



**Leeds Philosophical  
and Literary Society  
Annual Report and Review  
2021**

The 201<sup>st</sup> Annual Report of the Council  
at the close of the session 2020-21

*presented to the Annual Meeting held on  
9<sup>th</sup> December 2021*

and

Reviews of events and of grants awarded in 2021

THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY, founded in 1819, has played an important part in the cultural life of Leeds and the region. In the nineteenth century it was in the forefront of the intellectual life of the city, and established an important museum in its own premises in Park Row. The museum collection became the foundation of today's City Museum when in 1921 the Society transferred the building and its contents to the Corporation of Leeds, at the same time reconstituting itself as a charitable limited company, a status it still enjoys today. At the time when Leeds was expanding and enjoying its rank as a city, the Leeds Philosophical and Literary Society was one of the most prestigious bodies in Leeds. Today it has broadened its appeal but it still plays an important role in the city's intellectual life.

Following bomb damage to the Park Row building in the Second World War, both Museum and Society moved to the City Museum building on The Headrow, where the Society continued to have its offices until the museum closed in 1998. The new Leeds City Museum, which opened in 2008, is now once again the home of the Society's office. In 1936 the Society donated its library to the Brotherton Library of the University of Leeds, where it is available for consultation. Its archives are also housed there.

The official charitable purpose of the Leeds Philosophical and Literary Society is (as newly defined in 1997) "To promote the advancement of science, literature and the arts in the City of Leeds and elsewhere, and to hold, give or provide for meetings, lectures, classes, and entertainments of a scientific, literary or artistic nature". The Society is keenly interested in cultural developments in Leeds and the region, and is constantly looking for new ways to further its aims, and for new members to help and achieve them..

*Application forms may be obtained from the Hon Treasurer and are also to be found on the Society's website.*

**Website:** [www.leedsphilandlit.org.uk](http://www.leedsphilandlit.org.uk)

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*The Society thanks Anthony North for his work on this Review*





# THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY LIMITED

## LEGAL AND ADMINISTRATIVE INFORMATION

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<b>Constitution</b>	Company limited by guarantee Registered number 177204 Registered charity number 224084
<b>Governing document</b>	Memorandum and articles adopted 2 July 1997
<b>Members of Council (who are trustees for charity law and directors for company law)</b>	
<b>President</b>	G E Blair BSc, PhD, FRSB, FLS
<b>Vice-President</b>	C J Hatton BSc, PhD, FInstP
<b>Treasurer</b>	I W Smith HonFLeedsCM
<b>Secretary</b>	J E Lydon BSc, PhD (Retired from Council 3 <sup>rd</sup> December 2020) M Meadowcroft, MPhil (Appointed 3 <sup>rd</sup> December/2020) (Appointed Secretary 9 <sup>th</sup> January 2021)
<b>Other Council members</b>	R J Bushby BSc, DPhil (Retired 3 <sup>rd</sup> December 2020) Janet Douglas BA, MA R Jakeways BSc, PhD, MInstP Cllr Elizabeth Nash A C T North BSc, PhD, FInstP (Retired 3 <sup>rd</sup> December 2020) B M Selby (Appointed 3 <sup>rd</sup> December 2020) C M Taylor BSc(Eng.), MSc, PhD, DEng, FEng, FIMechE, FCGI Mollie Temple CBE, BA, MA, DUniv, DEd (Res'd 3 <sup>rd</sup> Dec. 2020) D Westhead, MA, PhD (Appointed 3 <sup>rd</sup> December 2020) Rachael Unsworth MA, PhD (Resigned 28 <sup>th</sup> February 2021)
<b>Registered Office</b>	c/o Leeds City Museum Cookridge Street Leeds LS2 8BH
<b>Website</b>	<a href="http://www.leedsphilandlit.org.uk">www.leedsphilandlit.org.uk</a>
<b>Bankers</b>	Lloyds Bank, 65 - 68 Briggate Leeds LS1 6LH
<b>Investment advisors</b>	Investec Wealth and Investment 2 Gresham Street London EC2V 7QP
<b>Accountant</b>	Katharine Widdowson FCA, 406 Otley Road, Leeds LS16 8AD

## **THE LEEDS PHILOSOPHICAL AND LITERARY 201<sup>ST</sup> ANNUAL REPORT FOR 2020-2021**

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The Council presents its report and financial statements for the year ended 30 September 2021. The financial statements comply with current statutory requirements and with the requirements of the Society's memorandum and articles.

### **CONSTITUTION**

The Society is a company limited by guarantee governed by its memorandum and articles of association. Membership is open to anyone on payment of an annual subscription which is due on 1 October each year. Only those members who have paid or have been elected to Honorary Membership are entitled to vote at the AGM. In the event of the Society being wound up, every person who is a member, or who has been a member within one year, is liable to contribute to the debts and liabilities of the Society a sum not exceeding £10.

### **STRUCTURE, GOVERNANCE AND MANAGEMENT**

The members of the Council are both directors for Companies Act purposes and trustees for Charities Act purposes. One third of the members of Council retire by rotation at each Annual General Meeting (normally held in December), when appointments or reappointments are made. The Council has powers to co-opt to its membership. Membership of the Council considers the need to have members with expertise to cover the variety of activities of the Society. All members of the Society are notified prior to the AGM of the names of the Council members who are due to retire and are invited to submit nominations. At the AGM (via Zoom) on 3rd December 2020 Mr Selby, Professor Westfield and Mr Meadowcroft were elected to Council

The Officers of the Society are elected by and from the members of Council at the first meeting of Council following the Annual General Meeting; at the Council meeting, Professor Blair was elected as President, Warren Smith was elected as Treasurer and Michael Meadowcroft as Secretary.

Council met on six occasions during 2020-2021 online by Zoom. Parts of its business were delegated to the following committees: Grants, Events, Exhibition and Museums, chaired respectively by Dr Hatton, Professor Westhead, and Dr Hatton. The committees are required to act in accordance with the Society's Aims and Policies, and their recommendations are put to the Council for its approval.

Mr Norman Madill has continued as Assistant Secretary, managing the Society's links with its members and other necessary administrative matters. Mrs Sue Clarke concluded her final year as the Assistant Treasurer, admirably administering the day-to-day financial transactions of the Society including applications for membership. Dr Rachael Unsworth undertook the new role of Events Secretary.

### **MEMBERSHIP**

During the 2020/2021 year, the Society lost nine members (through death and resignations) and gained fifteen new members; at the end of September membership totalled 156 including seven associate members.

## THE SOCIETY'S AIMS AND ACTIVITIES

### General

The Society aims to promote the advancement of science, literature, and the arts in the city of Leeds and its immediate area. In furtherance of this aim, which Council believes to be of benefit to the public in this area, the Council's policy has been to disburse its income as follows by:

- providing a programme of free public lectures relevant to the Society's aims
- supporting the work of the City of Leeds Museums & Galleries
- supporting other activities in Leeds of a scientific, literary, or artistic nature
- providing grants for purposes of research, publication, or artistic performance
- Maintaining a detailed web site including live lectures, histories and forthcoming events

### *Grant-making policy*

In making grants to promote the advancement of the Society's aims, the Council places particular emphasis on (but does not limit its grants to) the support of activities which directly benefit the citizens of Leeds or assist those engaged in academic and scholarly activities relating to Leeds and its immediate area. It does not give grants in general support of students on taught courses. The value of grants is normally in the range £100 to £2,000, although this limit may be exceeded in special circumstances. The Council is keen to support new endeavours by the award of 'pump-priming' grants.

### *The Society's archives*

The Society's archives are held in the Special Collections section of the Brotherton Library, University of Leeds, where they are available for public consultation.

## ACHIEVEMENTS AND PERFORMANCE

### *The Society's Events*

All events this season were online only. A few members booked for every event while some members didn't attend any. But we also had interest from beyond the Society and most events were well supported. (Though each time around a third of those who booked didn't attend).

Eventbrite was used to take bookings until the Society's new website was functioning in the summer of 2021 and since then we have been able to take bookings directly through its website. A recording of each event is made available on the website under 'Past Events'.

26 November Priestley Lecture 'Edward Jenner: a man who changed the face of the world'  
Professor Gareth Williams, University of Bristol

28 January 'Beethoven's mistake' Professor Julian Rushton (No recording is available, owing to a technical problem)

21 February 'A history of pigments: from cave paintings to the present day'  
Christine Holdstock, former professor of Colour Science at the University of Leeds

22 April 'SARS-CoV-2 variants: how do they arise and do we need to worry about them?'  
Professor Paul Kellam, Imperial College, University of London

24 June 'The Benin Bronzes, Colonial Violence and Cultural Restitution'  
Professor Dan Hicks, University of Oxford and Pitt-Rivers Museum

21 July '100 years of the Chinese Communist Party'  
Dr Frances Wood, formerly at the British Library

23 September 'Artificial Intelligence – Part 1'  
Professor Netta Cohen, University of Leeds

11 October 'Artificial Intelligence – Part 2'  
Gabriela Arriagada Bruneau, University of Leeds

## *Grants Awarded*

During the year the following grants were awarded by the Society:

- Liz Jeffrey, £500 to support the 10th anniversary celebration of Headingley Enterprise and Arts Centre (HEART) in 2021.
- John Townsend, £500 towards the digitisation of Series 1 of the Thoresby Society's publications.
- Spencer G. Needs, £500 towards the biography of Eliza Craven Green (1803-1899).
- Peter Murphy, £800 towards the printing costs of '*Rodley Nature Reserve – The First Twenty Years*'
- Stephen Burt, £1000 to support the publication of his new book, '*The Remarkable Story of Hunslet.*'
- Claire Roberts, £250 to support a collaboration with Jacob Savage and players from Opera North at The Nave, Pudsey.
- Alison Ford, £600 to support the local presentation and live stream of '*Outrageous Fortune -Hamlet Reclaimed by Gertrude.*'
- Kerry Harker, £300 to support a free publication about the progress on the 'East Leeds Pavilion'
- Verity Watts, £600 towards an audio documentary inspired by Tolkien's legacy in Leeds.
- Jillian Johnson, on behalf of Leeds Baroque. £600 to support an online recording of a 50-minute concert.
- Edward Maughan-Carr, £300 to purchase equipment for a Northern Sustainable Darkroom in East Street Arts building.
- Olivia Race, on behalf of Front Room Productions, £600 to support performances of '*A Midsummer Night's Dream*' at Temple Newsam Estate in August 2021.
- Prof Mark Westgarth, on behalf of Leeds Art Fund, a further £500 towards the restoration of the bronze figure of 'Industry' dislodged from the Victoria Memorial on Woodhouse Moor. (The Society had previously granted £500 in 2019).
- Gill Crawshaw, £230 to commission essays by two Leeds disabled writers on the online exhibition by thirteen disabled artists, '*Possible All Along*'.
- David Ward, £850 to support public events alongside an exhibition for the Leeds Opera story '*Exploring 300 years of opera in the City*'.
- Kersten Hall, £500 towards the publication costs of his new book on Insulin: partial refund of £68 returned.
- Layla Bloom on behalf of the University of Leeds Art Collection and Leeds Museums & Galleries, £1000 to support the acquisition of Melvin Moti's silent film '*The Eightfold Dot*' (2013).
- Christopher Webster on behalf of Leeds Minster, £728 to support the publication of the papers delivered at the Leeds Minster Conference 2021.
- Martin Lappage, £300 towards the publication of '*A Potted History - The Experimental Gardens of the University of Leeds*'
- Sarah Oldknow, £500 to create a podcast series bringing together local women in celebration of activist Leonara Cohen.
- Lara Eggleton on behalf of Corridor8, Henry Moore Institute, £750 to commission two essays by Leeds-based scholars about sculpture and identity in Victorian Leeds for inclusion in a printed anthology.
- Max Farrar on behalf of the David Oluwale Memorial Association, £500 to support a Leeds city centre walk with poetry on Saturday 17th July 2021.

## *The Leeds City Museum*

We have continued to enjoy a good relationship with the staff of the Museums, to whom we are most grateful for their collaboration. The Museums Committee, comprising representatives from the Council and the Leeds Museums Service, did not meet formally during the year due to the death of the Director, John Roles, and the gap that arose until the new Director, David Hopes, was appointed. The President had two meetings with Mr Hopes which provided a valuable opportunity to discuss collaboration in the planning of events and the best use of grants for supporting the Museum. It is planned to restore formal meetings during the coming year.

## **FINANCIAL REVIEW**

The Society's budget aims to fund all its events (lectures, dinners, trips etc) and grants from its income, the two major streams of which are the dividend income and subscriptions. The events expenditure is substantially offset by income. This budget omits the payment made during the year to the investment advisers which means that the annual overall expenditure is an under-estimate. The Society's financial position has been monitored regularly by the Council.

Dividends from investments within the financial year amounted to £11,854 and subscriptions and donations (including gift aid refund) to £4,447. The total value of the Society's investment portfolio (investments and cash held) increased this year following the easing of Covid 19 restrictions and now stands at £483,906, an increase of 9.7%.

There were 22 grants awarded during the financial year. The total grants sum awarded was £12,340 and refunds of £1,250 were received for previous project awards in previous years cancelled; hence a net sum of £11,090 is reflected in the accounts.

### ***Reserves policy***

The Society's reserves comprise an unrestricted fund derived from past benefactions and its annual subscriptions, including the proceeds from the sale of the Philosophical Hall to Leeds City Council in 1921. The fund increased in value over the years as income exceeded expenditure and the value of investments increased. Since the Society adopted its new constitution in 1997, Council's aim in the medium term has been to fund its activities as described above and to sustain/increase the capital value of its investments whilst using all the annual dividend income to promote the in-year activities. The Society's income and expenditure do, however, vary from year to year depending on several factors, especially due to the continuing Covid 19 pandemic. The Council therefore considers it prudent to hold modest liquid reserves with Lloyds Bank.

### ***Investment policy***

There are no restrictions in the Society's Memorandum and Articles on the Society's power to invest. The Council's investment objectives are to maintain a level of dividend income sufficient to contribute substantially to the Society's activities, while promoting the capital value of its invested assets over the long term. To this end, it is the Society's normal practice to reinvest realised gains on its assets. The Council has delegated the management of its investments on a discretionary basis to Investec Wealth and Investment. It is examining how best to continue developing ethical investments.



### ***Risk management***

- 1) **Income:** The investment managers pursue an active investment policy to generate income on the Society's behalf. The outcomes are regularly reviewed by the Trustees.
- 2) **Expenditure:** Expenditure on individual events and grants usually represents a small part of total expenditure and risks are minimised by standard procedures for authorisation of all financial transactions. The potential risks at the Society's events are considered as part of the planning for them, and appropriate steps are taken, including the arrangement of Public Liability insurance as necessary.
- 3) The quality of the Society's events and the outcome of grants that have been awarded are reviewed by the Trustees, and details published in the Annual Review, to ensure that all the Society's activities are of a high standard consonant with its Aims.

The Society has taken advantage of the small companies' exemption in preparing this Directors' Report.

*Approved by the members of the Council on 11 November 2021 and signed on their behalf by*

**Professor Eric Blair (President)**

**Michael Meadowcroft (Secretary)**



## The year's finances at a glance - 2020-2021

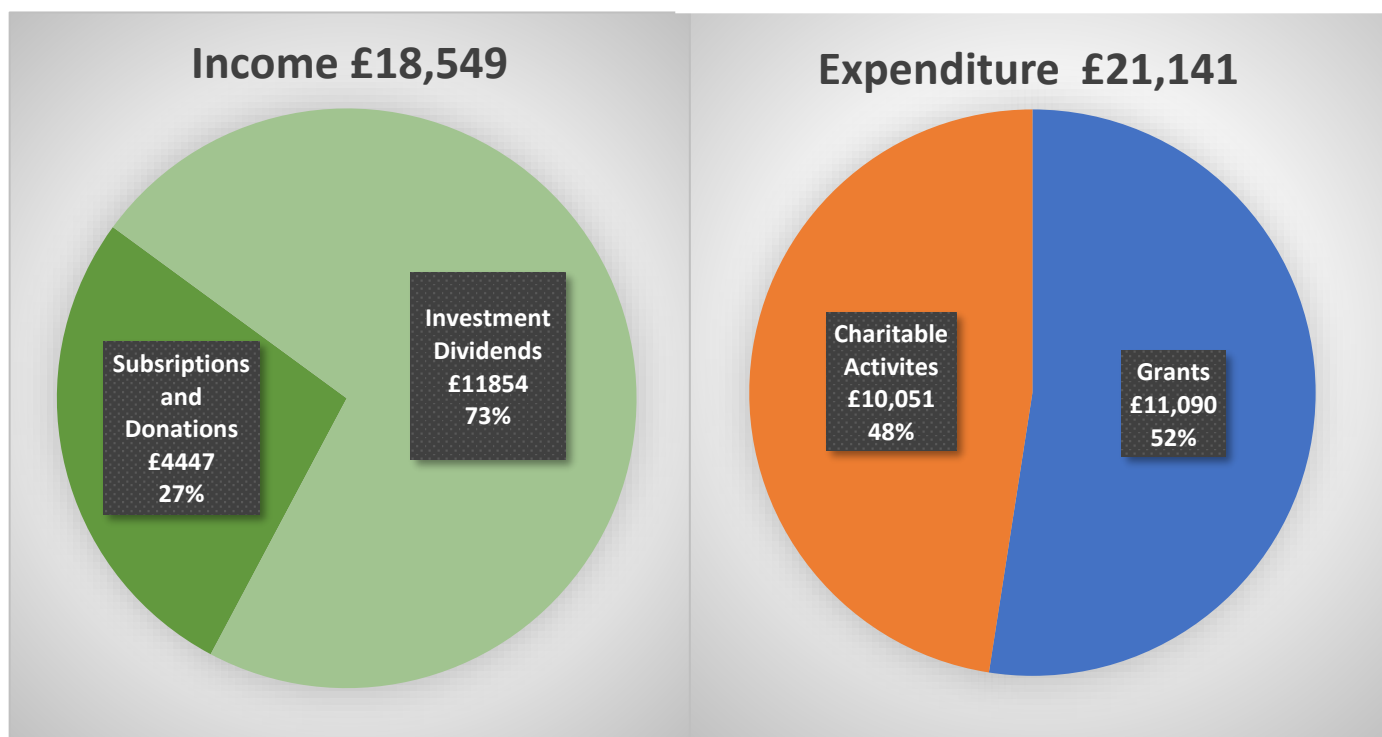
We are required by law to set out our full finances in the prescribed form. The Society's detailed accounts may be viewed on the Companies House web site: [LEEDS PHILOSOPHICAL AND LITERARY SOCIETY LIMITED filing history - Find and update company information - GOV.UK \(company-information.service.gov.uk\)](https://www.gov.uk/company-information.service.gov.uk) or a copy can be posted to you upon request to the Society, by letter or email.

It may, however, be helpful to set the Society's finances during the financial year in a different context. The Society sets a broad budgetary aim of funding its grants, events and administration from subscription and dividend income during any financial year. To this end a budget is drawn up and approved by Council to attempt to achieve a balance between income and expenditure determined on a receipts and payments basis for the financial year, with a modest surplus. The pie charts for income and expenditure during the 2020-2021 financial year are presented below. The data are based upon accounts of the Society as presented. Note that the expenditure shown in the chart omits the Investment Management fee, which has been subtracted directly from the investment capital, as in other recent years.

The overall effects of Covid pandemic have mainly impacted on Dividend income within the financial year; Subscriptions and Donations (including gift aid) have increased. This year's expenditure therefore exceeds income by a not inconsiderable sum due to the lack of income opportunities normally available from holding live events which were this year held on Zoom.

In 2020-21 twenty-two grants were awarded to outside bodies and individuals. Two previous awards were refunded due to not being able to proceed.

### Warren Smith (Treasurer)



## Presidents

*(since the foundation of the Society)*

1820-26	John Marshall	1922-24	Arthur J Grant, MA
1826-28	Revd W H Bathurst, MA	1924-26	Walter Garstang, MA, DSc, FZS
1828-31	Michael Thomas Sadler, MP	1926-28	Edwin Hawkesworth
1831-33	William Hey	1928-30	F W Branson, FIC
1833-35	James Williamson, MD	1930-32	E O Dodgson
1835-37	Revd Joseph Holmes, MA	1932-34	A Gilligan, DSc, FGS
1837-40	Revd Richard Winter Hamilton	1934-36	R Whiddington, MA, DSc, FRS
1840-42	Adam Hunter, MD	1936-39	Hugh R Lupton MC, MA
1842-45	John Hope Shaw	1939-46	W M Edwards, MC, MA
1845-50	Revd William Sinclair, MA	1946-48	E A Spaul, DSc, PhD
1850-51	William West, FRS	1948-50	W L Andrews
1851-54	Revd Charles Wicksteed, BD	1950-52	J N Tetley, DSO, LLD
1854-57	John Hope Shaw	1952-54	Terry Thomas, MA, LLD, BSc, PhD
1857-58	James Garth Marshall, FGS	1954-56	H C Versey, DSc, FGS
1858-59	Revd W F Hook, DD	1956-58	H S Vick, JP
1859-61	Revd Alfred Barry, MA	1958-60	H Orton, MA, BLitt
1861-63	Thomas Pridgin Teale, FRS	1960-62	Sir George Martin, LLD, JP
1863-66	Revd Thomas Hincks, BA	1962-64	E J Wood, MA
1866-68	Charles Chadwick, MD	1964-66	R D Preston, DSc, FInst P, FRS
1868-72	John Deakin Heaton, MD	1966-68	J le Patourel, MA, DPhil
1872-74	Revd Canon Woodford, DD	1968-70	G P Meredith, MSc, MEd, PhD
1874-76	J I Ikin, FRCS	1970-72	J G Wilson, MA, PhD, FInst P
1876-78	Revd J H McCheane, MA	1972-74	J Taylor, MA
1878-81	T Clifford Allbutt, MD, FRS	1974-76	H Henson, DSc, PhD, FRES
1881-83	Revd John Gott, DD	1976-78	P R J Burch, MA, PhD
1883-85	J E Eddison, MD	1978-81	R Reed, MSc, PhD
1885-86	Edward Atkinson, FLS	1981-83	Lord Marshall of Leeds, MA, LIB
1886-89	Thomas Marshall, MA	1983-85	B R Hartley, MA, FSA
1889-92	Thomas Pridgin Teale, MA, FRS	1985-87	D Cox, BA, ALA
1892-94	Revd J H D Matthews, MA	1987-89	B Colville, MB, BS, FRCGP
1894-96	Revd Charles Hargrove, MA	1989-91	I S Moxon, MA, BA
1896-98	Edmund Wilson, FSA	1991-93	R F M Byrn, MA, PhD
1898-00	Nathan Bodington, MA, LittD	1993-95	Mrs J E Mortimer, BA
1900-02	J H Wicksteed, President InstME	1995-97	A C Chadwick, BSc, PhD, DSc, CBiol, FIBiol, FRGS
1902-04	Arthur Smithells, BSc, FRS	1997-99	O S Pickering, BA, BPhil, PhD, DipLib
1904-06	J E Eddison, MD	1999-03	P J Evennett, BSc, PhD, Hon FRMS
1906-09	E Kitson Clark, MA, FSA, MInstCE	2004-07	M R D Seaward, MSc, PhD, DSc, FLS
1909-11	Revd J R Wynne-Edwards, MA	2007-10	C J Hatton, BSc, PhD, FInstP
1911-12	C T Whitmell, MA, BSc, FRAS	2010-13	A C T North, BSc, PhD, FInstP
1912-14	P F Kendall, MSc, FGS	2013-16	Joyce M Hill, BA, DPhil, .DUniv., FEA, FRSA
1914-17	Revd W H Draper, MA	2016-19	C J Hatton, BSc, PhD, FInstP
1917-19	James E Bedford, FGS		
1919-22	Sydney D Kitson, MA, FSA, FRIBA		

## Life Members

Byrn, Dr R F M      Day, N      Lydon, Dr J E  
Moxon, I S      North, Professor A C T

## Subscribing Members, as at 31.12.2021

Algar, D	de Pauw, Dr K	Knapp, Dr D G
Andrews, Mrs G	de Pennington, Mrs J	Lance, Professor C E
Andrews, Professor R A	Dodson, Mrs H I	Larkin, B
Archenhold, W F	Douglas, Ms J	Lawson, P W G
Bailey, Ms L	Drewett, Dr R	Lewis, Dr E L V
Barker, Ms J	Drife, Dr D	Lightman, Mrs E
Bartlett, Mx K *	Eastabrook, Ms G	Lynch, Ms K
Bassant, M	El-Hassani, M R	McAra, Mrs J
Beddows, Professor C G	Evans, Ms L	McCleery, Dr I
Blair, Professor G E	Evennett, Dr P J	McDonnell, E *
Blair, Dr M	Eyres, Dr P J	McTurk, Professor R
Bower, Dr D I	Farmer, P J	Madill, N
Bradford, Mrs E J	Fletcher, Dr C R	Maguire, Ms K.
Bradford, J M	Freeman, J	Marchant, Dr P
Briggs, M	Gibson, Ms N	Meadowcroft, M
Briggs, Miss S *	Golphin, Dr P	Meredith, Professor P
Britten, E A	Grady, Dr K	Midgley, C
Brooke, Miss C	Gulliford-Knight, E *	Mill, Dr P J
Brown, Mrs C	Hall, E *	Millner, Professor P A
Bushby, Professor R J	Hall, Dr K	Minkin, Mrs E
Butlin, Professor R K	Hammond, Dr C	Morgan, C J
Byde, Dr C	Hann, Professor M A	Morgan, Professor G J
Carden, Ms R *	Harker, Dr K.	Müller, A E W
Chadwick, Mrs A L	Harrison, Mrs H	Murphy, K
Chadwick, P R P	Harrison, M R	Nash, Cllr Mrs E A
Chesters, Dr M S	Hatton, Dr C J	Oakshott, Ms J, MBE
Childs, Professor W R	Henderson, Professor P J F	Paterson, Dr A
Clark, Mrs E A	Higgins, Dr S J	Peat, Dr D W
Clarke, Ms S	Hill, G	Pheby, Dr H
Clifton, Miss H *	Hindmarch, Professor I	Pickering, Dr O S
Collins, C J	Holdstock, Dr C R	Powell, M
Conaboy, A	Hollings, C	Radford, Dr A
Connor-Watson, F *	Hope, Professor T E J	Rastall, Professor G R
Crabbe, Dr D	Jakeways, Dr R	Rawnsley, Dr S J
Crosswell, R	Jenkins, Professor E W	Raynor, Professor D K T
Cruse, J	Jurica, Miss J	Reeves, Ms R, MP
Dagg, Dr M	King, Dr M H	Reynolds, P

Richardson, Professor B F  
Rivlin, Dr M  
Roberts, Professor K J  
Robinson, M  
Robson, Ms R M  
Roche, Mrs G M  
Rushton, Professor J G  
Salinger, Dr D  
Sargent, D \*  
Savage, Professor M D  
Sayer, Professor K  
Seaward, Professor M R D  
Selby, B  
Sellen, Dr D B  
Sellers, D  
Shaw, K  
Slomson, Dr A  
Smith, W

Stafford, Professor P A  
Staniforth, Dr M  
Stephenson, Mrs A  
Stevens, Miss E \*  
Sutcliffe, Miss A \*  
Sutcliffe, J R  
Suter, Mrs P A  
Sutton, Dr S L  
Swire, Ms L M P  
Tannett, P G  
Taylor, A.  
Taylor, Professor C M  
Temple, Mrs M  
Thomas, Miss B \*  
Thornton, Dr D  
Tierney, D \*  
Timbers, Ms G  
Trower, H \*

Turney, Dr J  
Unsworth, Dr R  
Wain, G  
Wainwright, M  
Wainwright, Mrs P  
Watson, Professor A A  
Webster, I C  
Wesley, Mrs J  
West, A  
Westhead, Professor D R  
Widdowson, Mrs J  
Wilson, Miss C A  
Winn, P  
Winter, Miss S \*  
Wood Robinson, Mrs V  
Woodhead, Miss S  
Wright, Dr P G

\* Designates Associate Member

We note with regret that a member of the Society,  
Dr A Turton, died during 2021.

## Current Members of Council

<b>President</b>	Professor Eric Blair
<b>Vice-president</b>	Dr Chris. Hatton
<b>Treasurer</b>	Mr Warren Smith
<b>Secretary</b>	Mr Michael Meadowcroft Ms Janet Douglas Dr Robin Jakeways Cllr Elizabeth Nash Mr Brian Selby Emeritus Professor Chris. Taylor Professor David Westhead



## Reports of Events held during 2021

Most of the 2021 events were only accessible remotely on-line; videos can be seen by clicking on 'Past Events' on the Society's website: <https://www.leedsphilandlit.org.uk/events>

*Editor's note: the events described below cover the calendar year 2021 and therefore differ from those listed in the Annual Report section of the Review, which are for the financial year 1 Oct. 2020 to 30 Sept. 2021. Events for Oct.-Dec. 2020 were reported in the Annual Review 2020.*

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***A history of pigments from cave paintings to the present day*** Dr Christine Holdstock  
23 February 2021

***Dr Christine Holdstock*** taught Colour Science at the University of Leeds for over 20 years. Before joining the University staff, she worked at WIRA (the Wool Industries Research Association in Headingley), where she obtained a PhD from the University of Leeds on the control of the dyeing process.

In 2020 Dr Holdstock gave a talk to the Society on the history of dyes (soluble compounds used to colour textiles). This online event was the companion lecture on pigments – insoluble colouring agents, particularly those used in paints. Early dyes were largely of organic origin, whereas early pigments were usually powdered minerals such as cinnabar, orpiment, realgar, malachite, ochre, and lapis lazuli. These ancient names conjure up images of mines in the tribal foothills of the Himalayas, camel trains lumbering across the Gobi desert, the painted tombs of ancient Egypt, and workshops of medieval artists.

We were shown the progression from the raw mineral pigments of prehistoric cave paintings to those used in the tombs of the Pharaohs, and the wonders of renaissance art, with artists purifying and blending colours according to secret formulations – the romance of ancient chemistry. The story moved on to the advent of synthetic materials and the subsequent explosion of available colours during the twentieth century, ending with the three colours now used in ink jet printers and the magnificent best-ever blue.

The prehistoric cave paintings in Lascaux in the Dordogne are images of animals, human figures and abstract signs, executed in materials literally to hand – red and yellow oxides of iron, black charcoal and white chalk. Many strike us as surprisingly sophisticated, considering they were dated back to 17,000 BC.

In startling contrast were the opulent excesses of the royal tombs in the Nile Valley, particularly that of the boy King, Tutenkamen (one of the few Pharaohs whose tomb was discovered unravaged by grave robbers). In the glint of torchlight, treasures glittered with gold and were embellished with deep blue ultramarine, the ruby-red vermilion pigment from cinnabar (HgS), ruby red realgar and orange/yellow orpiment – both sulphides of arsenic. They were treasured materials, imported from the four corners of the known world.

The deep blue pigment, *ultramarine*, was originally made by grinding the rare mineral *lapis lazuli* into a powder. This was imported into Europe along the Silk Roads and then across the eastern Mediterranean from mines in Northern Afghanistan during the fourteenth and fifteenth centuries, and this is reflected in its name, which comes from the Latin *ultramarinus* (beyond the sea). It

was the finest blue pigment available to Renaissance painters. But it was prohibitively expensive and was reserved for the most valuable paintings. By convention, it was used for the gown of the Virgin Mary.

Then the story moved to Renaissance Europe and Dr Holdstock showed the famous Arnolfini marriage portrait (1434) by van Eyck to illustrate range of colours available to the artist at that time, pointing out the subdued green of the bride's dress.

New colours always caused a stir in popular taste. The new green pigment discovered in 1775 by Carl Wilhelm Scheele aroused a fashion which spread throughout Europe. By the end of the nineteenth century, Scheele's Green was used in many household items such as wallpaper, candles, children's toys and even food colouring. It was cheap and easy to produce and soon became the green of choice, replacing the earlier copper-based compounds. But it was an unstable and lethal arsenic compound, deadly to those who handled it and those who lived with it. It has been seriously considered that it might have been Napoleon's wallpaper which eventually killed him.

In the England of the 1830s, the new colour was a rich golden yellow. This was Chrome Yellow (lead chromate), discovered in 1797 by the French chemist Louis Vauquelin. The Prince Regent was so taken with this that it was used for entire suites of rooms in his London palace, Carlton House, and in the Royal Pavilion at Brighton.

After centuries of sparing use of expensive, imported lapis lazuli, a dramatic change occurred in 1826. The French government was persuaded to offer a substantial prize for anyone who could devise a way of producing a synthetic analogue and after an inevitable controversy over a matter of priorities, this was awarded to Jean-Baptiste Guimet. His process for the manufacture of *French ultramarine* required nothing more expensive than china clay, sodium carbonate and sulphur to create a pigment with an identical composition to lapis lazuli, but even more vivid in colour.

In the late twentieth century organo-metallic compounds became a focus of interest to chemists – in particular complexes of metals with phthalocyanine ligands. Prominent amongst these was the brilliant blue copper complex widely used in paints and valued for its light fastness, covering power and resistance to of alkalis and acids.

In the twenty-first century, new technology has brought new requirements, for example the three colours used in ink jet printers: cyan, yellow and magenta. In these, the key property is transparency, so that they can be overlaid to produce virtually any colour required.

Dr Holdstock concluded with pictures of a dazzling artistic display featuring a remarkable colour which has just appeared on the market. The vivid new blue, with the strange name YinMn, is a composite of the symbols of the metals present: manganese and the rare earth element, yttrium. We live in world of colour and now take it for granted that safe and stable paints, plastics and colour prints can be produced in any desired shade, but it took centuries to reach this state. This was a fine lecture, full of history and detail. With the recent appearance of new specialist pigments, the story shows no sign of coming to an end.

**John Lydon**

## ***SARS-CoV-2 variants: how do they arise and do we need to worry about them?* Professor Paul Kellam**

22 April 2021

*Paul Kellam is Professor of Virus Genomics, Department of Medicine, Imperial College London and Vice President, Infectious Disease & Vaccines, Kymab Ltd, UK*

In his elegant talk on the Covid 19 pandemic, Professor Kellam focused on one of the currently most pressing aspects of this unprecedented global health problem: new variants of the virus SARS-CoV-2, its causative pathogen. Changes in the biological characteristics of the original virus, in particular increased transmission, have already been shown to have a big impact on the wide spread of the pandemic and its devastating consequences. However, a combination of various forms of social distancing, testing and, most importantly, mass vaccination have allowed important strides to be made in combating this deadly threat. The emergence of new variants, which are not only more transmissible, but potentially resistant to the vaccines currently being given in the UK and also to more pathogenic SARS-CoV-2 viruses, pose a major threat to the speed with which the pandemic can be successfully eradicated.

The presentation began with the fundamental facts on the structure of SARS-CoV-2, in particular the spike (S) protein that extends from the surface of the virus and provides the means of its attachment to the host cell – the first step in virus entry into the cell for the purpose of propagation. As the virus's surface protein, it is also important for the host's immune responses directed against the virus. Professor Kellam explained both the overall spatial form of this protein and how this form arises by the joining of the building blocks (the amino acids, present in every protein in a unique order) that give the S protein its specific characteristics e.g. its interaction with cells or its ability to stimulate an immune response.

Next, we had an outline of genetic mechanisms that determine the structure of every protein and therefore every living organism, e.g. how genetic information in the form of molecules called nucleotides are linked together in long chains (called RNA in the case of SARS-CoV-2). This RNA is then translated into the order of amino acids that give every protein its unique structure and therefore function. For example, the genetic make-up of SARS-CoV-2 consists of 30,000 nucleotides that are subsequently translated into 14 proteins, one of them being the spike protein. Virus variants arise from changes in the nucleotides, often leading to predetermined differences in amino acids. This modifies certain properties of the virus, such as transmissibility between humans or susceptibility to neutralisation by vaccines. Several well-established methods, some of which were described in the talk, are available to determine the order of nucleotides in the genetic material and subsequently infer the order of amino acids in corresponding proteins. They allow researchers to determine the type of variants (changes in amino acids) and their global spread, using single swabs collected in districts or in very large human populations. The UK is the world's leader in these studies and it has provided such data from approximately 750,000 people. This knowledge is invaluable in the formulation of public health measures which are most appropriate for different continents and countries. Various governments and WHO make use of this.



Viruses frequently change (mutate) their genetic make-up and protein structure when they propagate in cells. However, for a virus variant to spread across the world it has to possess either a survival advantage or encounter human behaviour that facilitates its rapid spread, or both.

Bottlenecks such as low levels of virus replication and selection mechanisms as well as advantageous circumstances for spreading can result in a variant “sweeping to fixation”, and displacing the current variant in the population. The term “phylodynamics” denotes the interplay between evolution and epidemiology when occurring on the same timescale. An interesting variant of SARS-CoV-2 that has arisen early in the pandemic has a different amino acid (glycine instead of aspartic acid) at position 614 of the spike protein and is believed to enhance the virus’s ability to latch on to cells. This variant emerged independently in several parts of the globe by the mechanism termed convergent evolution and eventually displaced the form of SARS-CoV-2 that originated in Wuhan, China.

New variants of discernible spread in human populations are structurally characterised in great detail and their medically important characteristics are assessed on the basis of their amino acid changes and by laboratory and epidemiological approaches. Initially they are classified as variants under investigation (VUIs) but eventually they can become variants of concern (VOCs). The difference between these two groups is that VUIs contain changes previously characterised as conferring certain medically concerning characteristics e.g. increased transmission, while VOCs are confirmed empirically to have those behaviours. At the end of April 2021, the UK was monitoring 4 VOCs and 7 VUIs. One such variant that emerged in the autumn of 2020 in the UK is termed the “Kent” variant (B.1.1.7). This was discussed in detail and its amino acid change (asparagine replaced by tyrosine) at a particular position (501) of the spike protein was related to the possible reduction in susceptibility to neutralisation by antibodies induced by the currently used vaccines. Incidentally, this variant also contains several other differences in comparison with the originally circulating SARS-CoV-2. It is often the case that a particular amino acid change occurs in other variants (often in combination with other changes). For example, the so-called South Africa variant also contains the same change, among others. The type and number of differences determine how different variants of the same virus are classified in different taxonomical groups e.g. lineages and strains.

Professor Kellam also explained how vaccine efficacy is established and calculated. An efficacy of 95% means that 95% of vaccinated people are protected in comparison with the placebo (unvaccinated) group in a clinical trial; this means that if in a population of 100,000 unvaccinated people 1000 get ill, in the vaccinated group of 100,000, only 50 people will get ill.

The talk was very well attended with some members of the audience from India and New York. They were many challenging questions which were discussed with great depth and knowledge by Professor Kellam. It was a great example of how Leeds Phil & Lit can present an event by a researcher at the top of his field that is given in a style suitable for non-specialists.

***Kersten Hall***

*James Mitchinson, Editor of The Yorkshire Post in conversation with Michael Meadowcroft, politician and historian, Hon. Secretary of Leeds Phil & Lit 19 May 2021*

Michael Meadowcroft explored with James Mitchinson the job of an editor in the business of managing multiple challenges and keeping news flowing to readers. Instead of simply asking him to talk, the tables were turned and the journalist became the interviewee. It was a wide-ranging, candid and engaging conversation. Mitchinson was very open about the opportunities and problems of being a regional newspaper editor.

James Mitchinson has been working for the same newspaper group since 2002, joining after he graduated from the University of Lincoln with a first-class degree in English Language and Literature. Starting as a trainee journalist on the Worksop Guardian, he moved to the Sheffield Star and in 2016 was appointed Editor of *The Yorkshire Post*. Since then he has achieved a personal standing in the industry for his defence of YP journalists, most notably in a dispute during the 2019 election campaign – over a story about a child sleeping on the floor at LGI – and in early 2021 over the paper’s reporting of supplies of vaccine being diverted from Yorkshire to London and the south.

Perhaps this was a factor in the Publishers’ Audience Measurement Company Ltd (PAMCo) naming the YP ‘the most trusted newspaper in Britain’. The stance also seems to have been appreciated by readers, though when Mitchinson was asked if the paper’s circulation had grown as a result, he replied that “It’s not a tsunami that allows me to go out and hire 10 more reporters for Yorkshire”.

He was, he revealed, extremely proud of the paper’s claim to be ‘Yorkshire’s National Newspaper’. He’s very aware that the paper traces its history back to 1754, with its current title having been adopted in 1866.

He’s also proud still to have a Westminster correspondent, despite the danger that the high profile of such journalists risks them being poached by bigger titles. Having a City editor also enables tabs to be kept on any business with a presence in Yorkshire. But unlike some national titles the YP “is not run by stinking rich oligarchs”. The team of 56 journalists costs £1.6 million a year and their boss is “blown away by them every day”.

As for the paper’s often forthright editorial stance, it is guided “not by right and left but right and wrong”. Political partisanship, he added, is the enemy of truth. The paper’s credibility, he argues, is “built on truth and trust”, with readers believing that the paper is produced with integrity. Trust can be lost by coverage of a single story, so constant vigilance is needed in the way the news is presented. “We don’t always get it right”, he conceded, “but that’s not for want of trying”.

Not afraid of challenging politicians, Mitchinson told the Phil & Lit audience: “We must be extraordinarily careful, as a properly functioning press is essential to healthy democracy”, warning of Orwellian dangers of “history being written by an incumbent government” rather than a free press playing a major role in holding the government to account.

Mitchinson takes inspiration from his distinguished predecessor, Arthur Mann, who in the 1930s was almost alone amongst newspaper editors and politicians in opposing appeasement of Hitler and the Nazis. Despite being leaned on by Prime Minister Neville Chamberlain personally, the chairman of the YP board, Yorkshire banker Rupert Beckett, backed his editor, despite personally disagreeing with him. **That is independent journalism.**

*Based on the editorial in NUJ News, July 2021. Edited by Rachael Unsworth*

***The Benin Bronzes, Colonial Violence and Cultural Restitution* Professor Dan Hicks**

*24 June 2021*

*Dan Hicks is Professor of Contemporary Archaeology at the University of Oxford and Curator of World Archaeology at the Pitt Rivers Museum, where he has worked since 2007. He spent ten years as a field archaeologist before becoming a student at Oxford. He works as part of an international movement seeking to change practices of museum display and ultimately to challenge the continued holding of cultural artefacts that arguably belong with descendants of the people who made them. His recent book 'The Brutish Museums' uses the story of the Benin bronzes to address the highly contentious issues of cultural restitution, repatriation and the decolonisation of museums. More information about Professor Hicks' book can be found here: <http://www.plutobooks.com/9780745341767/the-brutish-museums/>*

Before turning to his book, Professor Hicks sketched in the background to the Pitt Rivers Museum, founded in 1884 by Augustus Pitt Rivers\* to display his collection of artefacts and to exemplify his theory of cultural evolution which applied Darwinian ideas to the development of material objects. Even now the museum's display is essentially typological, showing, for instance, all spears or boomerangs together in order to show how they have evolved over time. Much of the collection is devoted to weaponry, reflecting Pitt Rivers' military background and his interest in the development of the rifle. But Professor Hicks said that it was not this aspect of the museum's collection that attracted the attention of the 'Rhodes Must Fall' campaign in Oxford in 2015 when it pointed to the museum as 'one of the most violent spaces in Oxford'. Its anger was instead directed at the display of objects looted from Benin in 1897 by a British military force. For African students, this display and the accompanying explanation of how the objects were acquired, was a constant reminder of colonial violence and its impact on ancient African civilisations.

Professor Hicks then talked about the assault on Benin, which was presented at the time as a punitive expedition against the Oba (king) of Benin in response to the killing of a small number of British administrators. He argued that it might better be seen as one of a series of extremely violent corporate-militarist attacks across Africa in the late nineteenth century intended to demonstrate European power, test new weaponry and protect trade by removing troublesome local rulers. Such attacks were often carried out on the fringes of empire, where the rule of law was less well enforced, rather than in formally constituted colonies. This applied in the case of Benin, at the time part of the Niger Coast Protectorate (later absorbed into colonial Nigeria). The Royal Niger Company, established in 1886, was involved, like other such companies, in a form of commercial colonialism, exploiting local supplies of rubber and palm oil, which the Oba opposed. The Royal Navy led the expedition to overthrow him, and for an allegedly punitive

expedition it was extraordinarily well-resourced with over 5,000 servicemen, 36 Maxim machine guns and other modern military technology. The result was the deaths of many thousands of Beninese and the wholesale destruction and looting of Benin City and other towns and villages. The action was very well documented with photographs of the destruction and of the looting, actions which were to be outlawed by the First Hague Convention of 1899.

As well as destroying the local civilisation the invaders took over 10,000 objects, many of them sacred and royal possessions, which were returned to Europe and found their way into museums across the world and into private collections. These included bronze plaques recording the several hundred year history of the kingdom, beautiful casts of royal figures, and ivory carvings and masks. The importance and significance of the objects that were taken led to calls for their restitution from as early as the 1930s, when some objects were returned. Demands for the return of more objects have increased over the years, led from Africa but supported by diasporic African communities in Britain and elsewhere.

Turning to his recent book, Professor Hicks said that the ‘Rhodes Must Fall’ demonstrations had come as a shock to a museum that thought it was doing a good job by engaging with source communities and promoting cultural and artistic exchanges. The protests made clear that while museums had stopped displaying human remains which memorialised white supremacy and anti-black violence they had failed to recognise and deal with displays of cultural objects which had the same effect, and were, from an African perspective, displays of loss and death. The question then arose of how to respond to this situation.

As a first step to removing such displays he said it was important to be transparent and, by setting out where looted works of African art are held (including in the Royal Armouries and Leeds City Museum), to provide the information which could lead to their restitution. A second step is to engage, case by case, with requests for the return of cultural objects which have been taken by violence. This should be seen as a natural extension of a process of restitution which has precedents in the return of human remains and of items looted by the Nazis. He was at pains to say that this was not about emptying museums or pitting African demands for return against white curatorial desires to hold onto what they have. Many curators recognise the need to restore looted objects to the descendants of the original owners. In that context he welcomed the recent action of many museums in returning items, and changing attitudes to the idea of return, though acknowledging that this was a slow process (the Pitt Rivers display which sparked the protests remained unchanged). He also stressed that the return of objects was not the whole story; what was important was to return agency and knowledge so that African peoples themselves, not museum curators, could decide on the future of stolen objects.

This was a wide-ranging and challenging lecture which addressed an issue at the forefront of the so-called ‘culture wars’ and it made a compelling case for tackling the dark legacy of colonialism in our museums.

\*Augustus Pitt Rivers (1827-1900) was born Augustus Henry Lane-Fox at Bramham, just north of Leeds. In 1880, when he inherited the estate of his cousin Horace Pitt-Rivers, he was obliged to take the name as a condition of the bequest.

*Martin Staniforth*

## **100 years of the Chinese Communist Party Dr Frances Wood**

22 July 2021

*Frances Wood studied art, history and languages, including – very unusually for the times – Chinese. She first visited the country in 1971 and then returned to study at Peking University 1975-76. Like many of the British Council-funded group who shared this extraordinary experience, she went on to a professional role in which this early encounter with the language and culture was a crucial starting point. Frances became Curator of the Chinese collections at the British Library in 1977, remaining until she retired in 2013. She visited the country many times, travelling widely and meeting Chinese people in many walks of life. Her books on China include ‘The Blue Guide to China’, ‘Did Marco Polo Go to China?’, ‘The Silk Road: 2000 years in the heart of Asia’, ‘The Forbidden City’, ‘The First Emperor’, ‘No Dogs and Not Many Chinese: Treaty Port life in China 1843-1943’ and an account of her year in the capital: ‘Hand Grenade Practice in Peking: my part in the Cultural Revolution’. (By the way, she says that Peking and Beijing are both acceptable versions of the name). Frances is still captivated by the evolution of this increasingly powerful country, with all its complexities and contradictions.*

*In this talk she covered in outline the birth of the Chinese Communist Party, how Mao came to the fore and stayed in control, the impacts of his leadership and then the remarkable series of changes since his death in 1976.*

Studying Chinese half a century ago was, admits Frances Wood, a perverse choice. Its appeal? It was particularly difficult and as different as possible from languages she’d encountered so far. She still finds it endlessly fascinating: how the characters are constructed and how the terminology and slogans relate to the ancient culture, despite the deliberate break with tradition in 1921 when the Chinese Communist Party (CCP) was founded. Since the death of Mao Zedong (1893-1976), historic Chinese features have even been resurrected, while so much that originated beyond their vast nation has been embraced. Communism always had uniquely Chinese characteristics and now it co-exists with a most energetic form of capitalism.

In the mid-1970s China was yet to enter its era of super-charged industrialisation and urbanisation. The majority of the people still led simple, rural lives with few possessions in their crowded traditional houses. They travelled by bicycle, in army trucks or on buses.

Before being installed with her patient Chinese room-mate at the university, Frances spent a night in a hotel in the heart of the capital. She was woken that first morning by bleating noises and peered out to see a flock of sheep being driven up the street. During the winter, she noted gatherings on street corners as locals in padded jackets soaked up warm sunshine. With skyscrapers and air pollution now obscuring the sun, such scenes are a thing of the past.

The British students were there to learn not only the language but also Chinese history. They had to rise early each Saturday for two hours on Mao’s thought – ideas that did not adhere strictly to Marxist-Leninism. They heard of Mao’s ‘10 great line struggles’: how he rose to the top of the Chinese Communist Party and stayed there for so long. Mao was a junior library assistant at Peking University in 1921 when he and a small group held the first meeting. All the other founders, apart from one, died or split with Mao in the following decades of struggle.

Soviet Russia was never a straight forward ally of the Chinese Communists. In Stalin's view, as a pre-industrial country without a proletariat as such, the Communists should join with Chiang Kai-Shek's Nationalist Party, become industrial, and work towards a proper Communist Revolution. Mao was not concerned that the majority of Chinese were peasants.

He was, though, motivated to redress the cruel blow suffered by China after World War 1, in which the Chinese had served the Allied cause. The Versailles Treaty awarded Chinese territory to Japan, and the Japanese encroached further. The USA and Soviet Russia supported Chiang Kai-Shek to resist the Japanese. Yet Chiang spent more of his time and resources against Communists than against the Japanese. In 1927, workers had managed to seize Peking. When Chiang's army arrived in the north, Communists were massacred. Mao managed to escape and built more of a following amongst the peasants. Surrounded by Chiang's forces, he and supporters embarked on the Long March to set up a new base. As support for him gradually grew in the rural areas, he gathered enough forces to oust the Japanese and then consolidated his position.

By 1956 Mao was confident enough to call for new ideas from the people: 'Let 100 flowers blossom', only to retreat from this when his grip on power looked less secure. Instead he launched 'The Great Leap Forward' in 1958, insisting that industry should be spread around the countryside. The Chinese should 'walk on two legs', not just rely on heavy industry like Stalin. An infamous famine ensued. The Cultural Revolution 1966-1976 was, in Frances's words, 'a last gasp' of trying to keep alive the idea of revolution, to demonstrate zeal for communist ideals, engage young people and keep criticising anyone insufficiently revolutionary, so avoiding a descent into corruption and comfort.

With Mao still at the helm, retaining his staunch support for the rural population, intellectuals were labelled 'ivory towerists'. So Frances and her fellow visiting students also had to learn from workers in the fields of the 'eternally green' people's commune, within sight of the New Summer Palace. They picked spring onions, planted rice and bundled Chinese cabbages with rice straw. Cabbage was a staple of the monotonous and minimal winter diet. There was great excitement in March when celery was added to the narrow repertoire.

But by 1976, people were fed up with the repetitive political movements, orders to attend political meetings, and the lack of consumer goods. With Mao's death, the time was ripe for a new direction. The incoming leader, Deng Xiaoping (1904-1997), had been a star of the military campaign to take southern China in his youth. Amazingly he survived the intervening years, despite being less purist and more pragmatic than Mao. He encouraged dramatic and rapid transformation in the operation of the economy and in the way of life.

Xi Jinping (born 1953) has been Paramount Leader since 2012. The latest slogan, 'China Dream', has simply been pinched from America. Being a rich and powerful nation is the main aim, retaining a strong sense of identity while engaging more with the outside world. The scale of cities still strikes Frances as extraordinary and rather baffling, and the environmental damage done within the country and globally is huge. But millions have been raised out of poverty, without creating a population explosion.

Yet for the CCP to maintain itself for the next 100 years, it needs not just to be tough and invest in infrastructure to maximise reach for resources and routes to markets ('the new silk roads'); it needs to have a dream with some substance. Could it be a fearless leader on climate change? Judging by the vast extent of solar and windfarms, there is surely potential to work at pace and at scale across many other elements of mitigation and adaptation.

The Chinese are writing a new history of the CCP. Mao will feature less prominently than when Frances first went to China in 1971. Uncomfortable episodes of the 20<sup>th</sup> century were omitted from the 1970s university courses, and the Chinese still have not resolved how to deal with events of the cultural revolution. Another 100 years may have to pass before they can confront and recount what really happened.

***Rachael Unsworth***

### ***Artificial Intelligence Part I Professor Netta Cohen***

*23 September 2021*

*Netta Cohen is Professor of Complex Systems in at the University of Leeds. In her research, she aims to elucidate fundamental principles and mechanisms that allow biological systems to generate robust and adaptive function. She then works to harness those principles in control engineering and robotics.*

*Her contributions have generated new understanding of the organisation and function of different nervous systems, rhythm generation in heart cells, and mechanisms of motor control and decision making in invertebrates. In parallel, she is developing intelligent and autonomous robotic platforms for self-repairing cities and underground pipe inspection.*

*Netta joined the School of Computing University of Leeds as a Lecturer in 2002. Previously she was a Postdoctoral Fellow, jointly across Physics and Zoology. She received her education in Physics from Columbia University, New York and the Technion-IIT. At Leeds, she has led or co-lead a number of projects, spanning topics from neuroscience and plant biology to robotics. She serves on a number of editorial boards, professional bodies and scientific advisory boards.*

In the first of this two-part series on artificial intelligence (AI) Professor Cohen set out to examine the nature of AI, what it is, how it works, what it has achieved so far and what it might do in the future.

Beginning with the thoughts of Alan Turing and his contemporaries in the 1940s, through the early developments in the 1960s and 70s to the present day, Professor Cohen showed that AI is not one thing but many, with the broad goal of achieving human or animal-like intelligence in an artificial computer, sometimes coupled with robotic systems that interact with the real physical world, or speaking systems that converse with people.

The breadth of the presentation was impressive. It began with an account of symbolic knowledge representation and reasoning systems (Good Old-Fashioned AI), then changed focus to the data-driven machine learning approaches that have dominated in more recent times. It finished with an account of Netta's own work using a species with intelligence significantly simpler than that



of human beings: the nematode worm *Ceanorhabditis elegans* deploys its limited 300 brain cells to control the search for food and the basic biology of movement, eating and reproduction. Understanding the ‘rules’ governing this relatively simple way of behaving gives a basis for building a robot simulation to achieve useful tasks. A typical, though rather unexpected practical application, is the development of robots to move over tarmac roads discovering and mending cracks. This system has been tested on over 300km of Leeds roads.

Netta also described other applications developed in the University of Leeds that are now in use in a range of settings – from supermarkets to underground infrastructure maintenance. These artificial systems that understand images, speech and text have become part of our everyday lives. Increasing numbers of tasks will be given over to or undertaken for the first time by machines. Robots can work in places and conditions where humans cannot venture directly or where the work would not be endurable or affordable if done with direct human agency.

Linking to the talk on the ethics of AI given as Part II by Gabriela Bruneau Arriagada was the point that highly sophisticated robots can process huge quantities of data and rapidly come up with strategies that no human could devise. There is the uncomfortable realisation that they can leave their human inventors powerlessly on the sidelines, unable to go in and tweak the behaviour of machines they have created.

A listener to this presentation will have had an excellent and comprehensive introduction to the modern field of artificial intelligence, coupled with a good account of the historical background. No talk is perfect and there was only one hour, but personally I would have liked to have heard a little more about the deep neural networks that have revolutionised the field and brought effective AI to our own computers, cars and smart phones, and perhaps a little on how technological developments have enabled both vast data availability and the computer power to train AI methods on it. But these are small quibbles, and perhaps for another presentation. This was a fantastic talk.

*Dave Westhead*

### **Artificial Intelligence Part II: Gabriela Arriagada Bruneau**

*11 October 2021*

*Gabriela Arriagada Bruneau is a third-year PhD candidate in the Inter-disciplinary Ethics Applied Centre (IDEA) and the Leeds Institute for Data Analysis (LIDA) at the University of Leeds. After her degree at the University of Santiago, she studied for an MSc in Philosophy at the University of Edinburgh. She is director of Applied Ethics for the Think Tank "Thinking Network" (Pensar en red) in Chile.*

*Many involved in AI are on the scientific and technological side: using ‘big data’ to create AI systems and refine their effectiveness in carrying out tasks. Gabriela, however, instead of being firmly within an established academic discipline, is bringing a philosophical lens to the science and technology of Artificial Intelligence.*

*Her work is mostly focused on fairness, bias, explicability, and interpretability in Data Science and AI. She is especially interested in the distinction between bias and fairness. If data contain*



*biases – how are the data specified, gathered, structured – then this has implications for the nature of the AI. Don't we need to be critical about what goes into systems in the first place as well as how they're applied? She is also interested in gender discrimination and feminist approaches to understanding these issues. She is keen to involve non-English speakers and those outside academic life in debates about AI.*

Gabriela warned us that this is a huge, fast-developing, complex and inter-disciplinary area. She could only sketch the landscape of artificial intelligence (AI) challenges we have to think about now, and raise questions about what could come next.

First came a 'map' setting out the usual way of breaking down the topic. The talk was illustrated throughout with clear diagrams. Straight away we were drawn into considering some fundamental questions, such as:

How close can a machine get towards operating as a moral agent like a human? What if we manage to develop a sentient, rationale artificial intelligence with its own needs, volition and intentions? Are we at risk from our own creations? What moral status will be given to machines? How will robots be integrated into society? They are getting better at doing tasks that have hitherto always been done by humans. So, just as there have been debates about incorporating animals into the moral sphere, we are now faced with considering how robots might be related to humans if they have capacities suggesting that they should be accorded rights and expected to abide by responsibilities. This is whole sub-field in itself.

Algorithms and models present many difficulties. There were clear links to Netta's earlier talk: we have created the algorithms, but once we set them running, we cannot follow every step and understand exactly how they are operating. How can we then judge the output if the process isn't completely transparent?

There are also ethical issues to do with how people's data are used. Inevitable tension arises because we need data to make AI work, and the more detailed and complete the sources, the greater the likelihood of effective AI. But privacy and security concerns loom large. How to implement data-driven technologies in ways that uphold ethical principles that we value?

Ethical considerations go beyond asking 'should we'? If we say yes in answer to this, then we need to make practical suggestions towards answering: 'how'? Risks and types/levels of control have to be considered. There are a wide spectrum of responsibilities. These are not new dilemmas – indeed, such dilemmas have been at the heart of philosophical enquiry for centuries – but they are being played out in a new realm of AI. These are not just rarified theoretical ethical discussions; there are real implications.

### **Manipulation**

One such area has been much in the news over the last few years. We know that algorithms have been used to manipulate opinions and actions and this affects our trust in people and systems. Gabriela drew attention to the phenomenon of 'deep fakes': creations or alterations of information and images deliberately intended to deceive. Acquiring sound knowledge is harder. Algorithms lead us down pathways and close off other possible pathways. These 'filter bubbles' prevent us from seeing options side by side, argued logically and dispassionately. Other people's choices help to channel our own choices and therefore alter our perceptions of what's happening.

Acquiring sound knowledge becomes harder when there is overload and manipulated information. Even educated and critically alert people can be taken in; more impressionable people, including children, can be completely deceived and even knowingly welcome being drawn down a channel. Product preferences are one thing; political and ethical ideas are more problematic.

This is a technology-driven version of what has always happened in human society but the scale and pace of the phenomenon is concerning. We think we have been empowered, but we're being led rather than exercising choice. Truths are being inferred from false premises. Digital literacy principles are ever more necessary – an 'anti-ignorance' movement. There is a difference between information readily accessed and the critical appraisal of different sources of knowledge to establish and refine proper understanding.

### **Design**

“Data do not speak for themselves. They need a context, they need a purpose, and that's why design can be a game-changer”.

AI is often built on simplified and partial and or biased data, uncritically accepted for lack of anything more comprehensive and consciously quality-controlled. Discrimination and inequality is being replicated in the systems being created and the decisions and actions that follow on. Technical feasibility isn't enough; the process of building systems needs to be informed by the ethical standpoint of the real world into which AI is being deployed and be done with awareness that values and laws aren't uniform across the world and throughout all societies.

Human-robot interactions are a special topic of concern. There are strong arguments in favour of providing robots for various kinds of intimate interactions with humans – for sex, for care. But there are also counter-arguments. There is the practical challenge of creating appropriate functions but also the danger that successful robot functioning might lead to vulnerable people being liable to over-interpreting the nature of the interaction. Might those reliant on robots become more uncomfortable with real interactions?

Robots with the capacity to decide to kill are a particular fear and the debate is far from resolved.

There are no solid, settled answers to these extremely complex matters. Efforts such as Gabriela is making to involve non-experts in the ethical debates are welcome. We should all be taking an active interest in this rapidly developing area of science, technology and ethics.

*Rachael Unsworth*

## **Annual Priestley Lecture**

held jointly by Mill Hill Chapel, the Leeds Library and the LPLS

### ***The Air We Breathe: how understanding of disease transmission has evolved during COVID19***

**Professor Cath Noakes**

*1 November 2021*

*The President of LPLS, Professor Eric Blair, introduced the lecture with some background on **Joseph Priestley**, born not far from Leeds and a remarkable 18<sup>th</sup> century polymath. In the field of science Priestley is possibly best remembered for his contribution to the understanding of the chemistry of gases and in particular the discovery of oxygen.*

***Cath Noakes**, Professor of Environmental Engineering for Buildings, is based in the School of Civil Engineering at the University of Leeds. Professor Noakes is a chartered mechanical engineer with a fluid dynamics background. She leads experimental and modelling-based studies including the exploration of airborne pathogens and the influence of indoor air flows. She is a member of the Government's Scientific Advisory Group for Emergencies (SAGE) and a Fellow of the Royal Academy of Engineering. She is currently Deputy Director of the Leeds Institute for Fluid Dynamics (LIFD) with which the slides used in the presentation were associated.*

The lecturer began by identifying the burden of respiratory diseases which can be caused by air transmission and potentially lead to death. At the time of the lecture the Covid-19 virus was estimated to have resulted in some 5 million deaths and 250 million confirmed cases. The worldwide cost was estimated to be a staggering one trillion dollars per month. The understanding of the influence of the environment and ventilation in airborne disease transmission dating back to Florence Nightingale was explored. The Covid-19 pandemic has thrown science into the spotlight and led to an improved understanding of the transmission of pathogens, knowledge which has been used by governments to plan strategies in response. The evidence for airborne virus transmission was described and the existence of multiple routes and risk factors for transmission cited. No one thing is the answer and there are multiple factors to consider. The risk profile embraces environmental factors (high people density, poor ventilation, highly populated spaces, temperature and humidity) and human factors (form of activity, breathing characteristics, duration of exposure, contact network, hygiene behaviour, socio-economic).

The details of the significance of breathing mode and exhaling were discussed. Particle counters had been employed to investigate exhaled particles with different activities – singing, speaking, coughing, breathing etc. There is an enormous difference in respiratory particles emitted by different individuals. What happens to breath has been examined by thermal imaging cameras. The coronavirus itself is about 100 nanometres in size but does not travel on its own but associated with aerosols (less than 5 micrometres) exhalation or greater size droplets. With such knowledge how does one then prevent or mitigate transmission – face masks, avoiding face touching, hand hygiene, time of exposure, screens, test and trace, ventilation, quarantine, government advice, vaccines?

The link between ventilation and Covid-19 spread is complex and there is a huge variability in understanding and interpretation. It is recognised that poor ventilation can affect health, sleep,

productivity and so on. But understanding ventilation in buildings is complex: what is the rate of ventilation, how is it measured and what metrics do we need for health and airborne pathogens? There are also competing priorities in building design – excluding outdoor pollution, energy usage, noise, cost etc. There is much to do in improving the design of buildings for better health and retrofitting is complex.

An outstanding and informative lecture was concluded with amongst other things some interesting publication statistics. The influenza pandemic of 1917 has resulted in an estimated 134,000 publications. The SARS-CoV-2 (coronavirus) had already generated some 93,000 publications between early 2020 and late 2021. This represents a great deal of research that needs to be sifted to address the embedded beliefs and take forward sound measures to support people and countries. As Professor Noakes commented: real-time science (and I might add engineering) is in the public eye, and everyone has a view.

**Chris Taylor**

***The Mars 2020 Perseverance Rover and the search for ancient life on Mars*** Prof Nick Tosca  
17 November 2021

*Professor Nicholas Tosca is at the University of Cambridge Department of Earth Sciences. His research focuses on unravelling the processes that shape planetary surfaces using experimental and theoretical approaches to understand how sediments and sedimentary rocks on early Earth and Mars record aspects of paleo-climate and habitability. He served on the International Mars Sample Return Objectives and Samples Team and the NASA-ESA Mars Sample Return Planning Group, and the hope is that, if and when the collected samples of rocky material are eventually returned to Earth, they can be analysed under laboratory conditions.*

Why go to all the trouble and expense of an unmanned mission to Mars to gather imagery and collect samples of Martian material? Here on Earth, rocks have been subjected to substantial disturbance from weathering and plate tectonic movements. It means there is very poor evidence of the presence of very early life forms on our own planet. Sedimentary rocks on Mars have largely retained their structures, so it is hoped that Martian samples might contain the signatures of primitive life in the form of the vesicles of fatty acids which would date back 3.5 to 4.2 rs. On the Earth all such ancient remains have been long destroyed.

Professor Tosca described the Perseverance Rover, including showing a video of its touch down on the surface and its path to where suitable rocks on the edge of the remains of a primitive lake in the Jezero Crater might be found. He described the various instruments carried for measuring surface properties and the device for drilling into chosen rocks and depositing the powdered material into containers which would sit on Mars until the “rescue mission” eventually arrives and returns them to Earth for detailed laboratory analysis.

Finally, there was a quick update on recent and future activities of the project team. This was a fascinating and scholarly talk and much appreciated by the audience.

**Robin Jakeways**

## ***Leeds in 1821 – a presentation at Leeds Museum...Rachael Unsworth***

*2 December 2021*

***Rachael Unsworth*** is an urban geographer fascinated by the long-term evolution of cities, including prospects for the future. After a geography degree and PhD from the University of Cambridge, Rachael became Head of Research for a firm of surveyors in London. Back in Yorkshire from the mid-1990s, she was a part-time lecturer at the University of Leeds until 2013, specialising in urban development and the geography of natural resources.

From around 2000 she became involved in research, policy and practice in the city of Leeds: planning, urban design, development and regeneration, housing and environment. Publications include '21<sup>st</sup> century Leeds: geographies of a regional city' (published 2004) and 'Leeds: Cradle of Innovation' (published 2018).

Since 2019 she has been running Leeds City Walking Tours, taking groups of locals, visitors and professionals on a range of tours and also offering online presentations.

In the late 18th century, a few Leeds men tried to form a Philosophical and Literary Society. The time wasn't quite right and it didn't get off the ground. By 1819, in the thick of the 'industrial revolution', there was a sufficient head of steam and the founders quickly commissioned their own building. The Philosophical Hall in Park Row (see front cover) opened in April 1821, providing a lecture theatre, library and museum – the predecessor of today's Leeds Museum. Who were the men who founded the 'Phil & Lit'? How did they fit into the economic, social and political scene of the times? What role did the Society play in the Georgian town? This talk set the Phil & Lit in its historical and geographical context.

We have vivid evidence for Leeds in 1821: what was where – streets, buildings and facilities; influential people; main events of note; how the townspeople earned their living and what they were concerned about; the state of health care; education and cultural life; and the movement of people, materials, goods, energy and ideas. We can glimpse aspects of a growing and dynamic place, through ever-denser smoke.

Our main sources about Leeds at this exact moment are a trade directory, a detailed map complete with identification of all the public buildings, the census of that year and newspaper reports. All this can be read in the wider context of historical analysis of the era after the Napoleonic Wars as Britain was going through a period of rapid and turbulent change.

Leeds had been a hub of commerce for centuries, specialising in the trade in woollen cloth. With advantages of waterways and natural resources, especially coal, the town was well placed to be in the forefront of industrialisation. Integration of all cloth-making processes in new 'manufactories', with mechanisation progressively replacing manual elements, led to increased output. There were possibly 70 factories by 1821, though the majority of the workforce was not in factories and despite woollen cloth comprising a third of the value of national exports the local economy was becoming ever more diverse.

This positive story of entrepreneurial effort and innovation has to be set against the deterioration in living and working conditions for many locals and new incomers. The 1821 Census recorded

nearly 84,000 people within the parish of Leeds – up by 34 per cent since the Census of 1811. It was now one of the most populous towns in the country. The old streets became increasingly congested and unhealthy; unplanned, piecemeal development of small houses on the east side of town was well under way and many of these dwellings rapidly became dangerously insanitary. Even the new, planned streets of the west end were not desirable residential alternatives for long, as smoke from factories and many other buildings filled the air.

Victory over Napoleon was followed by several years of economic instability and social unrest. A swelling labour force, mechanisation causing dislocation and fear, some poor harvests, regressive taxes and lack of inclusive democracy made for a volatile political environment.

Pressure for reform focused on prices (and the impact of unfair taxes), wages and representation. It took until the early 1830s for the growing towns of industrial Britain to gain their own MPs, for more (male) citizens to be able to vote, and for major local government reforms. Effective legislation to improve working conditions was also some way off. Meanwhile children were amongst the workforce putting in long hours in mills and other businesses that are all listed in the Baines Directory, published early in 1822. By 1821, economic growth was widening opportunities and the workforce was less inclined to insurrection. But clashes continued between the Tory government, under long-serving Lord Liverpool, and the Whig opposition. The Church of England, an essential element of ‘the Establishment’, was aware of the threat from non-conformist groups (Methodists, Baptists, Quakers, Unitarians, Congregationalists & others). Money was poured into church building in an effort to provide for new neighbourhoods, though chapels continued to outnumber churches. An inadequate patchwork of education was provided by the Church and charities, chapel Sunday schools, the old Grammar School and small independent academies. The right for every child to have at least minimal education was still half a century away, as was the foundation of the Yorkshire College of Science (later the University of Leeds). So the Phil & Lit, with its nascent museum and library as well as its lectures, offered a significant addition to public culture in a town that, aside from its 150 taverns, had two subscription libraries, one theatre, a music hall and the Assembly Rooms.

While factionalism and heated debate played out in public meetings, Parliament, the newspapers and in private conversations, the Phil and Lit had decided that the Society would be open to all, regardless of political or religious affiliations, and that meetings would steer clear of these contentious topics. Amongst the men who led the Society at its inception were Tories and Liberals, Churchmen and non-conformists, merchants, industrialists, scientists and medical men (including physicians and surgeons practising at the Leeds General Infirmary just round the corner from Park Row). Women were welcome to attend the lectures but it was many decades before women were invited to speak on the platform or elected to the Council of the Society. Ahead lay so many struggles and discoveries, reforms and innovations.

Maybe the Society of 2021 will look back and consider the life of the city 200 years before. It will be even harder to summarise adequately within an hour.

*Rachael Unsworth*



## **Reports received by January 2022 on Grants awarded by the Society**

*The COVID pandemic has resulted in delays in the completion of some of this year's projects*

### **Headingley Enterprise and Arts Centre (HEART) in 2021**

*£500 to Liz Jeffery to support the 10th anniversary celebration of the Centre*

LPLS were good enough to award the Heart Centre, Headingley a grant of £1000 at the end of 2020 towards the tenth anniversary and celebration, in 2021, of the existence of Heart in the centre of the Headingley community. Specifically, the grant was to help fund the Room Art Commissions project, the total cost of which amounted to £2050, with the remainder of the money provided by Heart itself and by Leeds Inspired.

2021 has inevitably been a difficult year to organise celebratory events, because of Covid 19 restrictions. However, the Room Art project, although delayed from the original start date, was able to proceed and has proved a great and ongoing success. Seven artists in all were commissioned to produce art works and contributed to the project, all of whom are or were until recently local residents and range in age from their early twenties to their seventies. The art produced was similarly diverse, including a variety of different styles and techniques.

In June of this year, a public exhibition of all seven works took place at Heart. Each work represented an artistic depiction of one of the rooms in Heart, all of which are named after local roads or landmarks e.g. the Shire Oak room, the Ridge and Claremont. The public exhibition of the work was well-attended, subject to the Covid rules in operation at the time and each piece was subsequently re-hung in the relevant room where they will remain on permanent display.

Heart was and remains very grateful to LPLS for the generosity shown in providing the grant, which has helped Heart to mark its 10<sup>th</sup> anniversary in a meaningful and lasting way.

*Liz Jeffery*

### **Digitisation of Series 1 of the Thoresby Society's Publications**

*£500 to John Townsend towards the above*

Every year since 1891, the Thoresby Society has published volumes on the history of Leeds, but most of these publications, which were produced in limited numbers, are not now readily available. In order to make them accessible to interested readers everywhere, the Society has embarked on a digitisation programme in conjunction with the Internet Archive, one of the leading web platforms for the supply of digitised material. In 2021, the first series of the Society's publications, running from 1891 until 1990, were digitised and are now free to view or download on the Internet Archive website. This project has brought into the public domain a wealth of historical material, ranging from transcriptions of primary source material such as parish registers, wills, newspapers and other documents [a particular emphasis in the early decades of the Society], through reports of archaeological excavations at Kirkstall Abbey and elsewhere, monographs on subjects as diverse as the early Leeds Volunteers, Sorocold's Waterworks, Leeds

Music festivals and the “Wild Indian Savages”, to major works of original research such as W. B. Crump’s compilation of studies on the “Leeds Woollen Industry 1780-1820” and Maurice Beresford’s magnificent volume on early urbanisation in Leeds, “East End, West End”. The complete series can now be viewed by searching on the Thoresby Collection on the Internet Archive web site, or by following the links from the publications page of the Thoresby Society site. This project has been greatly assisted by financial support from the Leeds Philosophical & Literary Society, for which the Thoresby Society is most grateful.

*John Townsend*

### **Biography of the Leeds poet Eliza Craven Green**

*£500 to Spencer Needs towards the cost of printing the above biography*

The biography entitled, *Poverty, passion and poetry* has now been printed.

It brings to light the life of Eliza Craven Green, an early Victorian Leeds poet who attained literary acclaim despite her humble origins.

Her major work *Sea Weeds and Heath Flowers or Memories of Mona* was published in 1858 and contains 138 poems. It went to a second edition and a paperback version was also printed. Eliza is best remembered today for her 1854 poem ‘Ellan Vannin’, which was set to music by J. Townsend and is still much loved in the Isle of Man.

The Society’s generous grant of £500 was applied to copyediting and proofing costs which in total were £1219.30.

This grant was crucial to completing this project and I am extremely grateful. It has been acknowledged in the book and I am very proud that the book carries the emblem of the Society.

*Spencer Needs*

### **The Remarkable Story of Hunslet.**

*£1000 to Steven Burt to support the publication of his new book*

The money has now been raised to publish ‘*The Remarkable Story of Hunslet*’ by Steven Burt (edited by Dr Kevin Grady). The book charts the history of this out-township of Leeds from earliest times to the present day, and is based on over a decade of in-depth research. It is a 344 page hardback volume and is full-colour throughout. It includes over 200 illustrations comprising portraits, photographs, drawings, watercolour paintings, maps and plans. The book contains a vast amount of new information on the history of Hunslet which historians, residents and the general reader will find of interest.





This reconstruction of Hunslet Hall shows the magnificent home of the Neville family which, apart from Farnley Hall, was the finest residence in the parish of Leeds in the Tudor period. (Peter Brears)

Thanks to the Leeds Philosophical and Literary Society's grant it was possible to pay copyright clearance fees for permission to use rare images, including remarkable aerial views of Hunslet in 1929. This illustrative material was held by many different organisations, including The Royal Society, Historic England and West Yorkshire Archives. These illustrations enable the reader to gain a better understanding as to how Hunslet developed into one of the world's first industrial settlements. The book will be published in March 2022.

*Steven Burt*

### **Film of Performance at the Nave, Pudsey**

*£250 to Claire Roberts, to support a collaboration with Jacob Savage and players from Opera North at The Nave, Pudsey*

The recording day took place in January as planned, at the Nave in Leeds. The funds from LPLS were used to fund a film of the performance with Leeds-based videographer Jacob Savage. We spent the day filming, and in the weeks after the footage was edited and synced to the audio recording, and Jacob was paid on receipt of an invoice for his work. The recording has been viewed online leading to sales of the music and the piece being shortlisted for a contemporary composing competition in Shanghai in 2021. The recording, studio hire and performer fees were funded by the Ambache Trust, RVW Trust, Boas Trust and Gemma Trust.

<https://www.youtube.com/watch?v=Brijmn0boT9I>

*Claire Roberts*

## **We Will Be Pioneers**

*£300 to Kerry Harker towards the design, print and distribution of a free newspaper titled 'We Will Be Pioneers'*

Support from the Society (£300) was used for the newspaper and was also supported by Leeds 2023 and Arts Council England. The newspaper accompanies our bid to co-create the first makerspace for East Leeds, the 'East Leeds Pavilion', working collaboratively with our local community. Being able to distribute free print locally is particularly important in an area with high levels of digital exclusion.

2000 copies of the 24-page newspaper have been produced, including information on the project and the findings of our research and development activities over the past two years, told primarily through the words of East Leeds people who have been involved. In line with best practice for accessibility, the newspaper was produced with body text at 16pt size for legibility and is also highly visual to engage as many people as possible of different ages and from different backgrounds.

We are currently distributing the newspaper through East Leeds, including via the following venues: Chapel FM (Seacroft), Space2, The Old Fire Station, Paula's Cafe, Chelly's Deli, Church of the Epiphany, Gipton Methodist Church, Gipton Working Men's Club, Oakwood Lane Surgery (Gipton), Bellbrooke Surgery, Compton Road Library (Harehills), Cross Gates Library, Oakwood Library

We continue to share it with other venues and our partners across East Leeds and further afield, including in the city centre. We have also done a mail-out to approximately 150 individuals to date, including our funders and key contacts within Leeds City Council, Arts Council England, Leeds Community Foundation, Leeds 2023 etc. A copy has been sent to Dr Hatton of the Leeds Phil & Lit Society and we would be delighted to share further copies with the Society - please just let us know if you would like some.

The total cost of the newspaper, including design (Paul Harker, East Leeds Project), print (via Newspaper Club) and distribution (letterheads, envelopes, stamps) will be approximately £2500 once the mailout is completed. The Society's contribution of £300 helped enormously and we are extremely grateful for your support. A second newspaper is planned for later this year and we would respectfully like to approach the Society for further funding.

The newspaper can be read and downloaded as a PDF via our website at <https://eastleedsproject.org/we-will-be-pioneers-newspaper/>.

***Kerry Harker***

## **Tolkien in Leeds**

*£600 to Verity Watts towards an audio documentary inspired by Tolkien's legacy in Leeds*

The Leeds based audio/podcast collective Better Songs Productions joined with local Poet and Performer Jimmy Andrex to explore the legacy J.R.R Tolkien left behind in our city after his time as Professor of English at Leeds University from 1920-5. This immersive and rhythmical

audio experience gives listeners a different, accessible perspective on the legendary author along with a deeper understanding of how his time in Leeds may have shaped his future work and literary influence.

The documentary begins with Andrex at Sandal Castle, exploring and explaining the concept of alliterative verse, a style Tolkien loved to use in his work, and why he and other Northern poets have employed these ancient techniques to bring life and authenticity to their modern writing. This 'Old Norse' style of prose is exemplified in work such as *Gawain and Green Knight* which was translated by Tolkien himself and has the roots of much of the syntax and dialects of spoken English in Northern England.

We then hear from Dr Alaric Hall, Associate Professor of English and the Director of the Institute of Medieval Studies at the University of Leeds who is in many ways Tolkien's contemporary in this role. Dr Hall explores how Tolkien felt about his time in Leeds and how this can be seen in his work, both through his style of writing and his response to the industrial environment of the city at the end of the First World War. He also reveals how Old Norse language is continues to be used in Leeds and the wider Yorkshire area.

The documentary culminates in an original piece of work 'Billy Baggins: There and Back' written by Jimmy Andrex for the project which pulls together the influences of Leeds on Tolkien as well as being a celebration of alliterative verse through a modern interpretation of the Bilbo Baggins style anti hero as the archetypal Leeds lad. A mood of medieval eeriness is created throughout the piece through the production and editing skills of Better Songs' Producer Verity Watts.

The programme is available to listen to on worldwide media platform Mixcloud as well as via the Better Songs website ([www.bettersongs.co.uk](http://www.bettersongs.co.uk)) and was broadcast on Leeds based Chapel FM's long established literary podcast 'Love the Words'. The project was recorded and made entirely during lockdown.

*Verity Watts*

### **Northern Sustainable Darkroom in East Street Arts building**

*£300 to Edward Maughan-Carr to purchase equipment for a darkroom*

Since the award of the grant from your society, the Northern Sustainable Darkroom has now flourished into a recognised photographic research facility, that has been featured across numerous organisations. We used the award to purchase a moving image development tank, alongside a projector for analogue formats. The moving image tank is a rare item, developed exclusively in Russia by the LOMO company and now out of production. I acquired one on eBay for the Sustainable Darkroom in mint condition, with original box, for the use of our artists. Alongside this, I used the grant to purchase a EUMIG projector, meaning the film developed in the tank can be projected on site. In addition, I was able to acquire an 8mm boles with the remaining funds, to be used by our artists and art residents - creating an entire ecosystem for moving image within the sustainable darkroom, which would not have been possible without the funds from your organisation.

Additionally, we recently launched the Photographic Garden residency programme, providing 8 artists from around the UK and Europe with the means and facilities to research different topics around the idea of a photographic garden. We recently built a garden attached to the darkroom, where we can grow our own plants in-house to be used in sustainable photographic processes. We have individuals researching topics from plant-based alternatives to toxic chemicals, to hydroponic systems to clean our waste water, and growing fungi to decompose waste plastics. Because of the funding provided by your organisation, we were also able to take on a handful of proposals working with moving image, as the artists are able to utilise the equipment we purchased through the grant. At the end of the residency, we are planning to host an exhibition of works and research produced by the artists. With the moving image artists, we will be able to utilise the equipment purchased through your grant to adequately exhibit their works. Please see a link to a gallery of images exhibiting the now functional darkroom:

<https://drive.google.com/drive/folders/1hBhPWIV0ErKXo-Ub1RmAr3DCwiYAvluh>

***Edward Maughan-Carr***

### **‘A Midsummer Night’s Dream’**

*£600 to Olivia Race on behalf of Front Room Productions to support performances of ‘A Midsummer Night’s Dream’ at Temple Newsam Estate in August 2021*

We applied for support towards Front Room Productions’ abridged and accessible promenade version of Shakespeare’s A Midsummer Night’s Dream. We held 14 performances of our modern, Leeds based adaptation in the Walled Garden at Temple Newsam in August 2021, transporting the play to a modern day setting, yet delivered in the original tongue.

We aimed to make the production fun and relatable and 99.5% of our audience confirmed they had fun watching the production; 75.9% of audiences said that we had made the show more relatable for them by setting the production in Leeds. The audience written feedback also confirmed we’d created a fun and accessible production:

“Loved it! English is not my first language and being married to a Yorkshireman, really appreciated the reference to local places and accents.”

“The most enjoyable production of AMND I have seen. And I've seen a lot I can tell you.”

“Entertaining, thoughtful + very funny indeed”

We wanted to create a unique experience for the local community, and were keen to continue to connect with audiences local to Temple Newsam. Of our total audience, 37.6% gave ‘I live nearby’ as a reason for attending, which is an increase on our 20.3% of audience from ‘Twelfth Night’. We also wanted to create a show family audiences would enjoy, & we reassigned the gender of Lysander to better represent diverse 21st century relationships. Audience feedback again confirmed success:

“Brilliant - very well adapted with the music and Leeds focus - my 12 year old was engaged. I also liked the inclusion of the same sex couple!”

“Really enjoyed it. 2 kids (9 & 7) followed it well, and liked the use of music”

The success of the production of AMND at Temple Newsam has secured a working relationship with Temple Newsam as a venue. We sold 93% of our available tickets, and although we didn't have as many tickets available per performance as in 2019 for TN due to restricting capacity as part of our Covid- 19 measures, more people attended in total. These are incredibly encouraging figures proving there is an appetite for the work we produce in Leeds, providing us with evidence for longer term planning. West Yorkshire Mayor Tracy Brabin attended one of our performances of AMND, she gave wonderful feedback and is keen to continue to engage with us in the future, and will support the performances in whatever way she can.

Please see Production photography here:

[https://drive.google.com/drive/folders/1uy5Ftfp2uIA6\\_g1iACdENAJ1dGsr7azx?usp=sharing](https://drive.google.com/drive/folders/1uy5Ftfp2uIA6_g1iACdENAJ1dGsr7azx?usp=sharing)

### ***Olivia Race***

### ***Possible All Along - online exhibition by disabled artists in Leeds***

*£230 to Gill Crawshaw towards the cost of producing an essay to accompany the exhibition*

This grant was to commission two Leeds disabled writers to write a short essay (approx. 800 words each) to accompany the online exhibition, *Possible All Along*: <https://possibleallalong.co.uk/>.

The essays have been published on the exhibition website:

<https://possibleallalong.co.uk/expendable>

and <https://possibleallalong.co.uk/because-were-worth-it>

I wrote a brief introduction for both, which enabled me to also thank LPLS for the grant.

These are both powerful pieces of writing that give an unflinching account of the experiences of disabled people during the Covid 19 pandemic. I have shared them with Leeds Museums and Galleries community team and Healthwatch Leeds, who were collecting these sorts of accounts (although in much shorter form) last year.

Leanna Benjamin's essay has also been published, with acknowledgement of LPLS's support, on the Disability Arts Online website: <https://disabilityarts.online/magazine/opinion/leanna-benjamin-on-being-creative-through-a-time-of-crisis/>. Disability Arts Online is the UK's leading journal for news and opinion on disability and the arts, so the essay will reach a wider, national (and international) readership.

Both essays have been shared widely on social media. Publishing them has given a boost to the number of visitors to the exhibition as well. I will continue to look for other opportunities to share and perhaps re-publish these essays.

The grant was spent in the way outlined in my application.

### ***Gill Crawshaw***

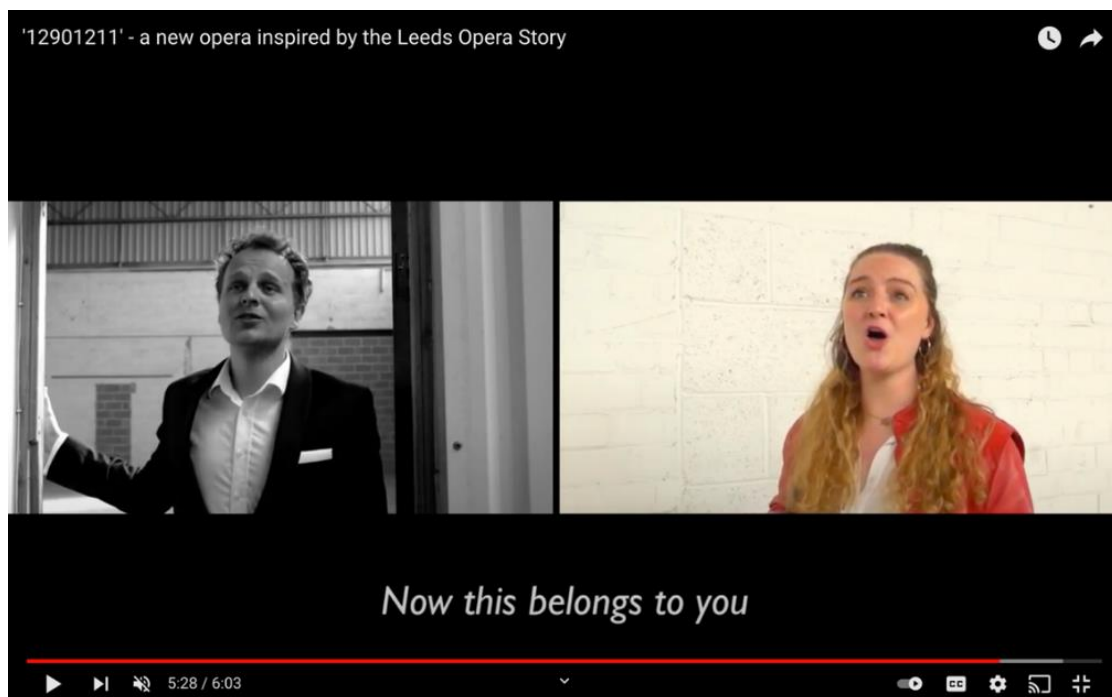
## **The Leeds Opera Story**

*£850 to David Ward to support public events and an exhibition on 300 years of opera in Leeds*

This grant supported elements of our Leeds Opera Story project – exploring the hidden 300-year history of opera in Leeds. We produced an online exhibition in August 2020, before being able to hold our full in person exhibition in August 2021 as part of the Leeds Opera Festival.

In Spring 2021 we commissioned local artists Carmel Smickersgill (composer) and Emma Hill (librettist) to create a new short opera for online broadcast inspired by elements of the Leeds Opera Story. They created a short film opera (below) comparing Ernst Denhof's seminal 1911 Ring Cycle, and a modern-day producer struggling to cope with the demands of staging opera during the pandemic. This piece created an important artistic response to the heritage, and produced a new perspective on elements of the story. With ongoing restrictions preventing live performance, this film adaptation enabled us to reach more audiences online, with over 1,500 viewing to date. It was filmed at Testbed, Leeds, and featured tenor Kamil Bien and soprano Beth Moxon, with pianist Jenny Martins and violinist Chloe Hayward.

Our free walking tour was themed around five key theatres (past and present) to Leeds' operatic heritage. The theatres featured were the existing Leeds Grand Theatre, Coliseum (now O2



Academy) and Leeds Civic Theatre (now Museum), with the demolished Theatre Royal and The Theatre. It can be carried out on foot, or at home, with accompanying online maps and images. The tour focuses on key information on each theatre, and the role it played in the theatrical and operatic development of the city.

Both the film and walking tour will be available for people to enjoy for free online in perpetuity - see website: [northernoperagroup.co.uk](http://northernoperagroup.co.uk) Thank you for your support, enabling us to expand the reach and benefit of the Leeds Opera Story to increase interest in Leeds' operatic heritage.

***David Ward***

## **A New Book on Insulin**

*£432 to Kersten Hall towards the publication costs of his new book on Insulin:*

The discovery of insulin was without doubt a medical milestone. It transformed Type 1 diabetes from a fatal condition into a chronic one that could be managed. Little wonder then that, Dr. Elliott Joslin, one of the first clinicians to treat patients with insulin hailed it as ‘The Vision of Ezekiel.’ His colleague Dr. Walter Campbell was equally impressed, but much less poetic, describing insulin as just ‘thick brown muck’ – albeit one that could save lives. Nearly sixty years later, insulin was again causing excitement – but this time not so much amongst clinicians as amongst traders on Wall Street who watched with delight as US biotechnology company Genentech made what was then the most spectacular debut in stock market history thanks to their production of human insulin using genetic engineering.

What then had happened in those six decades to enable this act of modern-day alchemy that transformed Campbell’s ‘thick brown muck’ into Genentech’s Wall Street Gold? Two crucial developments were the Nobel Prize winning determination of the complete chemical structure of insulin by biochemist Fred Sanger, and the analysis of the chemical composition of nucleic acids by Erwin Chargaff at Columbia University which revealed how DNA might carry genetic information. But what is less well known is that both these crucial discoveries have their origins in scientific work that was carried out in a converted stable on Headingley Lane, Leeds.

This was once a laboratory of the Wool Industries Research Association (WIRA) and it was whilst working here in 1941 that the scientists Archer Martin and Richard Synge developed a novel method of chemical separation known as partition chromatography. Although originally developed by Martin and Synge for the chemical analysis of wool fibres, the impact of partition chromatography was to go far beyond the textile industries of West Yorkshire. Fred Sanger praised it as ‘probably the greatest advance that has been made recently in this field’ and it proved to be the foundation of his work on insulin, whilst it gave Chargaff the vital method that he needed for his analysis of DNA.

In 1952, Martin and Synge were awarded the Nobel Prize in Chemistry for their invention of partition chromatography. The story of their discovery and its crucial role in the development of human insulin is told in my new book ‘Insulin, the Crooked Timber – a history from thick brown muck to Wall Street Gold’. This will be published by Oxford University Press in December to mark the centenary of the discovery of insulin. I am very grateful to LPLS for providing this grant which covered the cost of obtaining permission to use a number of key images in the book, including photographs of Martin and Synge from the National Portrait gallery and which I hope will bring them to the attention of a much wider audience. (*a partial refund of £68 was returned.*)

## ***Kersten Hall***

### **‘A Potted History - The Experimental Gardens of the University of Leeds’**

*£300 to Martin Lappage towards the publication of the above book*

The project was borne out of a love of a place where I spent most of my working life and a determination to share some of the history of Grove House Experimental Garden as it became a final chapter in the story of three similar facilities, in the Hyde Park area, just one mile from the

campus and departments of the University of Leeds they served. I am grateful for the additional impetus injected into the project by the grant funding from the Society and the challenge of the suggestion I research and share what arrangements were in place before the existence of the dedicated experimental gardens. I discovered some stand out characters, to compliment those I already knew, who helped to forge provide and sustain both garden and farm resources, supporting the teaching and research of the science faculties as they evolved from the founding of the University.

I admit my foray into the world of self-publishing was embarked upon somewhat naively. I did receive an enormous amount of help, without which my veering from horticulture and technical support to science in to the world of historical research and writing would not have been possible. I trust I have given sufficient acknowledgement, in the early pages of the book, to all those who gave this guidance. I underestimated the amount of time involved and far exceeded my initial budget forecast. The final product is though, just what I hoped it would be and more; a celebration as well as a record of the achievements, dedication and skill of staff across all levels throughout the years. Also an acceptance that some of these facilities were 'of their time' and that as the science moves on at Leeds and niches evolve, new generations of staff and facilities continue to innovate, develop and serve, adding new chapters to those of the past. The journey in producing this 'Potted History' has certainly enriched my life, especially through contacts I have made and renewed as well as the through gifts made to me of time and expertise. I hope all those who have their own connection, or have made contribution, to its content will find some memories captured with further ones evoked and those who discover the book in one of several recipient libraries will find something to inform and perhaps even inspire.

*Martin Lappage*

**David Oluwale's Leeds, 17th July 2021**

*£500 to Maxim Farrar to support a Leeds City Centre walk with music and poetry*

The funds were spent as specified in the application, except that Asher Jael was hired to replace Michelle Scally Clarke, who had to withdraw, and we also hired Slung Low theatre's mics and headphones so we could transmit all the speech to every participant while maintaining social distancing. This was paid for out of DOMA's funds. We advertised 30 places and 27 people signed up (a couple were barred by positive tests for Covid). Here is some feedback we received:

"We all gather at the Library in Commercial Street. I feel suddenly I belong, I am here together with others after much pandemic isolation. We walk, we pause and spaces suddenly become (his) places. I hear Joe Williams' voice speak his narrative so close to my ears, through the head phones provided. His form becomes body, he is given a context, anchored in our collective histories as we stand in the shade to keep cool. I hear poets by the river in which he died praise his name, call out to his ancestors and speak of the injustice of his life and death. Over the iron railing I see there is a shadow cast under the bridge and yellow petals of light.

Back in the centre I see him sitting in a doorway. He is here with us now. The years have fallen away. His name is David."

I have received numerous favourable tweets. Thank you very much for your support!

*Maxim Farrar*