

DEPARTMENT OF HISTORY

UNIVERSITY *of York*

APPLICATIONS INVITED

Instruments and their makers: A study of experiment, collaboration and identity in seventeenth-century London

AHRC-funded Collaborative Doctoral Award

The University of York, in collaboration with the Science Museum, London, has announced a fully-funded 3-year PhD studentship on the topic of 'Instruments and their makers: A study of experiment, collaboration and identity in seventeenth-century London'. Funded by the Arts and Humanities Research Council (AHRC), this PhD project offers an excellent opportunity for the successful candidate to pursue doctoral research in history while gaining first-hand experience of work within a museum setting, and to contribute to bringing the two sectors into fruitful interaction.

The PhD will be jointly supervised by Dr Sophie Weeks (Department of History, University of York) and Jane Desborough (Science Museum).

The studentship will comprise a fee-waiver at the Home/EU rate, and a stipend at the RCUK rate (£14,296 for 2016/17). The successful candidate will also get access to the training and research support opportunities offered by the [White Rose College of Arts and Humanities](#). They will also receive support from the Science Museum of up to £1000 a year for approved travel and expenses, as well as a staff pass, workspace, and library access in the Museum's new Dana Research Centre and Library. Standard AHRC eligibility criteria apply to this studentship.



Science Museum/Science & Society Picture Library

Potential applicants requiring further information are encouraged to contact Sophie Weeks at sophie.weeks@york.ac.uk

Closing date: Friday 15 April 2016
Interview date: Monday 16th May 2016

The project

The project will explore the multifaceted interactions of techniques, skills, knowledge and resources leading to the realization of seventeenth-century mathematical, optical and natural philosophical instruments. Grounded in the collections of the Science Museum, the project focuses on instruments made by Robert Hooke's London network of collaborators. Through integrating instrument history with history of science, the research seeks to shed new light on both the nature of collaborative experimenting, and the changing identities of seventeenth-century instrument makers. An exciting feature of this project is that it seeks to identify a novel methodology to bridge the divide between instrument history and history of science.

This project takes as its starting point the idea that scientific instruments are not mute museological objects. They are instantiations of relationships, conversations, exchange and transactions among people. Each instrument is a “solution” to a particular problem, and not just a philosophical or scientific problem, but a problem with practical, mechanical, and economic dimensions. In Stuart London, such problem-solving activity necessarily brought together instrument makers, artisans and Royal Society Fellows, and Hooke offers an exceptionally documented example of this concatenation because he was a point of origin and convergence in this complex metropolitan web of relationships. The central role of instruments in Hooke's work and his ability to mix freely with philosophers and craftsmen are well known. Moreover, Hooke unusually acknowledged the contributions of instrument makers and artisans in his *Diary*, letters and the *Journal* of the Royal Society. The project will therefore restore instruments and their makers to their rightful place in the big picture of early modern experimentation by reconstructing Hooke's network. Furthermore, by considering the self-perceptions of specific C17 craftsmen, the project will also address the key question of the changing identities of instrument makers during this period.

The Science Museum's unrivalled holdings of instruments (including Christopher Cock's optical instruments, Thomas Tompion's mechanical watches, and Samuel Morland's calculating machines) will be central to the research proposed. By working with these holdings, and with those who curate them, the successful student will also have the chance to contribute to new displays of the instrument collections in the Science Museum's forthcoming permanent galleries. We envisage this as a key aspect of the project, which should make it highly attractive to those with an interest in museums.

Moreover, while the Science Museum's collections are the core resource, the researcher will also use the Royal Society Archives (including letters and designs for instruments), thereby complementing and extending Royal Society projects, such as Felicity Henderson's research on “Robert Hooke's life and work”.

The successful student will also be actively involved in planning and organizing a series of workshops, to be hosted by the Science Museum. We hope that these workshops will include a wide section of the scientific instrument community, such as collectors and dealers, museum curators, and members of specialist societies.

We invite applicants to shape their own plans for bold and stimulating research within the research area indicated. It is hoped that the research planned will contribute to understanding and discussion of the following general questions:

1. What are the instruments, and what problems were they designed to solve?

The focus here is not just on intellectual or scientific problems, but includes the various practical, mechanical, and economic problems entailed in their production. The aim is to build up as detailed a picture as possible of the problems, limitations and difficulties faced by their makers.

2. Who did the work, and how did these individuals identify themselves?

Who were the individuals (philosophers, instrument makers and artisans) who collaborated to produce selected instruments? The aim is to map conceptually the complex web of relationships that generated the instrument. Were certain skills outsourced, and to whom? How did these craftsmen identify themselves and why did they assume these identities?

3. Where did the mental and physical work take place?

Is it possible to identify London streets and addresses where things are made, knowledge exchanged, and projects planned and administered?

4. What techniques, skills, and knowledge were required to produce selected scientific instruments?

This will entail acquiring an in-depth understanding of the skills of instrument makers and craftsmen with whom Hooke collaborated.

5. What were the dynamics of the collaboration?

While the collaborative nature of Hooke's work is widely recognized in the secondary literature, there has been no in-depth study of the collaborative process leading to specific scientific instruments. Moreover, although many commentators have remarked on the mutually advantageous nature of Hooke's relationships with his technicians, the view that there was a fairly straightforward division of labour between the mental and physical work involved in making instruments persists. This project will question the two-phase model and probe deeper into the subtleties of the collaborative process.

Institutional Framework

The [Department of History](#) at the University of York is one of the UK's leading university history departments, with an international reputation for research and teaching. It was ranked second in the UK for the quality, significance and impact of its research in the Research Excellence Framework (REF) 2014. The Department has over 40 academic staff, covering periods from Late Antiquity to the Present Day, and a graduate school of nearly 150 students on PhD or MA programmes. Around 70 PhD students are currently registered in the Department. The Department has an internationally recognised cluster in early modern history and over ten staff with research interests in the history of science. Members of the Department have a strong commitment to interdisciplinarity, which in the early modern period is evidenced particularly through their involvement in the University's [Centre for Renaissance and Early Modern Studies \(CREMS\)](#) and in the vibrant research culture of the University's [Humanities Research Centre \(HRC\)](#). The History Department also has a strong interest in public history and heritage studies, developed through its [Institute for the Public Understanding of the Past \(IPUP\)](#), which has strong collaborative links with museums and heritage institutions.

Established after the Great Exhibition of 1851 as part of the South Kensington Museum, the Science Museum celebrated the centenary of its separate existence in 2009. It is one of the world's premier museums of science, technology, industry and, since the addition of the Wellcome Collection in 1976, of medicine. Its collections in many areas are unparalleled. The Science Museum has twenty specialist curators with interests across science, biomedicine, ICT and engineering. For many years, curators have carried out research across the subject areas of history of science, technology and medicine to provide detailed and contextual understanding of the Museum's collections, which has resulted in scholarly publications, websites and books, as well as galleries.

The successful candidate for this studentship will be, so far as is practical, based jointly in the York History Department and in the Science Museum, will enjoy the facilities of both, and will be an active member of both. He or she will benefit from the lively disciplinary and interdisciplinary research cultures of the Department, IPUP, the HRC and CREMS, as well as of the Science Museum.

In addition to the History Department's own research training programme, the student will be eligible to participate in the integral programme of professional training for PhD students organized by the [White Rose College of Arts and Humanities \(WROCAH\)](#), the AHRC-funded Doctoral Training Partnership between the Universities of York, Leeds and Sheffield, which also gives excellent opportunities for networking and interaction across the three universities.

Research students at York have a thesis advisory panel (TAP) who review their progress and graduate professional development throughout their research programme. Research students meet with their TAP twice a year so that members of the TAP, along with the supervisor, can offer advice and guidance in relation to their research.

In addition to the lead supervisors, the student will be able to draw on the expertise of a project team comprising:

- Dr. Mark Jenner (Reader in Early Modern History at the University of York and member of the Thesis Advisory Panel), who is a historian of early modern England with particular experience in the cultural history of perception, medicine and of London. He has worked very extensively with London civic, guild and parish records as well as on the social history of ideas.
- Professor Jim Bennett (Former Director of the Museum of the History of Science, Oxford).
- Dr. Fokko Jan Dijksterhuis (Associate Professor of History of Science at the Centre for Studies of Science and Technology at the University of Twente) whose research focuses on the history of early modern optics, investigating the intersections between mathematics, physics and instruments in the seventeenth century.
- Dr. Felicity Henderson (Lecturer in Archives and Material Culture at the University of Exeter), who is currently editing Hooke's diary for Oxford University Press.
- Keith Moore (Head of Library and Information Services at The Royal Society).

Funding and eligibility

The studentship will cover University of York fees at the full-time home/EU rate (through a fee waiver) and a stipend at the standard AHRC rate (£14,296 for 2016/17) plus £550 enhancement per year, for a 3-year period, beginning in October 2016. To be eligible for the fully-funded studentship (fee waiver plus stipend), you must be a UK student or an EU student who has been resident in the UK for three years prior to the award, as defined by [RCUK Terms and Conditions](#). EU students not meeting this residence requirement are welcome to apply, but will be eligible only for the fee waiver, not for the stipend.

The student will also receive support from the Science Museum of up to £1000 a year for approved travel and expenses, as well as a staff pass, workspace, and library access in the Museum's new Dana Research Centre and Library. The Department of History at the University of York will contribute up to £450 per year for approved travel and expenses.

Students who have already commenced PhD study are not eligible to apply. The studentship is open only to students intending to commence PhD study in October 2016, and may not be deferred.

Academic requirements

Applicants should possess a good academic record in History or a related discipline (e.g. history of art, history of science, literary studies, heritage or museum studies). It is expected that this will include a first or upper second class BA degree or equivalent. The candidate should also have, or be expecting to obtain, a Masters degree in a relevant subject. Previous experience/experience/expertise in fields such as instrument history and curatorship would obviously be relevant, but is not essential.

How to apply

Applicants should first apply for a place on the PhD in History programme at the University of York, via the University's [Select](#) system. (If you have already applied, and your application has been accepted or is currently under consideration, there is no need to apply again.) As part of this application, you will be required to supply a CV, academic transcripts and references from two academic referees; these must all be received before your application for the studentship can be considered.

Where the system requires you to upload a research proposal and/or specimens of written work, please upload a statement to this effect: 'Candidate for CDA studentship on "Instruments and their makers," material sent separately to CDA assessors'. In the section on 'Financial support', indicate 'Wish to be considered for the CDA studentship on "Instruments and their makers"'.

Once you have applied for a place on the PhD, please also e-mail the following to Caroline Edwards, Departmental Manager, Department of History, at caroline.edwards@york.ac.uk:

- (i) A cover letter confirming that you wish to be considered for the 'Instruments and their makers' CDA studentship, and indicating your name, contact details and student number (which you will have been sent on receipt of your PhD application);
- (ii) A statement of up to 1000 words, explaining why you are interested in the studentship; what qualities, aptitudes, interests and experiences you feel you would bring to it; and your ideas for developing a research project in the area indicated in this description.

The deadline for completion of the application and for receipt of this additional material is **5.00pm** (BST) on **Friday 15th April 2016**. Interviews will be held at the Science Museum on **Monday 16th May 2016**. Applicants invited for interview will be asked to submit one or more pieces of written academic work (up to a total of c. 5,000 words max) in advance of the interview.

Potential applicants requiring further information are encouraged to contact Sophie Weeks at sophie.weeks@york.ac.uk