Publishing 350 – from foundation to future

Celebrating 350 years of scientific publishing at the Royal Society
For more information about the events and activities taking place during the 350th anniversary year of Royal Society Publishing, please contact the Anniversary Programme Manager:

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**Cover image**  
Composite image from the cover of *Philosophical Transactions A*, 13 July 2012, guest edited by Clare Parnell. (Foreground) The outer atmosphere of the Sun taken using AIA telescope on board the NASA Solar Dynamics Observatory. (Background) Some of the furthest objects in our Universe from part of a NASA/ESA Hubble Ultra Deep Field image. This small region of space in the constellation Fornax looks back approximately 13 billion years (between 400 and 800 million years after the Big Bang).
Introduction

In 2015 the Royal Society will mark the 350th anniversary of the launch of *Philosophical Transactions* – the world’s first science journal. *Philosophical Transactions* pioneered the concepts of scientific priority and peer review which, together with archiving and dissemination, provide the model for almost 30,000 scientific journals today.

*Philosophical Transactions* was a tremendous innovation, enabling the birth of science as we know it by replacing an inefficient system of personal communications between scientists with a permanent and widely accessible archive of peer-reviewed articles. From its foundation to the present day, the scientific journal has enabled the international communication of ideas and discoveries, providing the information infrastructure crucial to the progress of science.

Join us as we celebrate 350 years of scientific publishing in 2015.
A portion of Henry Oldenburg’s letter to Robert Boyle dated 24 November 1664, describing how a journal could help scientists establish scientific priority on their findings by “registring as well the person and time of any new matter”.

Networking during a meeting at the Society.
Philosophical Transactions enabled the progress of science by creating a mechanism for the dissemination and archiving of discoveries for the first time. The world’s first science journal verified the quality of the research it published through a process of peer review and guaranteed scientists the credit for their findings. 350 years later and 20 years after the invention of the web, scientific publishing is undergoing a revolution.

The Society’s flagship anniversary activity will bring together a wide audience of stakeholders (researchers, publishers, funders, librarians and policy makers) in a series of open debates on the future of scholarly communication. The debates will focus on the key controversies and moving edges in the publishing landscape such as peer review, open science, reproducibility, measurement of impact and reward, business models and misconduct. Each of these debates will aim to bring together a wide variety of contrasting viewpoints to inform the future of science publishing.

Why are we doing this?
To discuss and help shape the future development of scientific communication at a time of great change.

Who is it for?
Scientists, funders, librarians, publishers, policy makers, research administrators and information professionals.
Images
Science Stories will highlight the impact that scientific discoveries recorded in our journals have had on science and society.

This innovative digital project will draw on papers from Royal Society journals that have inspired the progress of science.
Philosophical Transactions introduced the ideas of scientific priority and peer review, which are cornerstones of the modern scientific method. On 6 March 2015 (the journal's 350th anniversary) we will launch a series of celebratory films to illustrate how scientific papers have inspired contemporary scientific careers and influenced the world around us.

The films, trailed and publicised via social media, will include the personal inspirations of Royal Society Fellows and Research Fellows and embrace overarching scientific themes that are the concerns of today and of the immediate future. This innovative digital project will draw on papers from Royal Society journals (mainly from the last century) that have inspired the progress of science.

**Why are we doing this?**

To demonstrate to the public how science and the scientific method (especially the concepts of peer review and reliable evidence) have contributed to society and to inspire the next generation of scientific leaders.

**Who is it for?**

Developed, launched and promoted via social and digital media, this activity is aimed at a public, as well as a scientific audience.
Image
Image from the cover of *Proceedings of the Royal Society B*, 22 Jul 2011. Breast feathers of the bird-of-paradise, Lawes’ parotia (*Parotia lawesi*). The feather structure incorporates two separate coloured reflectors that cause the plumage colour to switch dramatically from blue to yellow when the bird moves. (image courtesy of Justin Marshall)
Worldwide discussion meeting on bio-inspiration: join us online

Royal Society scientific meetings bring together scientists from around the world to present and discuss new research and further science. In 2015, for the first time, we will allow a global audience to join the debate remotely, allowing scientists at any stage of their scientific career to get involved in the conversation.

Discussion meetings have long been the centrepiece of the Society’s scientific programme and papers presented are subsequently published in Philosophical Transactions. In 2015 we will hold a discussion meeting with a significant digital element, allowing – for the first time – a geographically dispersed audience to enjoy the experience of being able to contribute to the discussion in real time via a dedicated website. Papers will be released ahead of talks in our themed cross-disciplinary journal Interface Focus.

Why are we doing this?

As open and inclusive events for scientists to meet, discuss and collaborate, discussion meetings give critical mass to nascent ideas between scientists. By taking the discussion worldwide, we hope to expand on the opportunities that discussion meetings offer.

Who is it for?

Scientists at all stages of their careers around the world who are interested in how nature solves problems.
The anniversary is an opportunity to reflect on the changes that have faced the world’s first scientific journal.

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Image
Minutes from the Society’s Council meeting from 1 March 1665, licensing Henry Oldenburg to compile the *Philosophical Transactions*. (Up until 1752, the new year in England began on 25 March)
Academic conference: Publish or perish? The past, present and future of scientific publishing

The 350th anniversary of the founding of Philosophical Transactions is an opportunity to reflect on the contributions scientific journals have made to building a framework for the present-day sociology of science – in 2015 we will hold an academic conference to examine the history and legacy of scientific publishing.

While the main thrust of the campaign is forward-looking, the anniversary is an opportunity to reflect on the changes that have faced the world’s first scientific journal. The Society is holding an academic conference at the Society in March 2015, which will examine the birth of scientific publishing and the Society’s crucial role in creating the first ever system for validating scientists and their work.

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<th>Why are we doing this?</th>
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<td>To explore the legacy of Philosophical Transactions and identify whether the lessons of the past can help us to decide the future for scientific publishing.</td>
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<td>Historians of science (professional and amateur), publishers, librarians and archivists.</td>
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Image

Partnership grants provide financial support for schools to run science projects. In June 2015 schools taking part will write their own papers, contributing to a special issue of Young Scientists' Journal.
We will produce online educational materials for schools on the scientific publishing process and students will be encouraged to create a communication programme for their projects to disseminate their findings among their peers.

Why are we doing this?
To promote the concept of scientific publishing to future scientists.

Who is it for?
The next generation of leading scientists – since 2000, the Society’s Partnership Grants scheme has awarded over £1.3 million to 745 schools and colleges, and has ignited enthusiasm for science among young people across the UK.
To mark the 350th anniversary of the world’s first scientific journal, the Royal Society will publish commemorative issues of *Philosophical Transactions A* and *Philosophical Transactions B*, featuring reviews of landmark papers that show the relevance of the work and how it continues to impact on science and even our lives today. These special issues will celebrate the evolution of modern science.

The commemorative issues will each feature more than a dozen breakthrough papers from the journal from the last 350 years. Each of these papers will be the focus of a review by a contemporary author chosen for their expertise and skills as communicators. The reviews will be supported by additional archive materials such as scans of original manuscripts, referee reports, letters and photographs.

**Why are we doing this?**

While scientific papers are scrutinised time and again for their methodological and data content, the craftsmanship of scientific papers, as well as the biographical, historical and sociological context in which they were written, is often overlooked. Nevertheless, individual papers can change the course of entire fields and inspire individual career directions. We want to celebrate the landmark papers of the world’s first and longest running scientific journal.

**Who is it for?**

Scientists, journalists, researchers, historians of science, educators.
Image
An inverted photograph from Dyson, Eddington and Davidson’s 1920 paper in Philosophical Transactions, 'A Determination of the Deflection of Light by the Sun’s Gravitational Field...', which is recognised as the first empirical confirmation of Einstein’s theory of General Relativity.
The Royal Society
The Royal Society is a self-governing Fellowship of many of the world’s most distinguished scientists drawn from all areas of science, engineering, and medicine. The Society’s fundamental purpose, reflected in its founding Charters of the 1660s, is to recognise, promote, and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society’s strategic priorities are:

- Promoting science and its benefits
- Recognising excellence in science
- Supporting outstanding science
- Providing scientific advice for policy
- Fostering international and global cooperation
- Education and public engagement

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