

Michael Trevor Bycroft

Assistant Professor of History of Science and Technology
University of Warwick
Department of History
Coventry CV4 7AL
United Kingdom
+44 (0) 24 761 50442
M.Bycroft@warwick.ac.uk

EDUCATION

- Oct 2010–
Sep 2013 **PhD, History and Philosophy of Science**
University of Cambridge, UK
“Physics and Natural History in the Eighteenth Century: the Case of Charles Dufay”
Supervised by Hasok Chang and Simon Schaffer
- Sep 2007–
Aug 2008 **MA, History and Philosophy of Science**
University of Toronto, Canada
- Jan 2006–
Dec 2006 **BA Hons., History and Philosophy of Science**
University of Canterbury, New Zealand
- Jan 2003–
Dec 2005 **BSc, Physics and Mathematics**
Included a minor in English and History
University of Canterbury, New Zealand

EMPLOYMENT

- Sep 2017–
present **Assistant Professor of History of Science and Technology**
History Department, University of Warwick
- Oct 2014–
Aug 2017 **Leverhulme Early Career Research Fellow**
Global History and Culture Centre, History Department, University of Warwick
- Oct 2013–
Sep 2014 **Post-doctoral Research Fellow**
Max Planck Institute for the History of Science, Berlin
- Apr 2008–
Apr 2013 **Research Assistant for Mark Solovey, Professor in the History of Social Science**
University of Toronto

RESEARCH FUNDING

- Oct 2014–
Sep 2017 **Leverhulme Early Career Research Fellowship**
Held at the History Department, University of Warwick
£63,000 over 3 years, including salary and research expenses
- Oct 2013–
Sep 2014 **Post-doctoral Research Fellowship**
Held at the Max Planck Institute for the History of Science, Berlin
£27,000 over 12 months, including salary and travel expenses
£27,000 for a further 12 months - declined
- Oct 2010–
Sep 2013 **Gates Cambridge Scholarship**
Held at the University of Cambridge, UK
£80,000 over 3 years, including tuition fees and living costs
- Sep 2007–
Oct 2008 **Masters and PhD Studentship**
Institute for the History and Philosophy of Science and Technology
University of Toronto
£25,000 over 12 months, including tuition fees and living costs
£75,000 for a further 3 years – declined

SCHOLARSHIPS and PRIZES

- Jan 2003–
Dec 2007 **Tower Undergraduate Scholarship**
Held at the University of Canterbury, New Zealand
£5,000 over 3 years, for tuition fees
- Jan 2003–
Dec 2003 **University of Canterbury Undergraduate Scholarship**
£1,500 over 12 months, for tuition fees
- 2008 **Honourable Mention, Kiran Van Rijn Essay Prize**
Institute for the History and Philosophy of Science and Technology
University of Toronto, Canada
- 2006 **Ada Wells Essay Prize in English Literature**
University of Canterbury, New Zealand
- 2005 **Ada Wells Essay Prize in English Literature**
University of Canterbury, New Zealand
- 2005 **John Connal Scholarship**
University of Canterbury, New Zealand
Monetary prize for academic excellence

ACADEMIC PUBLICATIONS

Books

Gems and the New Science: Matter and Value in the Scientific Revolution

Under contract with Synthesis, a book series published by the University of Chicago Press

Gems in the Early Modern World: Materials, Knowledge and Global Trade, 1450-1800

Co-edited with Sven Dupré (Utrecht University / University of Amsterdam)

Published 2019, Palgrave MacMillan.

Articles in peer-reviewed journals

“The Hand of the Connoisseur: Gem Hardness in Enlightenment Mineralogy,” forthcoming in *History of Science*, in special issue (co-edited with Alexander Wragge-Morley) on *Science and Connoisseurship in the European Enlightenment*

(co-authored with Alexander Wragge-Morley) “Introduction,” forthcoming in special issue on *Science and Connoisseurship in the European Enlightenment*

“Hindsight, Tradition and National Style in the Pre-History of the Leyden Jar,” *Isis* 102, no. 2 (2019), pp. 317-320

“Regulation and Intellectual Change at the Paris Goldsmiths’ Guild, 1660-1740,” *Journal of Early Modern History* 22, no. 6 (2018), pp. 500-527

“Style and Substance in Rococo Science,” *Journal of Interdisciplinary History* 48, no. 3 (2017): 359-84.

“Iatrochemistry and the Evaluation of Mineral Waters in France, 1600-1750,” in *Bulletin for the History of Medicine* 91, no. 2 (2017): 303-330, in special issue entitled “Testing Drugs and Trying Cures”, ed. Elaine Leong and Alisha Rankin.

“Wonders in the Academy: The Value of Strange Facts in the Experimental Research of Charles Dufay,” *Historical Studies in the Natural Sciences* 43, no. 3 (2013): 334–70.

“The Trials of Theory: Psychology and Institutional Economics, 1910–1931,” *Journal of the History of the Behavioral Sciences* 46, no. 2 (2010): 144–64.

“Going Outside the Model: Robustness Analysis and Experimental Science,” *Spontaneous Generations: a Journal for the History and Philosophy of Science* 3, no. 1 (2009): 123–41

Papers in edited collections

“La fin des pierres précieuses?”, in *Avoir une âme pour les pierres: arts, sciences et minéralité, du tournant des lumières au crépuscule du romantisme*, ed. Anouchka Vasak and Pierre Glaudes (Presses universitaires de Rennes, forthcoming, 2022).

“Robert Boyle’s Restless Gems,” in *Ingenuity in the Making: Materials and Technique in Early Modern Europe*, ed. Richard Oosterhoff and José Ramon Marcaida (Pittsburgh University Press, forthcoming, 2021). Approx. 20 pages

(with Pierre Crépel) “La correspondance entre Condorcet et Seignette sur l’électricité de la torpille et le flux et le reflux de la mer,” in *Les relations scientifiques de Condorcet avec les provinces françaises: correspondance et documents inédits, 1772-1791*, ed. Nicolas Rieucou (Centre International d’étude du XVIIIème siècle, 2019), pp. 235-64. Approx. 20 pages.

“Les articles sur les pierres précieuses dans l’*Encyclopédie*,” published in 2018 in Edition Numérique Collaborative et Critique de l’Encyclopédie (ENCCRE), ed. Alexandre Guilbaud, Marie Leca-Tsiomis, Alain Cernuschi, and Irène Passeron. Approx. 25 pages.

“Experiments on Collections at the Royal Society of London and the Paris Academy of Sciences, 1660–1740,” in Mordechai Feingold and Giulia Giannini, eds., *The Institutionalization of Science in Early Modern Europe* (Brill, 2019), 236-65. Approx. 30 pages.

“Exotic Taxa: Anselm Boethius de Boodt and the Distinction between ‘Oriental’ and ‘Occidental’ Gems in European Mineralogy,” in *Gems in the Early Modern World: Materials, Knowledge and Global Trade, 1450-1800* (under production with Palgrave MacMillan, publication expected Autumn 2018). Approx. 20 pages.

“What Difference Does a Translation Make? The *Traité des vernis* (1723) in the Career of Charles Dufay,” in *Translation and the Circulation of Knowledge in Early Modern Science*, ed. Sietske Franssen and Niall Hodson (Brill, Sep 2017), 66-90.

“How to Save the Symmetry Principle,” chapter in *The Philosophy of Historical Case Studies*, ed. Raphael Scholl and Tilman Sauer, *Boston Studies in the Philosophy and History of Science* 319 (Springer, 2016), 11-29.

“Dutour et le spath d’Islande: entre l’optique et la géologie,” in *Etienne-François Dutour de Salvert (1711-1789): un physicien auvergnat du XVIIIe siècle*, ed. Pierre Crépel and Jean Ehrard (L’Harmattan, 2014), 197-226.

“Dutour et l’électricité: défenseur habile du système Nollet,” in *Etienne-François Dutour de Salvert (1711-1789): un physicien auvergnat du XVIIIe siècle*, ed. Pierre Crépel and Jean Ehrard (L’Harmattan, 2014), 99-132.

“Psychology, Psychologists, and the Creativity Movement: The Lives of Method Inside and Outside the Cold War,” in *Cold War Social Science: Knowledge Production, Liberal Democracy, and Human Nature*, ed. Mark Solovey and Hamilton Cravens (New York: Palgrave MacMillan, 2012), 197-214.

Book reviews

Review of Larry Principe, *The Transmutations of Chymistry: Wilhelm Homberg and the Académie Royale des Sciences* (University of Chicago Press, 2020), *Ambix* 68, nos. 2-3 (2021): 323-5.

Review of Ofer Hadass, *Medicine, Religion, and Magic in Early Stuart England: Richard Napier's Medical Practice* (Penn State UP, 2018), *English Historical Review* 135, no. 573 (2020): 484-5.

Review of Antonella Romano, *Impressions de Chine: L’Europe et l’englobement du monde (XVIe-XVIIe siècle)* (Fayard, 2016), *Renaissance Quarterly* 40, no. 4 (2017): 1597-8.

Review of Karel Davids and Bert de Munck, *Innovation and Creativity in Late Medieval and Early Modern European Cities* (Ashgate, 2014), in *Artefact* 4 (2016): 407-10.

“Essay Review of Brad Wray, ‘Kuhn's Evolutionary Social Epistemology,’” *Studies in History and Philosophy of Science Part A* 43, no. 3 (2012): 425–29.

WORKSHOPS and PANEL SESSIONS

- 2020
March 6
Centre
Judgment in Early Modern Europe
Workshop held at University of Warwick, Early Modern and Eighteenth Century Centre
- 2018
May 8
Teaching with Historical Objects
(with Caroline Petit, University of Warwick)
Workshop held at University of Warwick, Centre for the Study of the Renaissance
- 2018
May 4
“Subjective Sciences: Taste and Connoisseurship in Early Modern Europe”
(with Alexander Wragge-Morley, University College London)
Workshop held at University College London
- 2017
Jul 6-9
“How Can You Tell? Connoisseurship, Quality Control and the Sciences”
With Alexander Wragge-Morley (UCL)
Panel session at the annual conference of the British Society for the History of Science
- 2017
May 10-12
“Ingenuity in the Testing: Detecting Counterfeit Gems in Early Modern Europe”
Ingenuity in the Making: Materials and Technique in Early Modern Europe
Workshop held at the University of Cambridge
- 2017
Feb 24
“A Failed Innovation: Isaaq Schabraaq's Royal Diamond Manufacture in Paris, c. 1780-1788”
Innovation in the Pre-Modern World: Knowledge, Design and Products
Workshop at the Institute for Advanced Study, University of Warwick
- 2017
Mar 6-10
Early modern Antwerp as a global city; reconstructing historical objects; technique in the arts – three events held at the University of Warwick with Sven Dupré (Utrecht) and Christine Goettler (Bern) as Fellows at the Institute of Advanced Study
Co-organised with Anne Gerritsen (University of Warwick)
- 2016
Jun 22-5
“The Quantifying Spirit in the Physical Sciences”
With Daniel John Mitchell (University of Cambridge)
4-speaker session at the 3 Societies Conference, ie. the joint meeting of the British, Canadian and US societies for the history of science
- May 2015-
Apr 2016
“Gems in Transit: Materials, Values and Knowledge in the Early Modern World”
With Sven Dupré and Marta Ajmar
- 2-day workshop at the University of Warwick and the Victoria and Albert Museum, London, 18-19 May, 2015
- 2-day workshop at Utrecht University / University of Amsterdam, 7-8 April, 2016
- 2-day workshop at the Victoria and Albert Museum, London, 11-12 April, 2016
- 2014
Mar 21
“Artists’ Knowledge of Gem Colour”
Roundtable discussion at the conference Early Modern Colour Practices II, 1450-1650
Max Planck Institute for the History of Science, Berlin
- 2013
“Natural History and Natural Philosophy in the Eighteenth Century”

Nov 21-4 4-speaker session at the annual meeting of the US History of Science Society, Boston

SELECTED PRESENTATIONS, 2015-present

- 2021
Feb 23 “Gem Assays in Early Modern Science”
Workshop on Weight and Weighing Practices in Early Modern Europe (online)
- 2021
March 8 “Gems and the Chemical Revolution”
AD HOC – seminar on the History of Alchemy and Chemistry based at the HPS
Department at the University of Cambridge (online)
- 2021
Feb 11 “Science and Connoisseurship at the Enlightenment,” with Alexander Wragge-Morley
Enlightenment Reading Group, Göttingen Institute for Advanced Study (online)
- 2019
Oct 19 “Gems and the Scientific Revolution” (keynote)
Yale Gems and Mineral Symposium, Peabody Museum, Yale University
- 2019
May 24 “Gems and the New Science: A Study in Interdisciplinary History”
Early Modern Interdisciplinary Seminar, History Faculty, University of Cambridge
- 2019
April 11 “La fin des pierres précieuses” [The end of precious stones?]
“Avoir une âme pour les pierres” [To have a head for gems]
Conference at the Fondation de Treilles, Provence, France
- 2019
March 4 “The Classification of Gems in Seventeenth-Century France”
Biographies of Materials at the Crossroads Between the Natural Sciences and
Humanities, Workshop at the Maison Française, Oxford
- 2018
Sep 16 “Humanism and Writings on the Lapidary Arts in Louis XIV’s Paris”
European Society for the History of Science annual conference, London
- 2018
May 17-19 “Geography and Gem Classification around 1700”
A Different Point of View: Scales, Spaces and Contexts in Histories of the Local and
the Global
Conference held at the University of Warwick
- 2017
Sep 29-30 “Testing Gems in the Early Modern World”
The Practice of Global History
Conference held at Oxford University
- 2017
Jul 6-9 “Qualities as Kinds: Goldsmiths and Gem Classification in Seventeenth-century Paris”
Annual conference of the British Society for the History of Science
University of York
- 2017
Feb 24 “A Failed Innovation: Isaac Schabracq’s Royal Diamond Manufactory, 1785-87”
Innovation in the Pre-Modern World: Knowledge, Design and Products (workshop)
University of Warwick
- 2017 “Isaac Schabracq entre les lapidaires et les orfèvres”

- Feb 20 Seminar on Jews and the luxury trades in the modern age
Université Paris 7
- 2017 “Ingenuity on Trial: the Detection of Fake Gems in Early Modern Europe”
May 10-12 Ingenuity in the Making conference
University of Cambridge
- 2016 “Gem Colour and Artists’ Pigments: the History of an Early Modern Analogy”
Jul 5-7 Scientiae conference
University of Oxford
- 2016 “Exactitude Without Numbers:
Jun 7 Measurement in the Qualitative Physics of Charles Dufay”
Séminaire de l’Observatoire de Paris
- 2016 “Les articles sur les pierres précieuses dans l’*Encyclopédie*”
May 19 Seminar for the ENCCRE project, a critical online edition of the *Encyclopédie*
Université Paris 6

TEACHING

Lecture courses

- 2022- Value in the Age of Reason
20-lecture third-year undergraduate module
History Department, University of Warwick
- 2015-2021 The Scientific Revolution in Perspective / Science in the Early Modern World
20-lecture / 10-lecture second-year undergraduate modules
History Department, University of Warwick

Other lectures and seminars

- Oct 2015– 1st year modules at the University of Warwick:
present Europe in the Making
The Enlightenment
Kill or Cure: the History of Medicine and Health
- 2nd year modules:
Galleons and Caravans: Global Connections, 1500-1800
- MA modules:
Early Modern core module
Global and Comparative core module
History of Medicine core module
Modules on the history of science, history of religion, and the history of consumption

Oct 2012– Apr 2013 Introduction to History and Philosophy of Science
Second-year undergraduate module
History and Philosophy of Science Department, University of Cambridge

Oct 2011– Jun 2012 History and Philosophy of the Physical Sciences
Second-year undergraduate module
History and Philosophy of Science Department, University of Cambridge

2007 Sep–Dec History of Evolutionary Biology
Third-year undergraduate module
Institute for the History of Science and Technology, University of Toronto

IMPACT and PUBLIC ENGAGEMENT

“Galileo and the Telescope,” *Modern History Review [for A-level students]* 24, no. 1 (Sep. 2021).

DIVA Diamond Museum consultant.

Advised curators of new permanent exhibition at one-day workshop at the DIVA Diamond Museum, Antwerp, 9 April, 2016. The curators expect 200,000 visitors per year.

“Demonstrating History: An Undergraduate Class Visit to the Oxford Museum of the History of Science”

Blog post on the blog of the Oxford Museum of the History of Science, 8 Feb 2016

“Ephemeral gems”

Presentation at ‘salon’ at the European Gallery, Victoria and Albert Museum, 10 Feb, 2016

50+ essays on www.doublerfraction.blogspot.com

Double Refraction is a research blog on methodological facing the history of science. Since 2012 it has averaged one essay per month, 1,500 words per essay, 600 views per essay.

“You *Can* Please Everyone: A Peace Plan for David Wootton and Steven Shapin”

Guest post on *Shells and Pebbles*, a blog on the history of science maintained by students at the University of Utrecht, 26 June, 2016

19 reviews of popular science books, published online at www.popularscience.co.uk, 2009–2010

Popular Science is a website devoted to short reviews (600 words) of popular science books

Energy for Radio: A Guide for Practitioners, 2012

240-page guide to sustainable energy management for radio stations in Africa, written on contract for Catholic Media Council, Aachen, Germany

Workshops and Scholarships Co-ordinator, World Conference of Science Journalists, London, 2009

ACADEMIC SERVICE

Reviews of book manuscripts for the publishers Reaktion Books and Brepols; reviews of article manuscripts for *British Journal for the History of Science*, *Art History*, *Warwick Exchanges*,

Post-doctoral representative on the Research Committee, History Department, University of

Warwick, 2015-2017

External examiner at Masters level for the History and Philosophy of Science Department, University of Cambridge, 2016

“Report of 2012 BSHS postgraduate conference, University of Kent,” *Viewpoint* 100, Feb 2012

“The Natural History of Robert Boyle,” *Chemical Heritage Magazine* 28, no. 3 (Fall 2010)
Review of Michael Hunter, *Robert Boyle: Between God and Science*

“Science in the Shadows,” in *Chemical Heritage Magazine* 28, no. 3 (Fall 2010)
Review of science-related exhibits at the Victoria and Albert Museum, London

“Adventures in Romantic Science: Richard Holmes on Passion, Teamwork, and the Neglected Art of Biography,” *History of Science Society Newsletter* 39, no. 1 (2010)
Interview with Richard Holmes, author of *The Age of Wonder*

“Perspectives on Science,” *History of Science Society Newsletter* 39, no. 1 (2010)
Feature article on a new UK A-level course in the history, philosophy and ethics of science