been granted the title of Affiliated Lecturer from 1 July 2016 for a further year. Dr Jossy Sayir, *R*, has been granted the title of Affiliated Lecturer from 1 October 2016 for a further year. Dr Elena Punsakaya, *CHR*, has been granted the title of Affiliated Lecturer from 1 January 2017 for a further year.

History. Dr Alison Martha Armstrong Leonard, *SID*, has been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2017. Dr Tom Stuart Cordiner, *Q*, Dr Leigh Taliaferro Denault, *CHU*, Dr Bronwen Elisabeth Everill, *CAI*, Dr Samuel Charles James, *CHR*, Dr Thomas Benedict Lambert, *SID*, Dr Simone Maghzenzani, *G*, Dr Duncan James Needham, *DAR*, and Dr Maria Christina Skott, *W*, have been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018. Dr Gareth William Atkins, *M*, has been granted the title of Affiliated Lecturer from 1 October 2016 for a further year. Dr Martin Robert Allen, *W*, Dr Caroline Burt, *PEM*, Dr Joseph Peter Canning, *Q*, Dr Michael James Edwards, *JE*, Dr William Henry Foster, *HO*, Dr Elizabeth Ann Foyster, *CL*, Dr Bernhard Dietrich Fulda, *SID*, Dr Rosemary Elizabeth Horrox, *F*, Dr Janet Clare Louise Jackson, *TH*, Dr Sachiko Kusakawa, *T*, Mr Scott Howard Mandelbrote, *PET*, Dr Richard John Partington, *CHU*, Dr Martha Kate Peters, *MUR*, Dr David Robert Pratt, *DOW*, Dr Timothy Michael Rogan, *CTH*, Dr Richard William Serjeantson, *T*, Dr Colinn Shindler, Dr David Lawrence Smith, *SE*, Dr Andrew Mark Spencer, *MUR*, Dr Deborah Thom, *R*, Ms Sylvana Palma Tomaselli, *JN*, Dr Damian Anthony Valdez, Professor Elisabeth Maria Cornelia van Houts, *EM*, and Dr Ineke van't Spijker have been granted the title of Affiliated Lecturer from 1 October 2016 for a further two years.

Law. Professor Peter Cane, *CC*, Professor Christopher Forbes Forsyth, *R*, Dr Hayley Jane Hooper, *HO*, Mr Nicholas John McBride, *PEM*, Dr Roderick John Corbett Munday, *PET*, Ms Odette Murray, *MUR*, Dr Nora Lydon, Dr Brendan Plant, *DOW*, Mr Joseph Sampson, *SE*, Dr Sophie Turenne, *MUR*, and Mr Julius Friedlieb Wiesengrund Weitzdoerfer, *DAR*, have been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2017. Dr Thomas Adams, *CC*, Mr Bill Allan, Dr Fernando Lusa-Bordin, *SID*, Dr Simon de Smet, Dr Veronika Fikfak, *HO*, Ms Sarah Fraser-Butlin, Mr Leslie Kosmin, Mr Henry Michael Mares, *SID*, Dr Rose Anne Melikan, *CTH*, Sir Dennis O'Connor, Mr Gavin Robert, Dr Yvonne Patricia Salmon, *CC*, Mr Andrew Sanger, *N*, Dr Brian Damien Sloan, *R*, Dr Martin Henry Steinfeld, *HH*, Dr Andreas Loakim Televantos, *F*, Dr David Paul Waddilove, *CTH*, Dr Shona Wilson Stark, *CHR*, and Dr Rumiana Vladimirova Yotova, *LC*, have been granted the title of Affiliated Lecturer from 1 October 2016 for a further year.

Pathology. Professor Stacey Efstathiou, *CHU*, has been granted the title of Affiliated Lecturer from 1 January 2017 for a further two years.

Physics. Dr Andreas Nunnenkamp and Mr Michal Patryk Kwasigroch have been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018.

Physiology, Development, and Neuroscience. Mr Thomas Santarius has been granted the title of Affiliated Lecturer from 1 January 2017 until 31 December 2018. Professor Geoffrey Malcolm Weston Cook, *ED*, has been granted the title of Affiliated Lecturer from 1 December 2016 for a further two years.

Psychology. Dr Rebecca P. Lawson has been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018. Dr Idalmis Santiesteban has been granted the title of Affiliated Lecturer from 1 January 2017 until 31 December 2018. Dr Nicola Morant has been granted the title of Affiliated Lecturer from 1 October 2016 for a further two years.

Public Health and Primary Care. Dr John Howard has been granted the title of Affiliated Lecturer from 1 September 2016 for a further two years.

Sociology. Dr Zeynep Basak Gurtin, *K*, has been granted the title of Affiliated Lecturer from 1 October 2016 until 30 September 2018.

Correction

There was an error in the Appointments notice of 9 November 2016 (*Reporter*, 6443, 2016–17, p. 97). The notice should have read as follows:

APPOINTMENTS

University Lecturers

Pure Mathematics and Mathematical Statistics. Dr Ailsa Macgregor Keating, M.Math., M.A., *CL*, Ph.D., *Massachusetts Institute of Technology*, from 1 October 2016 until the retiring age and subject to a probationary period of five years.

EVENTS, COURSES, ETC.**Announcement of lectures, seminars, etc.**

The University offers a large number of lectures, seminars, and other events, many of which are free of charge, to members of the University and others who are interested. Details can be found on individual Faculty, Department, and institution websites, on the What's On website (<http://www.admin.cam.ac.uk/whatson/>), and on Talks.cam (<http://www.talks.cam.ac.uk/>).

Brief details of upcoming events are given below.

<i>Kettle's Yard</i>	<i>Being modern at the Fitzwilliam Museum</i> : works by artists who sought to make a new art responding to the modern world; until 26 March 2017, at the Fitzwilliam Museum	http://www.kettlesyard.co.uk/
	<i>Anthea Hamilton reimagines Kettle's Yard</i> , until 19 March 2017, at the Hepworth Wakefield	
	<i>In search of new forms</i> : abstract painting, collages, and prints from 1960s to 1980s; until 8 January 2017, at Cambridge University Library	
	<i>Jesse Wine: sludgy portrait of himself</i> , until 5 February 2017, at the Museum of Cambridge	
	<i>Reimagining the city</i> : interpretations of Cambridge, in paintings, prints, and drawings; until 8 January 2017, at the Combination Room, Wolfson College	
	<i>Elisabeth Vellacott: figures in the landscape</i> , until 15 January 2017, at New Hall Art Collection, Murray Edwards College	
	<i>Portraits of place</i> : paintings, sculptures, collages, and works on paper by leading twentieth and twenty-first century artists who have been inspired to make artworks that respond to places in which they have lived and worked; until 15 January 2017, at Heong Gallery, Downing College	

NOTICES BY THE GENERAL BOARD**Senior Academic Promotions Committees, 1 October 2017 exercise**

The General Board has appointed the following as members of its Senior Academic Promotions Committee and Sub-Committees for the Senior Academic Promotions exercise in respect of promotions to take effect from 1 October 2017.

General Board's Senior Academic Promotions Committee

The Vice-Chancellor Professor Sir Leszek Borysiewicz (Chair)
 Professor Liba Chaia Taub (Arts and Humanities)
 Professor Jane Clarke (Biological and Medical Sciences)
 Professor Koen Alexander Steemers (Humanities and Social Sciences)
 Professor Ian Hugh White (Physical Sciences)
 Professor Robert Charles Kennicutt (Technology)

Externals:

Professor Christopher Carey (University College London) (Arts and Humanities)
 Professor Margaret Jane Dallman (Imperial College London) (Biological and Medical Sciences)
 Professor Davina Cooper (University of Kent) (Humanities and Social Sciences)
 Professor Alison Etheridge (University of Oxford) (Physical Sciences)
 Professor Rebecca Cheung (University of Edinburgh) (Technology)

General Board's Sub-Committees*Arts and Humanities*

Professor Liba Chaia Taub (Chair)
 Professor Wendy Margaret Bennett
 Professor Judith Margaret Lieu
 Professor Martin John Millett
 Professor Susan Kathleen Rankin
 Professor Johan Jacob van de Ven
 Professor Christopher Carey (External)

Biological and Medical Sciences

Professor Jane Clarke (Chair)
 Professor Matthew James Allen
 Professor Fiona Jane Gilbert
 Professor Beverley Jane Glover
 Professor Peter Brian Jones
 Professor Rebecca Mary Kilner
 Professor Margaret Jane Dallman (External)

Humanities and Social Sciences

Professor Koen Alexander Steemers (Chair)
 Professor Philip Michael Allmendinger
 Professor Sarah Brooks Franklin
 Professor Martin Kenneth Jones
 Professor Kaivan Dara Munshi
 Professor Anna Frances Vignoles
 Professor Davina Cooper (External)

Physical Sciences

Professor Ian Hugh White (Chair)
 Professor Simon Conway-Morris
 Professor Anne Christine Davis
 Professor Judith Louise Driscoll
 Professor Alan Lindsay Greer
 Professor Michael Christopher Payne
 Professor Alison Etheridge (External)

Technology

Professor Robert Charles Kennicutt (Chair)
 Professor Ann Alicia Copestake
 Professor John Stephen Dennis
 Professor Vikram Sudhir Deshpande
 Professor Richard William Prager
 Professor Stefan Scholtes
 Professor Rebecca Cheung (External)

Faculty Promotion Committees**1. School of Arts and Humanities***Faculty or other institution***Combined Faculty Promotions Committee One:
Architecture and History of Art, English, Music,
Philosophy, and Divinity***Members appointed*

Professor Paul Russell (Chair)
 Professor Simon David Goldhill (GB Member)
 Professor Steven Kevin Connor
 Professor Garth Lowther Fowden
 Professor Nicholas John Marston
 Professor Alexander Duncan Oliver
 Professor Wendy Ann Pullan
 Professor Caroline Alexandra Van Eck
 Professor Nicolette Zeeman
 Ms Susan Caroline Round (Secretary)

**Combined Faculty Promotions Committee Two:
Classics, Modern and Medieval Languages, and
Asian and Middle Eastern Studies**

Professor Sarah Jean Colvin (Chair)
 Professor Catherine Jane Crozier Pickstock (GB Member)
 Professor Sven Mikael Adolphson
 Professor Gabor Sandor Betegh
 Professor Steven Rowland Boldy
 Professor William E. Burgwinkle
 Professor James Peter Timothy Clackson
 Professor Geoffrey Allan Khan
 Professor Ianthi Maria Tsimpli
 Ms Nadya Mullen (Secretary)

2. School of the Biological Sciences*Faculty or other institution***Biology and Veterinary Medicine***Members appointed*

Professor Abigail Lesley Fowden (Chair)
 Professor Anna Philpott (GB Member)
 Professor Nabeel Ahmed Affara
 Professor Sir David Charles Baulcombe
 Professor Paul Martin Brakefield
 Professor John Michael Edwardson
 Professor Gerard Ian Evan
 Professor Anne Carla Ferguson-Smith
 Professor Zoe Kourtzi
 Professor Ole Paulsen
 Professor James Lionel Norman Wood
 Ms Margaret Alison Staff (Secretary)

3. School of Clinical Medicine*Faculty or other institution***Clinical Medicine***Members appointed*

Professor Patrick Henry Maxwell (Chair)
 Professor Anne Carla Ferguson-Smith (GB Member)
 Professor Edward Thomas Bullmore
 Professor Patrick Francis Chinnery
 Professor John Danesh
 Professor Richard James Gilbertson
 Professor Gillian Griffiths
 Professor Kay-Tee Khaw
 Professor Eamonn Richard Maher
 Professor Sir Stephen O’Rahilly
 Professor Susan Ozanne
 Professor Sylvia Therese Richardson
 Professor Kenneth George Campbell Smith
 Dr Litsa Maria Biggs (Secretary)

4. School of the Humanities and Social Sciences*Faculty or other institution***Economics***Members appointed*

Professor Sanjeev Goyal (Chair)
 Professor Pauline Margaret Rose (GB Member)
 Professor Giancarlo Corsetti
 Professor Christopher John Harris
 Professor Oliver Bruce Linton
 Professor Hamish Wallace Low
 Professor Johannes Dominicus Hyacinthus Maria Vermunt
 Ms Marie Ann Butcher (Secretary)

Education

Professor Maria Nikolajeva (Chair)
 Professor Loraine Ruth Renata Gelsthorpe (GB Member)
 Professor Geoffrey Francis Hayward
 Professor Pauline Margaret Rose
 Professor Keith Stephen Taber
 Professor Johannes Dominicus Hyacinthus Maria Vermunt
 Ms Kate Marie-Josephine Allen (Secretary)

History

Professor Peter Mandler (Chair)
 Professor Sarah Jean Colvin (GB Member)
 Professor John Hugh Arnold
 Professor Sir Christopher Munro Clark
 Professor Mark Adrian Goldie
 Professor Ulinka Rublack
 Dr Elizabeth Haresnape (Secretary)

Human, Social, and Political Sciences and the Department of History and Philosophy of Science

Professor Simon John Schaffer (Chair)
 Professor Loraine Ruth Renata Gelsthorpe (GB Member)
 Professor Cyprian Broodbank
 Professor Joel Lee Robbins
 Professor David Walter Runciman
 Professor Jacqueline Lilian Scott
 Professor Eske Willerslev
 Ms Suzanne Frances Adcock (Secretary)

Land Economy, Law, and Criminology

Professor Ronald Leonard Martin (Chair and GB Member)
 Professor Catherine Sarah Barnard
 Professor Mark Christopher Elliot
 Professor Richard Griffith Fentiman
 Professor Christine Diana Gray
 Professor Ian David Hodge
 Professor Colin Martyn Lizieri
 Professor John Stuart Landreth McCombie
 Professor Lawrence William Sherman
 Ms Daniela Manca (Secretary)

5. School of the Physical Sciences*Faculty or other institution***Earth Sciences and Geography***Members appointed*

Professor Ashit Hariprasad Amin (Chair)
 Professor Henrietta Miriam Ottoline Leyser (GB Member)
 Professor Nicholas James Butterfield
 Professor Julian Andrew Dowdeswell
 Professor Matthew Gandy
 Professor David Arnold Hodell
 Professor Simon Anthony Turner Redfern
 Professor Susan Smith
 Professor Andrew William Woods
 Dr Adam Nigel Strange (Secretary)

Mathematics

Professor Malcolm John Perry (Chair)
 Professor Serena Michelle Best (GB Member)
 Professor John Alexander David Aston
 Professor Natalia G. Berloff
 Professor Mark William Gross
 Professor James Ritchie Norris
 Professor Gordon Ian Ogilvie
 Professor Gabriel Pedro Paternain
 Professor Nigel Peake
 Professor David Tong
 Ms Hannah Fox (Secretary)

Physics and Chemistry

Professor Gerard Francis Gilmore (Chair)
 Professor Marian Barbara Holness (GB Member)
 Professor Serena Michelle Best
 Professor Mark Giffard Blamire
 Professor Catherine Jane Clarke
 Professor Andrew Christopher Fabian
 Professor Christopher Allim Haniff
 Professor Christopher Alexander Hunter
 Professor Michael Andrew Parker
 Professor John Adrian Pyle
 Professor Henning Sirringhaus
 Professor Dominic Simon Wright
 Ms Mary Howe (Secretary)

6. School of Technology*Faculty or other institution***Business and Management***Members appointed*

Professor Daniel Ralph (Chair)
 Professor Nicola Susan Clayton (GB Member)
 Professor Christoph Hubert Loch
 Professor Sucheta Subhash Nadkarni
 Professor Jaideep Charles Prabhu
 Professor Raghavendra Rau
 Professor Jochen Heiko Runde
 Ms Julie Brown (Secretary)

Computer Science and Technology

Professor Ian Malcolm Leslie (Chair)
 Professor Sabine Bahn (GB Member)
 Professor Simone Hochgreb
 Professor Andrew Hopper
 Professor Simon William Moore
 Professor Andrew Mawdesley Pitts
 Ms Caroline Anne Stewart (Secretary)

Engineering and Chemical Engineering and Biotechnology

Professor David Anthony Cardwell (Chair)
 Professor Valerie Gibson (GB Member)
 Professor William Joseph Byrne
 Professor Robert Stewart Cant
 Professor Simon David Guest
 Professor Elizabeth Ann Howlett Hall
 Professor Clemens Friedrich Kaminski
 Professor Robin Stewart Langley
 Professor Andrew David Neely
 Professor Sir Mark Edward Welland
 Ms Sally Dorothy Winton Collins-Taylor (Secretary)

Staff of the University Library and affiliated libraries**With immediate effect**

The General Board, on the recommendation of the Library Syndicate, has approved an amendment to the regulations for the staff of the University Library and affiliated libraries (*Statutes and Ordinances*, p. 645) to reflect a revised organizational structure. Sub-paragraphs (a) and (b) of Regulation 2 have been amended so as to read:

- (a) This staff shall include officers designated by the Library Syndicate, on the recommendation of the Librarian, for duties in the affiliated libraries, who shall be responsible for the management of those libraries.
- (b) In addition to the officers specified in sub-paragraph (a) above, the Library Syndicate, on the recommendation of the Librarian, may also designate other officers for duties in any of the affiliated libraries.

REGULATIONS FOR EXAMINATIONS**History and Modern Languages Tripos***(Statutes and Ordinances, p. 333)***With effect from 1 October 2018**

The General Board has approved revisions to the regulations for the History and Modern Languages Tripos, so as to introduce the teaching of German (*ab initio*), Italian (*ab initio* and advanced), Portuguese (*ab initio*), and Spanish (*ab initio*).

GENERAL

Regulation 11.

By amending the regulation so as to read:

11. Modern and Medieval Languages Examinations shall be held in the following languages: French, German, Italian, Portuguese, Russian, and Spanish.

PART IA

Regulation 13.

Modern Languages

By removing clauses (i), (ii), and (iii) of the current regulation and by replacing them with the following so as to read:

(i) Option B (post-A-level or equivalent) languages:

French, German, Italian, Russian, and Spanish

Paper B1	Use of the foreign language
Paper B2	Translation from the foreign language
Oral examination B	

(ii) Option A (*ab initio*) languages:

German, Italian, Portuguese, Russian, and Spanish

Paper A1	Introduction to the foreign language 1: Use of the foreign language
Paper A2	Introduction to the foreign language 2: Translation from the foreign language
Paper A3	Introduction to the foreign language 3: Introduction to culture/literature of the foreign language
Oral examination A	

(iii) Introductory Scheduled Paper relating to the language concerned:

Introduction to French literature, linguistics, film, and thought (also serves as Paper Fr.1 of the Modern and Medieval Languages Tripos);

Introduction to German studies (also serves as Paper Ge.1 of the Modern and Medieval Languages Tripos);

Italian texts and contexts (also serves as Paper It.1 of the Modern and Medieval Languages Tripos);

Introduction to the language, literatures, and cultures of the Spanish speaking world (also serves as Paper Sp.1 of the Modern and Medieval Languages Tripos);

Introduction to Russian culture (also serves as Paper Sl.1 of the Modern and Medieval Languages Tripos).

The remainder of the regulation remains unchanged.

PART IB

Regulation 15.

Modern Languages

By removing clauses (i) and (ii) of the current regulation and by replacing them with the following so as to read:

- (i) *French, German, Italian, Russian, Spanish (Option B)*
Translation into the foreign language, and test in the foreign language through audio-visual media (also serves as Paper B3 of the Modern and Medieval Languages Tripos)
- (ii) *German, Italian, Portuguese, Russian, Spanish (Option A)*
 - (a) Use of the foreign language (also serves as Paper B1 of the Modern and Medieval Languages Tripos)
Translation from the foreign language (also serves as Paper B2 of the Modern and Medieval Languages Tripos)
Oral examination B
 - (b) Translation into the foreign language, and test in the foreign language through audio-visual media (also serves as Paper B3 of the Modern and Medieval Languages Tripos)

The remainder of the regulation remains unchanged.

Regulation 16.

By amending the first sentence of the regulation so as to read:

16. A candidate may offer, in place of one of the designated papers from Schedule A (papers indicated by the ‘†’ symbol) two long essays, each of not fewer than 3,500 and not more than 4,000 words in length including footnotes but excluding bibliography.

*SCHEDULE A***German**

By adding the following paper to the list of papers that may be offered:

Ge.1 Introduction to German studies

By introducing two new sub-sections headed ‘Italian’ and ‘Portuguese’, and listing papers to be offered as follows:

Italian

- It.2. Structure and varieties of Italian
- It.3. Italian cinema †
- It.4. Autobiography and self-representation in Italian culture †
- It.5. Italian identities: place, language, and culture †

Portuguese

- Pg.1. Introduction to the language, literatures, and cultures of Portuguese-speaking countries
- Pg.4. Self, family, nation, and empire in Lusophone culture †
- Sp.11. The Hispanic languages

Spanish

By introducing a dagger (†) symbol against papers Sp.3, Sp.4, and Sp.5; by removing paper Sp.10 from the list of papers that may be offered; and by adding the following paper to the list of papers that may be offered:

- Sp.11. The Hispanic languages (also serves as Paper 21 of the Linguistics Tripos)

Slavonic Studies

By introducing a dagger (†) symbol against papers Sl.2, Sl.4, Sl.5, Sl.6, and Sl.7.

SCHEDULE B

By removing the following paper from the Schedule of papers to be offered:

- NL.1. Introduction to Neo-Latin literature 1350–1700 (Part IB and Part II)

SCHEDULE C

By introducing two new sub-sections headed ‘Italian’ and ‘Portuguese’, and listing papers to be offered as follows:

Italian

- It.6. Topics in modern Italian culture
- It.7. Dante and the culture of his age
- It.8. Italian literature, thought, and culture, 1500–1650
- It.9. Text and image
- It.10. The language of Italy

Portuguese

- Pg.4. Self, family, nation, and empire in Lusophone culture
- IL.1. Ibero-American cinema
- Sp.11. The Hispanic languages (also serves as Paper 21 of the Linguistics Tripos)

Natural Sciences Tripos, Part II

(*Statutes and Ordinances*, p. 395)

With effect from 1 October 2017

The General Board, on the recommendation of the Management Committee for the Natural Sciences Tripos, has approved the addition of Half Subject Materials Science to the Physical Sciences course under Regulation 30 as follows:

By adding Materials Science to the list of Half Subjects in sub-paragraph (a):

- (a) the examination requirements of one Half Subject, chosen from Chemistry, Earth Sciences, Materials Science, Physics

By inserting new sub-paragraph (iv):

(iv) The examination requirements for Half Subject Materials Science shall consist of two written papers of three hours’ duration and specified further work. The further work and its examination requirements and submission arrangements shall be announced by the Head of the Department of Materials Science and Metallurgy not later than the beginning of Michaelmas Term. Records of further work shall be submitted to the Examiners through the Head of the Department and shall bear the signatures of the teachers under whose direction the work was performed. The Examiners shall be provided by the Head of Department with assessments of the work submitted by candidates, and shall take the assessments into account in assigning marks for the examination.

Half Subject Materials Science may not be offered unless the candidate has previously offered Materials Science in Part Ib of the Tripos.

Medical and Veterinary Sciences Tripos, Part IB; Bachelor of Medicine and Bachelor of Surgery: Curriculum Regulations; and Bachelor of Veterinary Medicine: Revised Regulations: Correction**With immediate effect**

Further to the Notices published on 16 November 2016 (*Reporter*, 6444, 2016–17, p. 106 and p. 107), the following corrections have been made.

Sub-paragraph (b) of each of the revised regulations concerning the examination in Mechanisms of Drug Action (MODA) should have made reference to ‘one written paper of two hours containing essay questions (Section III)’.

NOTICES BY FACULTY BOARDS, ETC.**Mathematical Tripos, Part III, 2017: Essay titles**

In accordance with Regulations 18 and 19 for the Mathematical Tripos (*Statutes and Ordinances*, p. 369), the Examiners have published a list of essay titles on which candidates may submit an essay. The full list of essay titles and further guidelines are available at <http://www.maths.cam.ac.uk/postgrad/mathiii/part-iii-essays>.

Candidates are reminded that they may request leave to submit an essay on a topic other than those given in the list, provided that the request is made, through their Director of Studies, so as to reach the Secretary of the Faculty Board, c/o the Undergraduate Office, Faculty of Mathematics, Wilberforce Road (email: undergrad-office@maths.cam.ac.uk), not later than 1 February 2017.

A candidate who proposes to submit an essay should inform the Chair of Examiners, through her or his Director of Studies, on a form which will be provided, by 5 May 2017. Candidates should submit their essay, through her or his Director of Studies, so as to reach the Chair of Examiners not later than 5 May 2017.

CLASS-LISTS, ETC.**Act for the Degree of Doctor of Medicine**

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GRACES**Graces submitted to the Regent House on 30 November 2016**

The Council submits the following Graces to the Regent House. These Graces, unless they are withdrawn or a ballot is requested in accordance with the regulations for Graces of the Regent House (*Statutes and Ordinances*, p. 103), will be deemed to have been approved at 4 p.m. on Friday, 9 December 2016.

1. That the recommendations in paragraph 7 of the Report of the General Board, dated 2 November 2016, on the establishment and re-establishment of certain Professorships (*Reporter*, 6443, 2016–17, p. 98) be approved.

2. That in the regulations for the Wolfson Fund for Industrial Co-operation (*Statutes and Ordinances*, p. 994), Regulation 2 is amended as follows and Regulation 3 is rescinded:¹

2. The capital and income of the Fund shall be applied for the purpose of advancing co-operation between members of the University and industry in such manner as the General Board shall from time to time determine, which may include the payment of the stipend, national insurance, pension contributions, and associated indirect costs of posts or offices payable by the University.

¹ Following the rescission of the regulations for the Wolfson Industrial Liaison Office by Grace 10 of 15 July 2015 and after consultation with the donor, the General Board proposes these changes to the administration of the Wolfson Fund for Industrial Co-operation, which was set up with funds donated by the Wolfson Foundation to support the establishment of a unit for industrial co-operation. The amendments confirm that the purposes to which the capital and income of the Fund may be applied include the support of any one or more posts which advance co-operation between members of the University and industry.

ACTA

Approval of Graces submitted to the Regent House on 16 November 2016

The Graces submitted to the Regent House on 16 November 2016 (*Reporter*, 6444, 2016–17, p. 119) were approved at 4 p.m. on Friday, 25 November 2016.

Congregation of the Regent House on 26 November 2016

A Congregation of the Regent House was held at 2 p.m. All the Graces that were admitted to the Regent House (*Reporter*, 6445, 2016–17, p. 144) were approved.

The following degrees were conferred:

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This content has been removed as it contains personal data protected under the Data Protection Act.

J. W. NICHOLLS, *Registrar*

END OF THE OFFICIAL PART OF THE 'REPORTER'

REPORT OF DISCUSSION

Tuesday, 22 November 2016

A Discussion was held in the Senate-House. Pro-Vice-Chancellor Professor Graham Virgo was presiding, with the Registrar, the Registrar's deputy, the Senior Pro-Proctor, the Junior Pro-Proctor, and thirty-seven other persons present.

The following Reports were discussed:

Report of the General Board, dated 2 November 2016, on the establishment and re-establishment of certain Professorships (*Reporter*, 6443, 2016–17, p. 98).

No remarks were made on this Report.

Topic of concern to the University: That the Regent House, as governing body of the University, consider the report of the ACBELA Working Group on Investment Responsibility published in June 2016, and in particular consider a policy of divestment from fossil fuels (*Reporter*, 6441, 2016–17, p. 64).

The Reverend J. L. CADDICK (University Council and Emmanuel College):

Deputy Vice-Chancellor, I am a Fellow of Emmanuel College and an elected member of the University Council, though, obviously, making these remarks in a personal capacity.

We are here today to discuss the suggestion that the University should divest from fossil fuels. Climate change is in many ways the pivotal issue of our times. It is impossible to avoid taking sides because doing nothing and continuing with our current ways of doing things is in effect a vote against building a sustainable future. A university of Cambridge's standing needs to show global leadership. For this reason this issue goes to the heart of our conception of ourselves as a community of scholars living in the times that we do.

The challenge that we face is widely known. Within a generation we will have to manage a transition to a way of life in which our net carbon emissions are at or close to zero. That challenge is huge, but above all it is a transition that we need to make together. A move to divest from fossil fuels would represent a public commitment by the University to that carbon-free future. We already as a University have ambitious targets to make the University carbon-neutral, and sustainability is one of the University's core values. A policy of divestment of our endowment funds would throw the weight of Cambridge University behind the efforts that society is making to achieve sustainability.

Divestment is a positive action. It is different from things such as campaigns against the arms trade or apartheid because it represents a radical commitment to the future in the face of what is an unprecedented threat. Divestment will not starve fossil fuel companies of money but it will act to change public perception. As one commentator put it, 'We do not aim to take away their money. We aim to take away their credibility.'

The background to this is the report approved by the University Council back in June on Investment Responsibility (the so called ACBELA report). A recommendation of the report was that the Vice-Chancellor and the Chief Investment Officer write to everyone who

invests the University's endowment to point out what the University's values are and to urge them to act in conformity with them. That report falls short of recommending a policy of divestment, but it does encourage members of the University to express their views on investment practices (Recommendation 2) and it recommends a change to the Statement of Investment Responsibility (SIR) that requires the Investment Office to 'take due care to ensure that its management reflects the interests and values of the University' (paragraph 9 of the SIR). What better way of articulating the University's values in this area than by having a public debate and, I hope, a vote?

One of the interesting things about the report is that when it was presented to the Council, it was reported:

that there was no evidence that the University held *any* investments through its fund managers in fossil fuels, but this was difficult to prove conclusively and therefore the report noted that the University had negligible exposure to fossil fuels. [emphasis added]

What then would be the problem about publicly declaring that we wouldn't invest in fossil fuels if it is not something we are doing anyway? The response that is given to that is that the University's fund managers *might want to* in the future. This seems highly unlikely as carbon stocks have underperformed relative to the rest of the market since at least the 2008 crash. We are not losing money by not investing in fossil fuels. It is not a case where it is a choice between our principles and our collective wallet here. Doing the right thing actually brings us more money.

In resisting calls for a policy of divestment, appeal is frequently made to the fiduciary duty laid on the trustees of a charity (in our case the members of the Council) to promote its aims. That usually means maximizing the income available to the charity, the better to be able to promote its aims. But that duty is not absolute. Trustees may not undermine the aims of the charity by the way they invest and indeed, according to recent legal opinions, in many cases will have a positive *duty* to take steps to ensure that their investments are consistent with their charitable purposes. Sustainability is, after all, one of our core values.

The risk to me and my fellow members of the Council of adopting a policy of not investing in the future in fossil fuels is therefore entirely hypothetical. For a conflict to arise not only would the performance of carbon stocks have to improve, but it would have to improve to such an extent that the returns offered could not be had anywhere else in the market, and that is before we weigh the damage we are doing by perpetuating the assumption that carbon fuels will be a continuing part of our life into the future.

So why divestment, rather than other ways of bringing pressure to bear? Could not the University as a shareholder actively engage with companies to bring about change? The working group indeed recommended this as a way of going forward (Recommendation 6). There are a number of problems with this. First, it doesn't look as if it can be done. The University invests indirectly via fund managers and so isn't in the position of a shareholder to engage with companies. In any case we don't have any holdings in fossil fuel companies anyway. More fundamentally though, we don't need fossil fuel companies to just invest a bit more, or even a lot more, in research into renewable alternatives. We need them to stop what they are doing altogether. We need them to have a plan to shut down their current business activities entirely in the course of the next twenty years. Shareholder engagement as a way of achieving that seems to be like asking a lion very politely

if he would consider the advantages of vegetarianism. Taking carbon out of the ground is just what they do, and we need them to stop. Divestment, and only divestment, communicates that vital message.

I'd like to finish by telling you about Myron Ebell. You probably haven't heard of him. He is a professional climate change denier. He is on record as saying that global warming is a hoax perpetrated by the European Union. Worryingly, Trump has appointed him to lead the transition team for the Environmental Protection Agency. Developments like that make it even more important that we stand up for a sustainable future. Why is this relevant to this afternoon's Discussion? Because in many of the photos of him on the web, Mr Ebell is shown dressed in a sober suit, wearing a Cambridge University tie. This, apparently, is on the basis of having 'done graduate work' here. It would be interesting to know if he has a degree from the University. But he wears his tie precisely because it helps make his views seem plausible. It conveys respectability. We need to change that. We need to make that tie coterminous with a public commitment to build a sustainable future. We need it to symbolize an institution that uses all its influence, knowledge, and expertise in the service of the future. We need to make it impossible for a climate change denier to be seen in public with our coat of arms around his neck. We need to make Myron Ebell ashamed of his tie.

Dr R. G. MACFARLANE (Faculty of English and Emmanuel College), read by Reverend. J. L. Caddick:

Deputy Vice-Chancellor, next year the International Commission on Stratigraphy is expected to ratify and formalize the adoption of a new epoch of Earth history, the Anthropocene: a phase of geological time in which human activity is considered such a powerful influence on the environment, climate, and ecology of the planet that it will leave a long-term signature in the strata record. The idea of the Anthropocene asks hard questions of us. In particular it requires that we imagine ourselves as inhabitants not just of a human lifetime or generation, but of a future extending far beyond the usual horizons. It also lays bare the complex cross-weaves of vulnerability and culpability that exist between us and other species, as well as between humans now and humans to come.

In such a context, certain short-term actions must be seen to possess vastly long-term consequences. Fossil fuel use is one such action. Global temperatures rise year on year; climate scientists are forced to check their instruments in disbelief at the data they are seeing (as happened this summer to scientists recording the surface temperatures on the Greenland ice-cap). As the effects of climate change on planetary biodiversity and for human life in precarious zones gather force, it is clear that we must move to minimize the burning of fossil fuels. Divestment is a hugely powerful way for the University to help shape public opinion in this regard: a brave symbolic action that would demonstrate the long-term moral thinking of this ancient institution.

Dr J. RANDERSON (King's College), read by Reverend. J. L. Caddick:

Deputy Vice-Chancellor, thank you for the opportunity to contribute to this Discussion. I am an alumnus of King's College. I have a Ph.D. in Evolutionary Genetics, and I have worked as a specialist science and environmental journalist for fifteen years, including eleven at *The Guardian* newspaper.

People of conscience need to break their ties with corporations financing the injustice of climate change...

It makes no sense to invest in companies that undermine our future.

The words of the archbishop emeritus of Cape Town and Nobel peace laureate Desmond Tutu.

Though the fight against apartheid in South Africa happened on many fronts – moral, political, diplomatic, street protest – he has argued that the apartheid divestment movement provided a key dimension to the struggle that helped shorten the fight.

Today, perhaps the greatest underlying cause of economic injustice in the world is climate change and a new and much more complex fight is underway on many more fronts to stop it. Tutu has argued powerfully that divestment must again be part of our response.

The arguments are simple.

We know that we can only burn between a quarter and a third of the world's proven coal, oil, and gas reserves, and still have a reasonable chance of staying below the internationally-agreed 2°C warming threshold.

Governments and companies own far more fossil fuels than is safe to burn. And yet, at the same time, the fossil fuel industry is spending over \$700 billion annually looking for more reserves. Last year, Shell spent around \$7 billion unsuccessfully prospecting for oil in delicate Arctic environments.

This is investor cash being used to fund the discovery and development of yet more fossil fuel reserves that, if burned, will inevitably lead to climate disaster.

Through world-class research and scholarship, Cambridge University scientists have been at the forefront of the scientific understanding of climate change. Now the University's investments – its economic leverage – must become part of the solution, not part of the problem.

We would be in good company. Over 600 organizations – including faith groups, pension funds, universities, foundations, and governmental organizations – worth together \$3.4 trillion have made a commitment to divest. This is a powerful statement from civil society that using fossil fuels as the basis for the world economy is no longer acceptable.

But divestment is sometimes mischaracterized. Sceptics sometimes argue that divesting won't make any difference because the shares are simply bought by someone else. That's true, but it misunderstands the power of the transaction. The aim is not to bankrupt the fossil fuel companies, it is to force them to change by declaring that their business models are unsustainable and unacceptable.

Divestment is a moral and political statement, more than a financial one.

Secondly, critics argue that remaining invested offers a more powerful opportunity for change through engagement with the company's board. That may be so, but it is one that has yielded few significant successes so far.

If the University decides to rely on this argument to maintain its investments in fossil fuels then it must publicly serve notice that the oil, coal, and gas companies it invests in must move quickly to a business strategy that fits with

the 2°C goal. These plans must be credible and verifiable with a firm and short time-limit for divestment if they are not up to scratch.

Better still would be to divest now and promise to reinvest in fossil fuel companies that adopt a credible plan.

Lastly, there is the argument that the University may lose money by divesting. I won't attempt to predict market moves in the short term but as the governor of the Bank of England Mark Carney has said, the long-term trend is clear. The value of fossil fuel companies is vastly over-inflated because it is based on assets under the ground that simply cannot be extracted. There is a significant market correction coming – one that will very likely bring about a crash. A prudent investment strategy would be to reduce the University's exposure to these stocks before that happens.

Like apartheid, climate change must be tackled on many fronts – scientific, diplomatic, political, technological. Divestment alone is not sufficient and it is certainly no panacea. But just as with apartheid, it has proved to be an important part of the fight.

As Desmond Tutu puts it:

To serve as custodians of creation is not an empty title; it requires that we act, and with all the urgency this dire situation demands.

I urge the University to place itself on the right side of history.

Professor L. P. KING (Department of Sociology and Emmanuel College):

Deputy Vice-Chancellor, this Discussion proposes that the Regent House consider divestment from fossil fuels. Serious and timely consideration should absolutely be given: as the UN special envoy on climate change said last year, 'it is almost a due diligence requirement to consider ending investment in dirty energy companies'.

There are quite a few things we cannot say about the policy of divestment in this Discussion, and a couple of things we can. I would like to draw your attention to some of each.

We cannot say that this policy is extreme or drastic. The overwhelming scientific consensus is that man-made climate change exists and has the potential to be catastrophic for human life on Earth, let alone other species. The severity of such climate change, and therefore its consequences, will depend largely on how much carbon the global community continues to burn in the coming years.

We cannot say that a policy of fossil fuel divestment is solely a moral stance, or that there is an overwhelming consensus that fossil fuel securities are viable investments, especially in the medium to long term. Numerous investors and analysts have voiced serious and growing concerns that fossil fuel securities are exhibiting bubble-like overvaluation and will become stranded assets if the global community is to meet its climate goals. Central to this analysis is the observation that anywhere between 1/10th and 1/3rd of the world's proven fossil fuel reserves are unburnable if we are to meet the globally-agreed 2°C target. Examples of institutions that have lent legitimacy to this analysis include the International Energy Agency, the Bank of England, the World Bank, Standard & Poor's, Moody's, Goldman Sachs, Citi Bank, and HSBC. The latter of these has advised clients that they should avoid investing in fossil fuel producers as these firms have a high risk of becoming 'economically non-viable'; HSBC estimates that 40–60% of the market capitalization of oil and gas firms could be wiped out by this 'carbon bubble'.

We cannot say that divestment would be likely to attract punitive action on the basis of charity regulations governing the University's investments. Firstly, as I have just explained, the financial rationale for avoiding fossil fuels is widely considered sound by reasonable people in the worlds of investment, financial regulation, etc. Secondly, a prohibitory attitude would be incompatible with the widely-respected goals to which the UK government is committed. An OECD paper published last year sums up this issue well when it states that 'Stranded assets in the transition to a 2°C compatible world are inevitable' and suggests that in fact policymakers should 'encourage companies and investors to exit'.

Given the points I have just observed, we cannot say that enthusiasm for divestment is limited to the politically radical, financially illiterate, or legally naïve. Proponents of the campaign include Oxford University's former Director of Finance, the London Assembly, Barack Obama, and the United Nations. Divestment has not been limited to philanthropists and humanitarians. Various private investors, financial institutions, and investment managers have chosen this path for either ethical or financial reasons, or both. The CEO of AXA has commented that it is the responsibility of long-term institutional investors to 'consider carbon as a risk and to accompany the global energy transition'.

We cannot say that the situation regarding climate change is not dire merely because climate scientists discuss the probability of avoiding catastrophe. While judicious action may avert the most extreme consequences, the delivery of this promise is far from assured and political leaders have frequently dragged their feet and missed their targets. In any case, every year of carbon emissions will cost individual human lives and collective quality of life, even if the worst-case scenario does not materialize. Already, climate change has measurable and malign impacts around the world: degradation of human health, falling crop yields, droughts and wildfires in arid areas, coastal flooding, the endangering of species, and so forth.

We cannot say that divestment is unprecedented or that we would be taking a leap in the dark. Fossil Free, an organization tracking the divestment campaign, states that over 600 institutions worth a collective \$3.4 trillion have opted to divest in some form. The list includes faith groups, foundations, local governments including our own Cambridge City Council, pension funds, and of course some of our colleagues elsewhere in the Higher Education sector.

We cannot say that our status as a charitable educational institution somehow makes divestment okay for others but impossible or unacceptable for us. In the UK alone the list of fully-divested universities includes Queen Mary, Warwick, Oxford Brookes, Southampton, Glasgow, Newcastle, Sheffield, and SOAS; moreover, others such as Oxford and Edinburgh have adopted various partial divestment policies. It should be noted that this latter position is the one in which we already find ourselves at present.

So we can say, with some pleasure, that we have done something already. The report of the Working Group on Investment Responsibility notes that including both its directly and indirectly managed investments, the University has no exposure to tar sands companies and only negligible exposure to thermal coal companies, all of which is indirect. Furthermore, the expectation is that any such indirect holdings will remain negligible in the future, and the University has committed to avoiding direct investments in these most polluting fossil fuel companies. The question therefore is whether we are happy to arrest this progress and consider the *status quo* 'good enough', or whether we ought to proceed with the transition implied by these initial steps.

We can also say that the way to build on these initial steps would be by committing to divest from all fossil fuels. This could be a binding commitment to a gradual transition with an agreed end-state of full divestment. Such a commitment could recognize the practical challenges of fully divesting the University's indirect holdings while also pledging to work together with investment managers to overcome these. Other institutions have constructed managed portfolios free from fossil fuel investments, and carbon-free benchmarks and similar instruments are available.

I think we can safely say that if the University did this, we would have a substantial and admirable impact. Just as the UN aimed to lend their 'moral authority' to the divestment movement, the University could aim to lend their 'intellectual authority'. We are afforded respect and prestige, and we can use those to encourage other institutions to follow our example. The University's decision to divest would be heard around the world, inciting other institutions to join us in what is already the fastest-growing divestment campaign in history. A divestment policy would mean doing our best to minimize the harm of climate change – harm that the University's own scholars, among many others, have proven, predicted, and measured, and which it is part of the University's mission to avert. Divestment would also mean an investment strategy that is not built on unsustainability and irrational exuberance about the future of fossil fuels, and that is therefore at less risk of accumulating stranded assets.

PROFESSOR R. W. PRAGER (Head of the School of Technology, and Queens' College):

Deputy Vice-Chancellor, I speak as Head of the School of Technology. As you can imagine, there are several groups in my School that work on different dimensions of the global energy problem.

Industrial engagement is important to help us understand the complex issues involved, and to enable the results of our research to be translated and deliver real-world benefits.

Disinvestment could damage our relationships across a whole sector. As long as our industrial partners are willing to engage with us at the highest strategic and intellectual levels, it is important that we remain practically engaged in the field. As a university, we have significant expertise in this area, much broader than just the School of Technology. We have a lot to offer in technical innovation and in supporting a transition to new technologies and operating practices through research and education.

This is not just a desire to avoid alienating valued sponsors of our research; the issue is much more fundamental than that. We want to contribute to solving the real problems – bound up in all their societal constraints and with the need to support existing energy demands in the short term. We can only do this by engaging constructively with the industries, NGOs, and governments that are involved. They know the constraints that define the critical challenges, and many of them have technical expertise, experience, and problem-solving skills to challenge our own. Strong links between academic research and the energy industry have never been more important.

If we want a sustainable future, we must work together, invent new types of solution, and maintain active dialogues so wise scholarly arguments – both from academia to industry and from industry to academia – can be heard and have an impact. We must not put up barriers with things like disinvestment.

MS N. M. JONES (Faculty of Law and Trinity College):

Deputy Vice-Chancellor, I am a member of Trinity College and the Faculty of Law, and I speak on behalf of Positive Investment Cambridge.

The University of Cambridge states that its core mission is 'to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence.' Some may argue that this means we ought to focus narrowly on teaching and research, but this would seem to miss the point. Excellence in research or teaching does not happen in a vacuum. It requires a society that is able to see the value and benefit in these endeavours and thus remains willing to support them both politically and financially. And it requires wealth – whether in the form of donations from alumni, or in the form of partnerships with non-profits and businesses alike that see the potential for a better world in the work we do here.

But it seems increasingly that Cambridge takes this support for granted. When we claim to be thought leaders, but hold our tongues on any issue that does not affect our research funding, this claim begins to look doubtful. We do research on climate change, but as an institution we remain silent on the dire urgency of the problem, even as so many academics within this institution warn us that we have no time left for inaction. Academically, we argue that climate change is everyone's problem, but practically we say that we are doing our bit through research and teaching and need do no more. We leave the world out there to deal with the complexities of the problem, whilst we continue to receive funding from companies that have a history of denying climate change. Or we continue to insist that our investments are simply there to fund research and teaching, and that anything else is justified in the name of this. To the world out there – to the world on which we rely to do our work – this cannot but look selfish or even hypocritical.

Indeed, more and more popular sentiment has begun to question the value of expert knowledge. More and more the public are coming to feel that the bright ideas that are formulated and debated within Cambridge do not offer any material benefit to them. And so they are less and less willing to support us. If we continually talk, but never act, never lead by example, never demonstrate the practicality and the scope of our conviction, should this detachment and cynicism come as any surprise?

I am aware the University has recently released a working group report reviewing how it might improve the ethical impact of its finance. And I'm aware that this report covered some very complex issues. But the outcomes of this process were insufficient – a handful of vague commitments to do things like vote shares or quiz managers on carbon risk, but no clear mechanism as to how. And there is no transparency by which all those who are invested in the University may assess whether or not these commitments will have any substance. The success of this report will depend on its implementation, but the efforts we have seen so far seem as if the University is more concerned with continuing business as usual than with making a sincere effort towards maximizing the positive impact of its finances.

Meanwhile there are an abundance of practical steps we can take in the here and now. For instance, we could invest into retrofitting these beautiful ancient buildings all around us. Not only is this likely to pay back as an investment, in terms of the energy savings, but it provides us with a chance to harness expertise within the University in engineering, energy, and architecture. Making this commitment today would bring cutting-edge ideas into the real world in the very near future. In addition, we can

re-invest some of our portfolio into sustainable private equity, to finance the sort of sectors our own researchers insist we need to develop – from renewable energy to smart grids. And we could make these sectors a funding priority for Cambridge Enterprise, which invests in turning research into usable technology. And, finally and perhaps most importantly, we can speak out more clearly; we can say that ‘business as usual’ has become untenable – both for us and for the rest of the world. We can lead by example to demonstrate that we can change together. We can rebuild public trust when we acknowledge the position of tremendous privilege we are in, and when we stop passing over the opportunities to speak and to act that it affords.

Professor M. E. McINTYRE (Emeritus Professor of Atmospheric Dynamics and St John’s College):

Deputy Vice-Chancellor, I am a Fellow of the Royal Society and a climate-sceptic sceptic. I am sceptical of the claim that fossil fuel burning is a small effect by comparison with water-vapour effects. For some careful scientific arguments, look at my website: websearch ‘Postlude on climate’ and ‘lucidity principles’.

The climate system is a slowly responding amplifier. Fossil fuel burning is part of its input signal. Huge changes are already in the pipeline. The main uncertainties are entirely about how fast, and by what stages, those huge changes will occur. Anyone who invests in fossil fuel is betting that those changes will be improbably slow, and is betting against massive social disruption, global-scale migration, and massive economic instability. And in purely financial terms the investment bubble, the so-called ‘carbon bubble’ – like all those other investment bubbles – is going to burst sooner or later. A ‘market correction’, in polite language.

If Donald Trump is as smart as he says he is, then it could be that his real plan is to make the carbon bubble burst sooner rather than later.

By promoting climate denial, he can inflate the bubble enormously, then sell all his shares, reinvest in smart renewables, and announce – surprise, surprise – that the latest evidence supports something like the Paris Agreement, after all. Perhaps that’ll happen in about a year’s time. University investors, watch out.

Professor S. A. T. REDFERN (Department of Earth Sciences):

Deputy Vice-Chancellor, I am Professor of Mineral Physics and Head of the Department of Earth Sciences but I make these remarks in a personal capacity.

As a geoscientist, I observe the current changes in Earth’s climate, oceans, and ecosystems with alarm. At no point in the geological record is there evidence of such rapid change as that today induced by human industrialization and fossil fuel burning. The Paris Agreement offers hope, but it is already recognized that for the UK to meet its targets, negative net greenhouse gas emissions will be required.

The fossil fuel industry hosts the very organizations currently at the forefront of research, together with us, into mitigating carbon emissions through endeavours such as carbon capture and storage, a pathway to negative emissions. They are forward-looking. Like us, their executives and managers have children and grandchildren. So they are also interested in a lower-carbon reduced-emission economy and they can see it coming. For them it represents a perfectly sound commercial and business opportunity, under the right circumstances.

To provide sufficient and affordable energy for the next few decades, fossil fuels will remain an inevitable part of the mix. But they can be used with lower emissions, and these are the people with the know-how and experience to do it; but they need our help. It requires exactly the broad cross-disciplinary and deep expertise about how energy and the Earth works that is the University’s great strength; and they know it, which is why we are already engaged with them in finding solutions to these issues.

We now have a fantastic opportunity for the University to show responsible leadership. The low-carbon, low-emission, sustainable future that we surely all want is achievable, but only if we work with the people who can (and want to) deliver it. If we isolate them we risk that future. I think we all want to see the same outcome. The way to achieve it is through co-operation and engagement, not disinvestment and disengagement.

Mr C. M. GALPIN (King’s College):

Deputy Vice-Chancellor, I would like to start by thanking the ACBELA Working Group for their report. I am pleased that this report acknowledges the need for the University to invest in a way consistent with its core values, and that ethical considerations do have a part to play in investment decisions. I was also glad to see that the report acknowledges the significant financial risk associated with fossil fuel investments, and that a strategy of divestment could be consistent with the continued financial success of the endowment.

However, the words of the report do not translate into effective action. They lack the urgency that should be expected when engaging with an issue on the scale of climate change. I am sure all of us here accept the scientific consensus on climate change, but it is all too easy to forget the very real moral implications of inaction.

To avoid the worst effects of climate change, we will need to leave the majority of our fossil fuel reserves in the ground. Regardless of the climate model you pick, and what probability you want to have of avoiding 2°C of warming, the figures from the IPCC, the Intergovernmental Panel on Climate Change, say that we need to leave the majority of our proven fossil fuel reserves in the ground. To have a reasonable chance of avoiding 2°C, the consensus is that we need to abandon eighty per cent of these reserves.

Think about this for a second. Eighty per cent of the fossil fuel reserves which coal, oil, and gas companies intend to extract cannot be safely burned. This is not ‘business as usual’. Mitigating climate change requires a significant shift in politics and economics. Any investment policy that ignores this physical reality is in for a shock. The carbon bubble will burst.

During the last week, world leaders and diplomats met in Marrakech as part of COP22 – the follow-up to last year’s historic climate agreement in Paris. One after another, country by country, they laid out their commitments to reduce carbon emissions. These commitments are still not enough to avoid catastrophic levels of climate change – we’re still heading for well over 3°C of warming. But they do lay out a path to a future in which fossil fuels play only a minor part. Progress is happening, the world is changing, and fossil fuels are on the way out.

This is why I believe we need to stop investing in fossil fuels. The financial argument for divestment is strong, and the moral case is undeniable. Over the past year of making the case for divestment, I have not heard a single counter-argument that does not rely simply on inertia and an unwillingness to make decisions. Indeed, last year

Cambridge Zero Carbon Society produced a 74-page report, laying out clearly in writing the case for divestment from fossil fuels, and presented it to the University. The ACBELA Working Group report was an opportunity to engage with this unprecedented level of student engagement. An opportunity to discuss divestment seriously. This opportunity was wasted. What message does an academic institution send to its students when it shies away from the very open discussion of issues that a university is supposed to promote?

Cambridge needs to decide. Do we want to lead? Or do we want to sit and watch as others make the decisions we are not confident enough to make? Do we want to be left behind as other universities and investment funds around the world divest from fossil fuels? Only last week, Trinity College Dublin committed to divest their €144m endowment. As part of his justification for this decision, their Chief Financial Officer said; ‘Trinity wants to be a leader in sustainability’. They join over 505 other institutions, with a collective value of over \$3.4 trillion. This University claims to want to be a leader in sustainability too, but when it comes to investments, we’re at increasing risk of becoming a laggard.

To quote an open letter written by the faculty at Stanford University:

If a university seeks to educate extraordinary youth so that they may achieve the brightest possible future, what does it mean for that university to simultaneously invest in the destruction of that future?

Ms S. G. KABIR (King’s College):

Deputy Vice-Chancellor, I am from Bangladesh, the country at sixth highest risk from climate change in the world. I want to communicate to you today the profound injustice of the climate crisis – an injustice that specific groups in the world are most directly responsible for and have benefited from.

I am going to put some statistics to you that are deeply shocking. Bangladesh is ranked 181 out of 193 countries for CO₂ emissions *per capita*. China, the US, and the EU together produce more than half the world’s CO₂ emissions. Research published in the journal *Climatic Change* in 2013 shows that just 90 companies in the world produced 63% of cumulative global emissions of industrial CO₂ and methane from 1751 to 2010 – 83 of these were energy companies. Several top companies on the list have funded the climate denial movement.

But most people in Bangladesh are not in a position to deny; to pretend that nothing is happening until we hit 2°C and beyond; to see whether all the predictions come true after all:

I am not sure how many families left the village, but a lot of them have done so. I may not return to the village. I have no place to live in. The house is not safe. There will be more floods in the future.

This is Haowa Begum, now resident of a slum in Khulna, Bangladesh.

We have a continuous lack of food. Now I am not old, and I can go and work, so somehow I am able to sustain my family. But people in their seventies, eighties, and nineties, many of them cannot work. Many of them go a whole day without eating.

This is Anil Krishna Roy, former fisherman, now informal sector worker of Chalna, Bangladesh.

The people of Bangladesh are faced with temperature rise and drought, sea level rise, and increased salinity of water and soil, more frequent and destructive floods, cyclones, storm surges, river erosion, and drainage congestion. With a majority of the population working in agriculture, large numbers living near the coast and in general in conditions open to the environment, changes in climate conditions lead to drastic effects: starvation and thirst, sickness, and displacement. As with most of the developing world, IMF and World Bank-imposed structural adjustment programmes have left the public sector too thin to offer sufficient buffer to people. Those with most obstructions to resources and information, and least power in collective decision-making – that is, the poorest, women, children, and queer people, the elderly, ethnic, and religious minorities – are hardest hit. Huge numbers of people are forced to leave their homes, fragment from their communities and histories, and migrate to the capital, where they tend to live in overcrowded slums with few facilities, working in precarious jobs. Single women may be compelled into sex work or begging.

I am not trying to paint a picture of a vulnerable, broken people who need saving. These are resilient people, who have survived and resisted some of the most difficult conditions in the world. I know and work with people who have been fighting the construction of coal power plants and mines on their land, which they know will lead to more death and destruction. They will continue to fight, but they are frustrated and tired.

This isn’t about saving, this is about responsibility. It is undeniable that the United Kingdom, and the University of Cambridge within it, has played a significant role in the construction of the global system as it is. If, as I am sure is true, members of the University wish to break from this history, to make amends and take part in the construction of a different, more just world, then we need to act on this responsibility now. One of the ways to do this is to refuse to support corporations that inflict this kind of violence on people around the world: to withdraw our investment from the fossil fuel industry, and thereby condemn it publicly. Please, please, let’s prioritize this over technicalities, over administrative difficulties, and smooth relationships with corporations. There is no more time.

Professor D. A. CARDWELL (Department of Engineering and Fitzwilliam College), read by Professor A. Neely:

Deputy Vice-Chancellor, the Department of Engineering has extensive academic engagement with companies such as BP and Shell. We are working closely with these companies to address the world’s most pressing energy problems and we regard their partnership in this endeavour as fundamental, genuine, and invaluable. If we isolate ourselves from individuals and organizations who are in, or represent, the industry, we cannot hope to contribute in any significant way either to its development, or to addressing the urgent need to reduce fossil fuel consumption and hence increase environmental sustainability in the near future.

In addition, the major oil companies such as Shell and BP are major employers of our undergraduate and graduate students at all levels, and generally provide them with the highest possible professional training across a very broad range of careers. A decision to disinvest with these companies, therefore, would be to the clear disadvantage of our students.

As Head of the Department of Engineering, I therefore argue strongly against any case to disinvest in companies that deal with fossil fuels, which I believe would damage irreparably our ability to collaborate with these companies, influence negatively the more general issue of sustainable development in the short to medium term, and work directly against the best interests of our undergraduate and graduate students.

Mr R. G. GARDINER (Murray Edwards College):

Deputy Vice-Chancellor, I am the Bursar of Murray Edwards College. The College is an investor in the Cambridge University Endowment Fund.

Investors in companies can influence companies' actions by exercising their shareholder voting rights. Investors investing in funds which manage money on their behalf are at one step removed. But they may make their influence felt on the fund manager such that the fund manager votes in a way which is consistent with the requirements of its investors. The University, having the profile and global recognition that it commands, should be in a position to use them to influence those fund managers and thereby the companies. The revised statement of investment responsibility addresses these matters.

However, under that statement where the Investment Office would otherwise engage companies under its duty to ensure that its investment management reflects the interests and values of the University, I trust it will only not engage and will only consider that engaging with managers and companies on those interests and values is inconsistent with a primary mandate to generate return, in the most extreme circumstances. It is difficult to think what they would be and as such there should be a rebuttable presumption that the Investment Office will always engage on those values.

Additionally I wish to encourage the Endowment Fund to publish its activities in relation to engagement under its policy. The term that 'Any matters relating to the application of the policy should be addressed in writing to the Registry' is too passive in such an important an area where the University should presume it has influence and it should be more active in reporting the use of that influence.

The topic of concern for this Discussion also includes consideration of a policy of divestment from fossil fuels because those fuels risk damage to the environment. Divestment from fossil fuels is not, however, a solution. That is similar to a citizen seeing someone doing something anti-social in the street and walking away. The better course is to engage in persuasion, dare I say education, to stop the anti-social action. So it is with companies. The University should use its influence in conjunction with other like-minded investors to bring about change in the operations of those companies. Divestment from fossil fuels by those that consider them a bad thing means, by extension, leaving the investment to people who are not concerned about the environmental issues. That allows perpetuation and even intensification of those activities and would be an own goal.

Dr J. E. SCOTT-WARREN (Faculty of English and Gonville and Caius College):

Deputy Vice-Chancellor, I would like to support the call for a full divestment of the University from the fossil fuel industry.

2016 is set to be the hottest year since records began, breaking the record for the previous hottest year, which was 2015. The effects of climate change are already being felt in heatwaves, floods, droughts, storms, and wildfires across the planet. The response of the fossil fuel companies has been to continue their polluting practices behind the most superficial of greenwashed veneers. With breathtaking cynicism, they have even taken the rapid shrinkage of the polar ice caps as an opportunity for still more oil and gas exploration.

The rise of rightwing populism across the world is set to undo all the advances that have been made in this area. US President-elect Trump is a climate-change denier who is committed to withdrawing from international accords and declaring open-season for the short-term pursuit of profit, unfettered by his responsibility of care for the future. The Conservative government in the UK has withdrawn support for solar power and onshore wind, opened the door to shale gas extraction, and reneged on its plans to force all new homes to be zero carbon.

In these circumstances, it is up to intelligent people and intelligent institutions to take action. The world is pledged by the Paris Climate Agreement to keep the rise in global temperatures below 2°C, but it is increasingly clear that individuals and institutions will have to act quickly and decisively to achieve that goal. Fossil fuel companies are currently supported by \$19 trillion of global investment and by the aura of legitimacy that such investment generates. By divesting, we contribute to the global failure of confidence in these forms of energy and we help to precipitate their rapid and well-deserved decline. The financial consequences for the University may well be negligible, socially responsible investment funds having outperformed most UK tracker funds over the last five years. Even were that not the case, we should be prepared to pay a price to advance this cause.

Universities are places of intense intellectual innovation, but the thinking that goes on in them needs to be matched by comparable imagination and foresight in their organization and financing. I urge the University to follow the example of the Universities of Glasgow, Sheffield, Southampton, Warwick, and many others in the UK and overseas, and to terminate its fossil fuel investments, direct and indirect, with immediate effect. The consequences of not doing so will be reputational damage in the present, and extremes of risk in the future.

Mr M. V. LUCAS-SMITH (Department of Geography):

Deputy Vice-Chancellor, I am disappointed to see little consideration in the report of the need for divestment from the fossil fuel industries given the issue of climate change.

I do not need to rehearse the arguments about the scientific validity of climate change, because this University is in the fortunate position of having experts who are at the heart of research providing this evidence.

The Paris Agreement makes clear the urgency of the task ahead. Even if certain events in the US recently might temporarily trump this need for action in the short term, scientific evidence, which we as a University have worked on, will prevail.

The University lists amongst its mission statement ‘concern for sustainability and the relationship with the environment’.

In rejecting thermal coal and tar sands from its investment portfolio, albeit passively, the University seems to accept the principle that not investing in environmentally damaging industries is a valid and legal course of action, in line with its charitable objectives.

In this regard, it is good to see, in section 21 of the Working Group’s report¹ that:

future action by governments, including, for example, fiscal and regulatory change concerning carbon, is likely to affect the economic attraction of particular investments for the long term.

If the need for phasing out the burning of fossil fuels is accepted by governments, is it not entirely clear that the long-term, even medium-term outlook for such stocks is negative? Indeed, another speaker spoke of the likely significant market correction coming. We should be reducing our exposure to such stocks, for financial reasons as well as moral.

King’s College London (KCL), SOAS, and others seem to have been able to take action. SOAS froze all new investments in 2014 and last year announced a three-year divestment programme. King’s (the other one, that is, not my own College) say they are developing a plan:

to enable a phased divestment from any companies with more than 10% of their revenues derived from these high polluting fossil fuels and to reinvest the funds in low carbon alternatives as well as in investments which demonstrate a strong environmental performance.

KCL’s statement continues:

Regulatory change and public policy significantly affect the expected economic returns from carbon related industries. The Group recognises therefore that engagement with fund managers may include such considerations and involve strategies, where feasible, to divest progressively, consistent with the expected performance of the portfolio.

The fact that institutions like KCL and SOAS can make such changes provides an indication of a legal basis for our own University. Is there not scope for such divestment to be more explicitly highlighted in our own University’s policy?

I have heard it argued from some that the University should not consider divestment from fossil fuel companies because those same companies provide research funding and fund new buildings, and that this would create an inconsistency. No doubt the University also has in mind the desire not to upset its wealthy donors.

If there is such an inconsistency, this is not a reason not to take action in this other area. Indeed, the report by the Zero Carbon Society,² which I will discuss shortly, makes the point that continuing investment in the fossil fuel industries of the past is at odds with research collaborations involving issues of climate change, conservation, and sustainability. Indeed, the Zero Carbon Society report sets out an excellent principle: ‘As an academic institution, the University should align its investment policy with the consensus of its research.’

Continuing to work with companies like BP on solar energy research (for instance), while at the same recognizing through divestment that the majority of its income comes from fossil fuels, is not an inconsistent position.

The Working Party’s already weak recommendations seem to have been watered down further in the Council’s proposed final Statement of Investment Responsibility. For instance, report recommendation 6 notes that it should ‘consider exercising its voting rights as a shareholder within its strategies of engagement’, whereas the statement merely talks loosely of ‘actively engaging with fund managers’. Friendly discussions are welcome, but voting carries more weight.

The Working Party report also talks about systematic reporting, which is not featured in the Council’s decision, as well as writing an open letter describing the University’s expectations. Such public attention is useful in sending out a clear message.

The Council have not addressed these points; would they now do so?

The report also displays a lack of transparency through the future policy. An invitation to write to the Registry does not form transparency. Will the Council please improve on the issue of transparency?

In general, will the Council please consider a more active stance on divestment?

I would like to turn now to matters of procedure of governance.

Reading ‘through the lines’ of the Working Party’s report, one rather gets the impression that it tries to avoid consideration of divestment at all.

I have read the statement issued by the Zero Carbon Society on 17 June (a society, I may add, to which I have no link), and am appalled by what I hear. The Society outlines³ that they submitted their 75-page report,² which they say:

contained contributions by professional economists and which Rowan Williams termed ‘Clear, well-documented and deeply challenging ... [worthy of] attention from all of us in the University and the Colleges’

but that this report was not consulted. Indeed, I cannot see it listed in the Working Party’s bibliography.

This does not exactly sound to me like a model of engagement by the University. Nor does consulting students during the summer period, as is also claimed, for instance.

The Society appears to have worked hard on student engagement with over 2,000 signatures and the obtaining of a clear vote in CUSU’s Council, which consists of representatives of the junior and senior Student Associations across the University, of 33 to one.³ Anyone who has taken the time to read that report would agree with me that it is an extremely impressive piece of work, making a clear case, with extensive referencing and therefore should have been considered by the Working Party.

Therefore could I ask the Council for clarification from the Working Party on why this evidence was not consulted?

¹ <http://www.admin.cam.ac.uk/reporter/2015-16/weekly/6430/Investment-Responsibility-Wkg-Grp-Report.pdf>

² <http://zerocarbonsoc.soc.srccf.net/?p=4006>

³ <http://www.varsity.co.uk/news/10437>

Professor J. S. DENNIS (Department of Chemical Engineering and Biotechnology, and Selwyn College):

Deputy Vice-Chancellor, I am Head of the Department of Chemical Engineering and Biotechnology. What are thought of as the traditional oil and gas companies are now strongly focusing on renewables technology. However, we are not in a position to switch off use of hydrocarbons from fossil fuels because the renewables technologies are not yet ready to replace them. Research ongoing in the University focuses for the most part on reducing environmental risk and increasing the energy efficiency of fossil fuel recovery or new energy technologies outside fossil fuels. These are intellectually interesting and challenging research topics and we value our intellectual relationships with the energy companies.

The need to use fossil fuels will remain for many years to come. There are of course many technical reasons for this, apart from their sheer abundance and low cost compared to most renewables. For example, the high energy density of liquid hydrocarbon transport fuels, particularly for aircraft and road vehicles, is unequalled by, for example, compressed methane or hydrogen made from renewable resources. Aircraft, in particular, need weight saving and very high quality fuel. In electrical power generation, fossil-fuel-fired powerstation systems are needed to lend base stability to the grid, given that most renewables (e.g. wind, solar, etc.) are intermittent.

In my experience, the forward-looking oil and gas companies are keenly aware of their environmental and social responsibilities. They interact with major academic centres to understand how changes in the energy system will impact consumers, stakeholders, and the environment. They are the 'good guys'. I shall give three examples of collaborations to illustrate this with a process perspective to them.

Example 1. Advancing research in understanding the energy-land-water nexus. A cross-University activity, involving collaboration with oil majors, has developed critical tools (i) to understand how much energy is required to deliver the critical services needed by society and how good design can reduce those energy consumptions; and (ii) has produced workable and practicable models to understand the interaction of the demand for energy with pressures on use of land and water resources, particularly for food production and for the preservation of ecosystems. To put it crudely, by expanding biofuel production, what pressure do I exert on food production and, even worse, do people starve in third world countries alongside fields intended to produce biofuel? These critical approaches, involving whole systems views, have made substantial impacts on company understanding of biofuel development, helping to avoid critical pitfalls.

Example 2. Whatever happens in future, there will be a shift away from coal to natural gas. Clearly this must be encouraged but how do you turn natural gas, or even fuel gas generated from lignocellulosic biomass, into an acceptable transport fuel? The basic answer is that one has to employ a reaction occurring at high temperature and pressure called Fischer Tropsch (FT) synthesis. But, there is still much to be investigated to understand FT synthesis; for example, could one use milder reaction conditions? Could a narrower range of desired products and fewer by-products be obtained? Could one reduce the scale to make it economic for distributed production in developing countries? Could one use biomass-derived feedstock? Researchers in Cambridge are addressing all these questions. Advances in these areas cannot be made without maintaining trusting, working relationships with the oil majors.

Example 3. In the recent past I worked with colleagues in Biochemistry and Plant Sciences together with a major oil company to understand if algal biomass could play any part in the sustainable production of liquid biofuels, even where improvements could be made through the use of biotechnology. Despite many scientific breakthroughs, the process conclusion was that the system was just not intense enough to provide energy. In most guises, the energy put in to grow and harvest the biomass and extract the products exceeded that that would ever be generated by using the material as fuel. Here again, a systems approach, using unique Cambridge interdisciplinary research in close collaboration with the company, yielded important conclusions.

Many other such interactions occur, of course, as a glance at the Energy@Cam website will reveal. It is the ability of Cambridge to configure interdisciplinary offerings to address both detailed issues and systems-level issues (at which the environmental and social impacts occur) that makes it critically important for the University to interact with all types of energy companies in order to inform the best path to a low-carbon future.

I would actually argue that there are certain sections of the fossil fuel industry where Cambridge should, in fact, redouble its efforts to be involved. This is particularly the case with the industries using coal-fired power generation. In the UK, the involvement of Cambridge with new methods of burning coal and capturing CO₂, has, as with the industries themselves, been very patchy. Most coal-fired stations use 1970s, pulverized-fuel technology, and the interest of the utilities companies in new technology has been very limited. There are many reasons for this of course, but we should be pushing harder to be part of the coal debate, because, like it or not, the appetite for burning coal in China and India remains unabated.

I have one final point to make. Many of the undergraduates in our Departments join the energy industries, particularly the oil, gas, and coal industries. There is an abiding interest in the energy debate on the part of students, and it is only by our very best people entering these industries that we can expect there to be real advances in energy efficiency, new forms of energy, sustainability, social development, and reduction in carbon emissions. That the interest exists is because lecturers and researchers are involved in ongoing interactions with the fossil-fuel companies, and these real issues inform our teaching.

I make a real plea to enhance our interactions with all energy sector companies, not to divest from parts of it. Although one could argue that divestment from shareholdings in companies is not the same as refusing to undertake research with those same companies, any CEO of a company will inevitably question the next research investment with such a university. Thus, divestment will change nothing – merely slow the rate at which we all move to a low carbon world and therefore the proportional increase in extremes of climate and its associated impact on mankind.

Mr M. EWEN (Pembroke College):

Deputy Vice-Chancellor, we have heard several speeches reminding us of the urgency of climate change, and making the moral case for divestment; many of them have focussed on the economic and financial arguments. I would now like to reassure you all that divestment is both safe and profitable, and is actually probably safer in the long term than continuing to hold fossil shares.

I would like to reiterate that these fossil fuel shares are rapidly becoming unstable. Currently, five of the ten largest companies in the world (by sales) are in the fossil industry – but last year there were six. This number may still sound strong, but in the last five years, every single one of these companies has seen their market value decrease. There are bigger problems down the road. Due to recent legislation limiting global emissions, it is increasingly likely that the majority of fossil fuels will become stranded assets. Bank of England Governor Mark Carney states that if regulation targets are

even approximately correct, it would render the vast majority of fossil fuel reserves... literally unburnable.

There is no accurate mechanism of factoring these risks into current prices, hence the existence of the ‘carbon bubble’, the bursting of which could be catastrophic. Fossil fuels have been strong in the past, but they are no longer a safe investment. Continuing to invest in them is not a safe long-term strategy for Cambridge.

In contrast, ethical investments are stronger than they have ever been. FTSE Russell tracked ethical portfolios from 2006 to 2014, and found no underperformance compared to others. The majority of these portfolios did not lean heavily on certain sectors such as renewable energy: there is not necessarily a risk of overexposure in these investments. It is worth noting, however, that renewable energy is a better investment than ever before. More money was spent on the sector in 2015 than in any other year, and the International Energy Agency recently described renewables as ‘no longer [being] cost outliers’. Divestment from fossil fuels may in fact even be profitable. A publicly available portfolio analysis tool, developed by Corporate Knights and Clean Capitalist, shows that Cambridge could have made £112 million more had we divested three years ago. If you would like full details of this analysis they are available in the Zero Carbon Report, and I would encourage anyone interested to read it.

The take-home message here is that divestment is possible, and is in line with the fiduciary duty of the University Fund Manager. It is, morally and financially, a better option than continuing to hold fossil fuel shares.

I would also like to address a couple of arguments raised by earlier speakers. First, it has been said that divesting in fossil fuels could limit sponsorship with fossil companies. Thus far over 500 other institutions have divested, totalling \$3.4 trillion and we have not seen any evidence amongst these institutions that funding has been lost or research has not been carried out as a result of these choices.

The second issue is this argument that engagement with fossil fuel companies will be sufficient to fix the climate crisis. We have been engaged with these companies for a long time now and yet as a result of their actions we are on the brink of climate catastrophe; it has not worked¹ and we are now out of time. We need to divest.

Finally, it is a trivial amount of money and other people will pick up the shares but the point is not that so much money has been removed from fossil fuel companies, the point is that in the news Cambridge University has condemned the fossil industries, and that will have an affect.

To conclude, we are in a position to take the lead in tackling climate change. We can divest; we should divest; we must divest.

¹ For evidence of the fossil industry’s track record with scientific ‘engagement’, please see <http://www.ucsusa.org/publications/catalyst/su15-documenting-fossil-fuel-companies-climate-deception#.WDSxEfnJzIU>

Ms E. M. NYBORG (Christ’s College):

Deputy Vice-Chancellor, it is very easy to get caught up in facts and figures in these kinds of discussion, with the consequence that everything becomes very removed and impersonal, and doesn’t really seem to matter to those of us sitting here – especially not for a privileged student such as myself.

I am from Norway – a country that has benefited perhaps more than any other from the fossil fuel industry. We are wealthy, we are clean, we do not seem like a country that has to worry about the consequences of global climate change, let alone the consequences of our own oil industry – we are rich enough to deal with the consequences, just take a look at our oil fund, and we are so far north that a few degrees extra would almost appear positively beneficial.

But I am from the Arctic: an archipelago, named Vesterålen, over 250 km north of the Arctic circle. My family has lived there for hundreds of years. And I can tell you that this is a place where human damage to the environment stands out starkly. Climate change is faster and more severe in the Arctic than in most of the rest of the world. The Arctic is warming at a rate of almost twice the global average.

But it is easy for us to talk about climate change as a general vague negative thing expressed in numbers, it is less easy to talk about the specifics, especially specifics that have already been happening. Let me tell you about some specifics I have witnessed first hand. I can tell you about a rising sea meaning every year the beach creeps a little more uncomfortably close to our front door due to erosion; I can tell you about the rising tree line on the mountains due to increasing temperatures. I can tell you about marine species that shouldn’t be there in the sea, coming up from the south as temperatures increase, affecting an already fragile ecosystem. I can tell you about pollution that is piling up on the shore in the form of yellow foam, so that the local fishermen, my great-uncles included, know they should not even be eating some of the fish that they fish for a living. I can tell you about the the native cloudberries, crucial to our culture and local economy, that will not flower any more because the climate has begun to shift in a subtle but significant way. I know this perhaps comes across as a little melodramatic, but these are real conversations we have been having, and need to continue to have.

And then there is the oil industry, and what that means, for a place already so vulnerable to change. Arctic oil has been a contested topic of conversation for a while; and for a while the Norwegian government has denounced it but now Prime Minister Erna Solberg has not only announced that her government wants to increase offshore oil exploration but also open up areas off scenic Lofoten and Vesterålen (the archipelago below us) to oil and gas activity. It is not that major oil companies have already admitted they do not know how to deal with the consequences of an Arctic oil spill; it is not the irreparable consequences this will have for our local biodiversity, our fishing industries, or blossoming tourist industry, or the lives of the people, including my family and my own, that it will change permanently. It is that we could have taken a symbolic stand against it and instead choose not to.

In summary, there is no right way. There is no way to invest in fossil fuels in a clean or ethical way, no matter how you try to rationalize it. The effects the fossil fuel industry has, both directly and indirectly, are difficult to comprehend and extend far beyond the environmental. And I do not feel comfortable benefiting from an education at a University, no matter how good, that is supporting an activity that stands for the destruction of not only my home but the homes of many others around the world.

Ms E. BRYAN (Sidney Sussex College):

Deputy Vice-Chancellor, climate change is the greatest threat faced by humanity and it is the responsibility of today's leaders to work to find solutions. I want my University to engage with this globally important issue, to face up to the fact that fossil fuel companies are at the forefront of the climate crisis. Cambridge is a leader in education, in research, in innovation. We need to take the lead on climate change. Consumption of oil, coal, and natural gas is at the core of fossil fuel companies' business models and this isn't going to change until the reserves have been completely drained. This will trigger a monumental catastrophe for environments, communities, and ecosystems across the world.

I want my University to use its influence to spread the message about climate change. The possibility of Cambridge divesting from fossil fuels has already made the front page of the *Independent*, so full divestment would send a message to political and business leaders that the social licence of fossil fuel companies is waning. Climate change is something we cannot ignore. Fifteen of the warmest years on record have occurred since 2000, and 2016 is set to be the hottest year yet. California is seeing their worst drought in 1,200 years. Warmer ocean temperatures have more than tripled the frequency of natural disasters since 1980 like hurricanes and tsunamis, with Hurricane Matthew last month shattering records because of its intensity and longevity.

The Cambridge Zero Carbon Society is part of a global divestment movement – we've got widespread support from students across the University with a petition signed by 2,300 university affiliates. But there's only so much we as Cambridge students can do. This is why we're asking fellows to stand with us and show that you recognize the urgency of climate action.

I want my University to show that they support those most affected by climate change, who have contributed least to the problem. Because climate change is about people. It's about social justice. The world's poorest and marginalized are most vulnerable to climate hazards, like the 20 million people the UN estimates were displaced by climate change in 2008, like the 1.2 billion people living on less than \$1.25 per day, most of whom depend on agriculture for a livelihood. Climate change is set to reduce productive farming land and increase spread of diseases like malaria, forcing more people from transient to chronic poverty. In terms of historical CO₂ production, the UK is the fifth largest emitter, with the second largest emissions per person – this makes us morally responsible to work to support those affected the most.

As a science student, we are taught about how we can use technology to provide alternative sources of energy and tackle climate change. Vast amounts of incredible research across Departments as diverse as Medicine, Politics, Materials Science, and Economics goes into understanding and mitigating the effects of climate change. I want my University's investment policy to reflect its pre-eminence in research and teaching when it comes to climate change. Divestment is the logical, moral, and sensible answer.

Dr M. J. RUTTER (Department of Physics):

Deputy Vice-Chancellor, I am the President of the Cambridge branch of the University and Colleges Union and a Computer Officer at the Cavendish Laboratory. I first wish to say that the UCU has a clear national policy to encourage divestment. However, I would like to make some more remarks in a personal capacity.

I would like to point out that financial divestment and academic disengagement are not identical. There is much constructive engagement that we can and do have with fossil fuel companies. These companies often work to reduce the impact of their fossil fuel activities. They often have activities unrelated to fossil fuel extraction or even activities which would displace extraction. Cambridge should be confident in the quality of its researchers. Companies will wish to engage with us regardless of our investment strategy.

As a trades union official I know first hand that one can engage constructively and beneficially with organizations with whose views and actions one may not entirely agree. Nor is it necessary to have a financial relationship with an organization in order to influence it. I note that many speaking this afternoon seem to share this view. We have been told of our many research collaborations with BP, with Shell, and with other similar companies. We have also been told that our current investment in fossil fuel companies is negligible. I shall not repeat the moral arguments in favour of divestment but I shall simply say that I find them compelling.

Dr J. F. W. WEITZDOERFER (Faculty of Law, Centre for the Study of Existential Risk, and Darwin College), read by the Senior Pro-Proctor:

Deputy Vice-Chancellor, I lecture in 'EU Environmental and Sustainable Development Law' in the Tripos at the Faculty of Law. I also supervise and examine sixty students on the same topic in the Department of Land Economy every year. Moreover, I hold a full-time research position at the Centre for the Study of Existential Risk, where my postdoctoral research is supervised by Professor Lord Rees.

With regard to today's decision, I would like to express my view on investment practices, pursuant to Recommendation 2 of the report. I very much welcome the report's recommendation to change the Statement of Investment Responsibility so that it requires the Investment Office to take due care to ensure that its management reflects the interests and values of the University with regard to climate change and sustainability. First of all, there is much to be said in support of divestment. Despite the reservations, I am convinced it is a viable tool, mainly by means of its signalling function to the market, to political decision-makers, and to society at large, especially when undertaken by an eminent and well-respected institution such as this University. Secondly, at the same time, and while this is implemented, the University must immediately take responsibility and make use of its role as a shareholder to influence the corporations it is invested in with regard to its values, particularly sustainability. Finally, I want to highlight to the members of the Regent House my first-hand experience that over the last few years, the University's studentship has moved to a very co-operative, constructive, and balanced approach in support of the topic submitted for discussion today. This support, and the tireless engagement of our students, should be an encouragement for us to act, instead of blocking and further postponing the inevitable.

Therefore, the Regent House should thoroughly consider the report of the ACBELA Working Group on Investment Responsibility and implement a policy of divestment from fossil fuels.

Professor A. L. GREER (School of the Physical Sciences, and Sidney Sussex College), read by the Junior Pro-Proctor: Deputy Vice-Chancellor, I make the following remarks on behalf of the School following a discussion between the Heads of Department.

Achieving the goals of the Paris Agreement and simultaneously meeting global energy needs will require positive efforts by companies engaged in the extraction of fossil fuels. Key companies in the sector recognize this. With support from Cambridge they are already taking forward work on, for example, Carbon Capture and Storage. Cambridge is well positioned more widely to help lead the changes to a low carbon future that can only be realized in partnership with the key industry players. Disinvestment is a blunt instrument that jeopardizes constructive and critical dialogue between universities and relevant companies – a dialogue that may turn out to be crucial in achieving the goals of the Paris Agreement.

Dr I. MÖLLER (Department of Geography, Deputy Director of the Cambridge Coastal Research Unit, and Fitzwilliam College), read by the Junior Pro-Proctor:

Deputy Vice-Chancellor, unfortunately I am unable to attend this Discussion, but feel strongly enough about this issue to express my concern. As someone whose research has, for many years now, been focused on the impact of climate change on the most low-lying, ecologically diverse, and densely populated coasts of the world, I strongly support a divestment from fossil fuels. Given the wealth of scientific evidence on the now very likely – if not unavoidable – ecological, social, and economic impacts of climate change, it is increasingly difficult to justify any position in which the University, as a centre and ‘host’ of the provision of such evidence via its internationally recognized research outputs, would *not* take such action.

COLLEGE NOTICES

Elections

Darwin College

Elected into Fellowships under Title A from 31 October 2016:

Maha Abdelrahman
 Julia Davies
 Aylwyn Scally
 Angela Wood
 Daniel Weiss
 Alexandra Brintrup

Other Notices

Darwin College

Memorial service for Professor Sir Patrick Sissons

A memorial service for Sir Patrick Sissons, Emeritus Fellow of Darwin College and Emeritus Regius Professor of Physic, will take place at Great St Mary’s, the University Church, at 2.30 p.m. on Saturday, 4 February 2017.

Members of the University attending are requested to wear their gowns (black gown without hood).

The Service will be followed by refreshments in Darwin College.

On the morning of the memorial service a short scientific symposium in honour of Sir Patrick will be held, entitled *Host-pathogen interactions in persistent viral infections*, in the Lecture Theatre, St Catharine’s College, from 9 a.m. to 1 p.m., with a buffet lunch provided.

Please sign up for these events independently of each other by ticking the appropriate boxes on the registration form: <http://fitzroy.dar.cam.ac.uk/civicrm/event/info?reset=1&id=14>.

SOCIETIES

The Postdocs of Cambridge Society

The Postdocs of Cambridge (PdOC) Society would like to announce an Extraordinary General Meeting (EGM) on Thursday, 19 January 2017 at 6 p.m. – 6.30 p.m. in the Postdoc Centre at 16 Mill lane.

The primary purpose of the EGM is to adopt a resolution with regards to the forthcoming revision of the Graduate Union constitution. The agenda, all documents, and registration link are available on the PdOC website: <http://www.pdoc.cam.ac.uk/what/2017EGM19Jan>.

All postdocs associated or affiliated with the University of Cambridge, its Colleges, and University Partner Institutions are welcome to attend; please register by 12 January 2017; any queries should be emailed to: contact@pdoc.cam.ac.uk.

EXTERNAL NOTICES

University of Oxford

Exeter College: Director of Development and Alumni Relations; competitive salary; closing date: 3 January 2017 at 9 a.m.; further details: <http://www.exeter.ox.ac.uk/director-development-and-alumni-relations.html>

Exeter College (in association with the Faculty of Medieval and Modern Languages, and Keble College): Associate Professor in Spanish Golden Age Literature; salary: £45,562–£61,179, plus housing allowance; closing date: 5 January 2017 at 12 noon; further details: <http://www.exeter.ox.ac.uk/associate-professor-spanish-golden-age-literature.html>

St Cross College, Centre for the History and Philosophy of Physics: one-day conference: *The émigrés in Oxford physics*, on 25 February 2017 at St Cross College; free registration and attendance; further details: <http://www.stx.ox.ac.uk/happ/events/emigres-oxford-physics-one-day-conference>