

# ICOHTEC NEWSLETTER

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## Newsletter of the International Committee for the History of Technology ICOHTEC

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### Editorial

Dear Colleagues and Friends,

Thank you for your contributions to the bibliography of books written and edited by ICOHTEC members 2013 – 2015. It is impressively long and mirrors your fruitful work within the last years.

Best wishes

Stefan Poser

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## I. ICOHTEC Bibliography 2013 - 2015

The bibliography gives information about books, edited or written by ICOHTEC members since 2013.

Thinking about research and publications of ICOHTEC members the first volume to mention is the so-called ICOHTEC Anniversary Issue: this special issue of ICOHTEC's reviewed journal ICON gives an insight in fields of research which were launched at and developed on ICOHTEC symposia. The reason to publish such a volume was **ICOHTEC's 40<sup>th</sup> anniversary**; thus the volume gives a glance of ICOHTEC's social life and it's well known jazz band, too. The project was put in reality thanks to Timo Myllytaus, who came up with the idea to publish an anniversary issue, Hans-Joachim Braun and James Williams, who edited *two volumes* of ICON last year.

**Symposia Anniversary Edition**, ICON, Journal of the International Committee for the History of Technology, 20-1 (2014).

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**Appleby, C. / Cocroft, W. / Schofield, J.:** The Home Front in Britain 1914-18 An Archaeological Handbook. Council for British Archaeology, York 2015. ISBN 978-1-909990-01-2

This handbook describes the main types of sites associated with the First World War found in Britain. The war was arguably the first modern technological war and brief descriptions are provided of the innovative infrastructure that was needed to support these new systems, including airfields, airship stations, wireless stations, and acoustic listening mirrors. To supply the needs of the armed forces existing factories were adapted to wartime needs and new ones built. The book has been written to support the Home Front Legacy project <http://www.homefrontlegacy.org.uk/wp/> a community engagement, or citizen science, project that encourages members of the public to document traces of the conflict in Britain.

**Bix, Ami Sue:** Girls Coming to Tech! A History of American Engineering Education for Women. MIT Press, Cambridge MA, London 2013

Ami Bix book fills a gap: based on case studies from Georgia Tech, Caltech and MIT she investigates the history of women's struggle for acceptance as students of engineering as well as in their engineering profession.

**Braun, Hans-Joachim (ed.):** Industrielandschaften im Wandel. = Schriftenreihe der Georg-Agricola-Gesellschaft, vol. 37. Freiberg 2015.

This volume consists of revised versions of papers presented at the annual meeting of the Georg Agricola Society in Hattingen 2014. The authors are particularly concerned with regional industrial development in Germany and neighboring countries and the numerous, often private, initiatives and projects to set up sites of industrial culture and make them available to the public. Linking different projects over national borders is of special relevance in this context.

**Braun, Hans-Joachim (ed.):** *Technische Netzwerke und Energiespeicher.* = Schriftenreihe der Georg – Agricola – Gesellschaft, vol. 36, Freiberg 2014.

This volume includes eight revised papers presented at the annual meetings of the Georg – Agricola – Society for the Advancement of the History of Science and Technology in Berlin 2012 and in Mannheim 2013. The topics discussed range from Roman aqueducts in Jordan and Syria to early modern water storage installations for mining, accumulators and other storage devices for electricity in the 19<sup>th</sup> and 20<sup>th</sup> centuries and to attempts to include Berlin into the European electricity grid during the Cold War.

**Braun, Hans-Joachim and Poser, Stefan (guest-eds.):** *Playing with Technology: Sports and Leisure.* Special issue: ICON 19 (2013).

This volume gives an overview of this relatively new subject of the history of technology, which was launched on an international level at ICOHTEC's Copenhagen symposium in 2007. The topics discussed are sports, amusement parks, technical toys, and hobby culture. Contributors: Hans-Joachim Braun, Jeremy R. Kinney, Dick van Lente, Rachel Maines, Arwen Mohun, Simone Müller-Pohl, Stefan Poser, Carroll Pursell, Joseph Wachelder, James C. Williams.

**Butrica, Andrew J.:** *The Navigators: A History of NASA's Deep Space Navigation.* CreateSpace, Independent Publishing Platform (April 25, 2014).

This is the untold story behind NASA's successful exploration of the solar system over the past half century. The book focuses on two broad themes. One is the beginnings and evolution of space navigation in response to the security crisis starting with World War II and running to the present century. The other overarching theme is the relationship between navigation and science, especially astronomy. The author argues that navigators are representative of the application-oriented science that the security crisis fostered. The book makes additional points about modeling, the role of technology (computers, instruments), and the reasons for navigation's increasing accuracy.

**Cionca, Marina:** *Repere ale designului secolului XX (Highlights of 20<sup>th</sup> Century Design),* Lux Libris Publishing House, Brasov, 2014. ISBN 978-973-131-286-6.

This book is built around the "Modern Classics" collection of 30 chairs belonging to the Transilvania University of Brasov, Romania. The chairs were created by great architects and designers of the 20<sup>th</sup> century, from Charles Rennie Mackintosh (Art Nouveau) to Charles Eames (postwar American design) and from Frank Lloyd Wright (organic rationalism) to Frank O. Gehry and Philippe Starck (postmodernism). All designers are presented in the specific time context of their time, with a few significant biographical details and aspects of their creation.

**Gronegger, Thomas / Cionca, Marina / Lapadat, Marius Marcu / Olarescu, Alin M. :** *Inside - Outside - In - between I & II.* New Design University Publishing House, St. Pölten 2014. ISBN 978-3-9503515-1-4.

The book gives an insight of the ways of life and works of a creative team of students and teachers from the New Design University St. Pölten (Austria), Transilvania University of Brasov and the University of Architecture and Town Planning *Ion Mincu* Bucharest (Romania) during two consecutive

workshops in 2013 and 2014. The objective of this partnership was ethnological research and practical work on a Transylvanian village site for creating and reinforcing places with a specific identity, as well as creating and developing a process of social design together with the artistic and cultural interventions.

**Helerea, Elena:** Evoluția tehnicii și tehnologiei. (Evolution Technics and Technology). Transilvania University Printing House, Brasov 2014. ISBN 978-606-19-0362-7

The book analyses the complexity of the epoch we are going through, epoch dominated by the complex social processes, accompanied by super-mechanization, complex automation and high specialization. There is done a synthesis of the complexity and evolution of the main technical systems of the twentieth century - micro-electronics, opto-electronics, telecommunications, new materials, biotechnology and energy use, in which technical and technological issues are accompanied by the analysis of the main types of innovations, together with their technical, economic, social, political, and cultural implications. New arguments are given for the promoting the subjects of Technological education, History of science, technique and technology, and Evolution of technology in secondary education, high schools and higher education.

**Herzig, Rebecca M.:** Plucked: A History of Hair Removal. New York University Press, New York 2015 . The book describes the various technologies---from clam shell scrapers to new gene therapies---used to remove hair from human bodies, focusing on practices in the United States. The stories recounted should be of interest to historians of medical technology, of race, gender, and technology, and of technology and the environment.

**Heßler, Martina and Kehrt, Christian (eds.):** Die Hamburger Sturmflut von 1962. Risikobewusstsein und Katastrophenschutz aus zeit-, technik- und umweltgeschichtlicher Perspektive. Göttingen 2014. The sampler is dedicated to the 1962 storm flood, which had been really hard for the city of Hamburg. The authors analyse contemporaries' risk awareness and the development of flood protection in the 1960s, based on approaches of the history of technology and of environmental history.

**Högselius, Per / Kaijser, Arne / Vleuten , Erik van der (eds.):** Europe's Infrastructure Transition. Economy, War, Nature. Palgrave, 2015.

Europe's infrastructure both united and divided peoples and places via economic systems, crises, and wars. Some used transport, communication, and energy infrastructure to supply food, power, industrial products, credit, and unprecedented wealth; others mobilized infrastructure capacities for waging war on scales hitherto unknown. Europe's natural world was fundamentally transformed; its landscapes, waterscapes, and airscapes turned into infrastructure themselves. Europe's Infrastructure Transition reframes the conflicted story of modern European history by taking material networks as its point of departure.

<http://www.palgrave.com/page/detail/europes-infrastructure-transition-/?isbn=9780230307995>

**Högselius, Per / Hommels, Anique / Kaijser, Arne / Vleuten, Erik van der (eds.):** The Making of Europe's Critical Infrastructure: Common Connections and Shared Vulnerabilities. Palgrave

Macmillan, Basingstoke, Hampshire 2013.

Europe's critical infrastructure is a key concern to policymakers, NGOs, companies, and citizens today. A 2006 power line failure in northern Germany closed lights in Portugal in a matter of seconds. Several Russian-Ukrainian gas crises shocked politicians, entrepreneurs, and citizens thousands of kilometers away in Germany, France, and Italy. This book argues that present-day infrastructure vulnerabilities resulted from choices of infrastructure builders in the past. It inquires which, and whose, vulnerabilities they perceived, negotiated, prioritized, and inscribed in Europe's critical infrastructure. It does not take 'Europe' for granted, but actively investigates which countries and peoples were historically connected in joint interdependency, and why. In short, this collection unravels the simultaneous historical shaping of infrastructure, common vulnerabilities, and Europe.

**König, Wolfgang:** Der Gelehrte und der Manager. Franz Reuleaux (1829–1905) und Alois Riedler (1850–1936) in Technik, Wissenschaft und Gesellschaft. Steiner-Verlag, Stuttgart 2014.

Franz Reuleaux and Alois Riedler might have been the best known German scientists in engineering in the late 19<sup>th</sup> century. Whereas Reuleaux promoted the scientification of engineering, Riegler brought in practice in university education. Both had been important in taking root of engineering as subject of research and teaching in technical universities. König investigates the roles of Reuleaux and Riedler for the development of science and technology as well as their influence on the institutional development of the new type of (technical) universities.

**König, Wolfgang:** Kleine Geschichte der Konsumgesellschaft. Steiner, Stuttgart 2013.

Wolfgang König's „Kleine Geschichte der Konsumgesellschaft“ (1st edition 2008) is now available in a revised second edition. He reveals a concise history of the consumer society from its origins in the Industrial Revolution until today. In particular, he compares consumption in the US and in Germany. Special chapters are dealing with food, clothing, housing, health, sexuality, mobility, mass tourism, and entertainment.

**Lopera, Antonio:** Arquitecturas flotantes (Floating architecture). Fundación Juanelo Turriano, Madrid 2015. ISBN: 978-84-942695-1-6

The technical, economic and social conditions prevailing from the second half of the nineteenth through the early twentieth century spawned the advent of and conquest of the sea by a previously uncommon type of vessel: large passenger ships. Designed as complex, awe-inspiring, floating constructs in which no architectural detail was left to chance, these vessels are viewed here from a new angle, in which architecture and engineering merge to afford a clearer understanding of only vaguely remembered features of naval construction.

**Łotysz, Sławomir:** The contribution of Polish-American inventors (in Polish: Wynalazczość polska w Stanach Zjednoczonych). ASPRA-JR, Warszawa 2013.

This book aims to provide an analysis of the attitude of the Polish-American community toward the questions of technical progress and modernity. Another objective was to demonstrate the role of Polish inventors, engineers, and technicians in transferring the technical ideas and expertise between Europe and America.

**Luxbacher, Guenther:** „Praktiker, Theoretiker und Freunde der Elektrotechnik“. Der Österreichische Verband für Elektrotechnik 1883-2013. Wien 2013.

The author analyses the development of the most important electrotechnical society in Austria, known as Oesterreichischer Verband für Elektrotechnik (Austrian Electrotechnical Association) today. He investigates questions of internal organization, technological discussion of water power, political and legal consulting, business development and professional policies in the different historical phases of the Austrian Monarchy, the Republic as well as in the phase of German occupation 1938-1945.

**Muñoz Corbalán, Juan Miguel:** Verboom. Jorge Próspero Verboom : ingeniero militar flamenco de la monarquía hispánica (Jorge Prospero Verboom: a Flemish military engineer in the Spanish court). Fundación Juanelo Turriano, Madrid 2015. ISBN: 978-84-942695-2-3

This book contains a thorough description of the career of one of the foremost figures in the history of Spain's corps of engineering: Jorge Próspero Verboom. His many works, designs, reports, services and journeys in the service of the Spanish monarchy after his appointment by King Philip V in the early eighteenth century as Engineer General for the Royal Armies attest to the decisive role in national defence and land use and management accorded to Modern Age military engineers.

**Navascu Palacio, Pedro / Revuelta Pol, Bernardo (eds.):** Una mirada ilustrada. los puertos españoles de Mariano Sánchez. (An illustrated gaze: Spanish ports by Mariano Sanchez), [textos, Pedro Navascu Palacio... [et al.]].\_Fundacion Juanelo Turriano, Madrid 2014. ISBN: 978-84-937754-9-0

In the final fourth of the eighteenth century, Mariano Sánchez journeyed around Spain to portray its main ports. The outcome of this royal commission was an exceptional series of paintings of some of Spain's major arsenals and ports, as well as of other civil works such as bridges and towers. Fundación Juanelo Turriano assembled a sizeable team of historians, engineers and architects to produce this book, a first-time compendium and analysis of the scenes painted by Mariano Sánchez. The paintings are the point of departure for a tour of Spanish ports during the Enlightenment, a significant period in the country's history, when plans for reform were drawn up for many in the belief that the sea would be the source of a more prosperous future.

**Pursell, Carroll:** From Playgrounds to PlayStation: The Interaction of Technology and Play. Johns Hopkins University Press, Baltimore 2015.

From Playgrounds to PlayStation explains how play reflects and drives the evolution of American culture. Pursell describes the work of inventors, engineers, manufacturers, entrepreneurs and consumers in reshaping the worlds of toys, playgrounds, amusement parks, hobbies, and sports, as well as "extreme" sports and video games, from 1800 to the present.

**Romero Muñoz, Dolores:** La navegación del Manzanares: el proyecto Grunenbergh (Sailing on the River Manzanares: the Grunenbergh Project). Fundación Juanelo Turriano, Madrid 2015. ISBN: 978-84-942695-0-9

German engineers Carlos and Fernando de Grunenbergh, who worked under the orders of the Spanish monarchy in the mid-seventeenth century, submitted a design to the court for an artificial canal to run parallel to the River Manzanares. This book details the history and objectives of a

project inspired by the Modern Age aspiration to foster inland navigation in Spain, and the obstacles to its implementation.

**Sambrook, Stephen:** *The Optical Munitions Industry in Great Britain, 1888-1923.* Pickering & Chatto, London, 2013. See <https://www.pickeringchatto.com/titles/1472-9781848933125-optical-munitions-industry-in-great-britain-1888-1923>

**Schmidt Horning, Susan:** *Chasing Sound: Technology, Culture, and the Art of Studio Recording from Edison to the LP.* Johns Hopkins University Press, Baltimore 2013.

In *Chasing Sound*, Susan Schmidt Horning traces the cultural and technological evolution of recording studios in the United States from the first practical devices to the modern multi-track studios of the analog era. Charting the technical development of studio equipment, the professionalization of recording engineers, and the growing collaboration between artists and technicians, she shows how the earliest efforts to capture the sound of live performances eventually resulted in a trend toward studio creations that extended beyond live shows, ultimately reversing the historic relationship between live and recorded sound.

**Sierra, C., Carlos Eduardo (Guest Editor):** *Revisita internacional magisterio, vol. 71: Bioética y educación de futuro.* Cooperativa Editorial Magisterio, Bogotá 2014.

This special issue of *Revista Internacional Magisterio* is aimed at the incorporation of bioethics dimension in educational practice in Latin American teachers in order to adapt their respective educational paradigms to the challenges of a future characterized by a global crisis of civilization because of the failure of the second industrial revolution.

**Sierra, C., Carlos Eduardo / Macraigne, Steve / Osorio, Sergio:** *La bioética a la luz de las epistemologías de segundo orden. El aporete crítico de Iván Illich y de Hans Jonas.* Universidad Militar Nueva Granada, Bogotá 2014.

This book presents the legacy of two great thinkers (Hans Jonas and Ivan Illich) given its relevance to understanding the current crisis of industrial society, that is, the obvious failure of the second industrial revolution after a century and a half of history. So, understanding that legacy enables consolidation of a global and radical bioethics in order to make the move to an alternative paradigm of civilization.

**Stegmann, Knut:** *Das Bauunternehmen Dyckerhoff & Widmann. Zu den Anfängen des Betonbaus in Deutschland 1865–1918.* Ernst Wasmuth Verlag, Tübingen/Berlin 2014.

Concrete based on Portland cement is one of the most important innovations in the field of building construction in the 19th century. The “triumph” of the material is inextricably linked with the upcoming concrete industry. The book deals with the Dyckerhoff & Widmann Company as one of the most important protagonists in that field in Germany. The company’s systematic experiments laid down the foundations for the expansion of concrete constructions. Organizational developments, partly based on study trips to the US, improved the productivity on the construction sites by mechanizing and optimizing the building processes. Marketing strategies, largely unknown in the building industry, contributed to the distribution of the technical innovation. In this way the company gradually succeeded in opening up new markets for concrete: from precast concrete components to

products of civil engineering and eventually to (famous) architecture like the Centennial Hall in Wroclaw.

**Stokes, Raymond G. / Käter, Roman / Sambrook, Stephen:** *The Business of Waste: Great Britain and Germany, 1945 to the present.* CUP, Cambridge/NY 2013. See:

<http://www.cambridge.org/us/academic/subjects/history/economic-history/business-waste-great-britain-and-germany-1945-present>

**Stranges, Anthony N.:** *Transforming America,* Kendall Hunt Publishers, Dubuque 2014.

The book is a comprehensive survey of science in America from colonial times to the present.

**Weber, Wolfhard (ed.):** *Salze, Erze und Kohlen: Aufbruch in die Moderne - 18. und 19. Jahrhundert .= Geschichte des deutschen Bergbaus, vol 2.* Aschendorff-Verlag, Münster 2015.

This second in the sequence of four volumes on a comprehensive history of mining in Germany focuses on the transition from silver to coal-mining. It focuses on attempts of the silver mining feudal administration to maintain authority, transition to industrial elements there and in coal mining and the disappearance of traditional cultural settings amidst the miners' settlements, the social deprecation coming up with the liberal/industrial coal miners' work. Jacob Vogel writes about social and economic aspects, Heinrich Lück about the legal disruptions, Wolfhard Weber about technological changes and Angelika Westermann about continuity and change of cultural traditions and understanding.

**Wosk, Julie:** *Breaking Frame: Technology, Art, and Design in the Nineteenth Century.* Authors Guild backinprint.com edition, 2013.

*Breaking Frame* –with a new introduction special to this edition –presents a comprehensive view of how artists and designers dealt with the tremors of technology as new mechanical inventions and industries dramatically transformed human life in the nineteenth century. European and American artists captured the explosive impact of the Industrial Revolution and new transportation machines in their dramatic images of factories spewing smoke, trains crashing, and comic views of people turned into automatons. Designers ornamented steam engine frames and developed artful electroplated and cast-iron imitations of more costly wares. The provocative new introduction links the book's themes to today's digital world of technology, art, and design.

**Wosk, Julie:** *My Fair Ladies: Female Robots, Androids, and Other Artificial Eves.* Rutgers University Press, New Brunswick 2015.

The book highlights how artificial females have been represented as objects of desire in films, television, fiction, and art, and how "living dolls" have been manufactured as ultra-realistic robots today. Lavishly illustrated, the book ranges from early European mechanical automatons to Hollywood films like *The Stepford Wives* to work being done by both women and men in robotics today. Drawing on the author's own experiences as a young female *Playboy* copywriter and child of the "feminine mystique" era, *My Fair Ladies* reveals how artificial females reflect changing technologies and changing attitudes toward women themselves, see [www.myfairladiesbook.com](http://www.myfairladiesbook.com).



**Zeller, Thomas (ed.):** Special issue of the Journal of Transport History, Histories of Transport, Mobility and Environment, vol. 35, no. 2, December 2014.

In his editorial, Thomas Zeller (University of Maryland, US) sketches one of the general ideas behind this publication, namely that “whenever new modes of transportation entered the competition with existing ones and when their nascence depended on new transportation routes (canals, bicycle lanes, rails, roads, airports), critics pointed out that existing ensembles of technology and the environment were altered for the benefit of a new mobility regime. New landscapes emerged.

## **II. Conference Announcements**

**3 - 6 September 2015**

**Technology – Nature – Environment 7<sup>th</sup>** Tensions of Europe Conference  
Stockholm

For a preliminary program see <http://www.kth.se/abe/inst/philhist/historia/tensions-of-europe>.  
Please contact the organizers by [ToE@tue.nl](mailto:ToE@tue.nl)

**8 – 9 October 2015**

**Einheit trotz Vielfalt? Die Diversität der Wissenschaft als Herausforderung für die Forschung.  
Herbsttagung der Sektion Wissenschafts- und Technikforschung der Deutschen Gesellschaft für  
Soziologie**

Wissenschaftszentrum Berlin für Sozialforschung

Please find the program on: <http://www.soziologie.de/de/sektionen/sektionen/wissenschafts-und-technikforschung/home.html>

**8 December 2015**

**Twenty years under the Channel, and beyond: Capital and governance in major infrastructure  
projects. Second International Conference**  
Institut français, London

**Deadlines:**

for submission of abstracts:	<b>15 July 2015</b>
for submission of working paper	<b>8 November</b>
for submission of full paper (final paper) for publication	<b>8 January 2016</b>

The languages of the conference are English and French.

### About the conference

**Twenty years under the Channel, and beyond: Capital and governance in major infrastructure projects** is the second international conference on the agenda of **Twenty years under the Channel, and beyond**, the research and events programme led by RAILS et histoire, the French Railway Historical Society, to celebrate 20<sup>th</sup> Anniversary of the railway Channel tunnel and 30<sup>th</sup> Anniversary of the Channel Tunnel Treaty.

The programme **Twenty years under the Channel, and beyond** strongly encourages the dialogue between the academic world, corporations and administrations. The international conference will bring together academics, professionals and policy makers interested in infrastructure finance and governance of major projects, with a focus on the cross-Channel rail infrastructure between London, Paris and Brussels and beyond.

Contributors to the conference are invited to present research papers or case-studies, to recount and share their experience as actors in this history, and all are welcome to take a part in the open discussion which is one of the main objectives of the **Twenty years under the Channel, and beyond** programme.

### Steering Committee, responsible for the scientific programme of the conference

- **Prof. Christian de Boissieu**, Université de Paris I Panthéon-Sorbonne (France)
- **Prof. Terence Gourvish**, London School of Economics and Political Sciences (UK)

### Submission of abstracts, working papers and full papers

#### 1. Abstracts (in English or French)

Papers proposals may refer to research papers or case studies or first-hand accounts by actors.

Abstracts should not exceed 1,000 words (Arial 12 pts, with bibliography) and include: Author, Position, Institution, Title of the paper and keywords, paper proposal, and short CV (maximum 150 words), as well as short summary in English (maximum 150 words) for abstracts in French.

All abstracts will be peer-reviewed by the scientific programme committee based on standard review procedures.

The submission of abstracts implies:

2. **Submission of working paper** (no poster presentation) by 8 November 2015. Working papers will be circulated among the conference committee and attendees only as working papers before the conference. Working paper should not exceed 8,000 words.
3. **15 minutes oral presentation** (no poster presentation) of the paper by the registered presenter *in persona*, followed by questions.
4. **Full paper**: authors are invited to submit their final and full paper for publication in the conference proceedings (digital and print versions).

All communications should be sent to [20yearschannel@ahicf.com](mailto:20yearschannel@ahicf.com)

## Call for Papers

### Background

A network is worth only its weakest link. The road network of the Roman Empire remains an icon for major infrastructure projects at any time as well as an illustration for such a fact. What the many centuries which came afterwards taught us, is that the success in building and operating major infrastructure projects depends mainly on two earlier, less material steps: planning and financing. Here lies the actual challenge and place for out of the ordinary prowess - and failure. Since 1945, a steep increase of world population, economic growth and international trade supported an enormous increase of transport flows for passengers and goods. The rising costs for major infrastructure projects stretched the financial capacity of States and markets, encouraging complex and innovative solutions to make them possible.

### Topic

The cross-Channel railway link is the largest infrastructure project of the 20<sup>th</sup> Century. The tunnel and high-speed lines it connects constitute a Pharaonic and successful technical achievement. They carried more than 350 million passengers since 1994 with the highest safety records.

Beyond the tunnel, the cross-Channel link is a unique case of interdependent infrastructures, forming a complex transport system with the Channel Tunnel Railway Link (CTRL, now *High Speed 1*), continental 'LGV's (high speed trains dedicated lines), Eurostar services, *High Speed 2* project, to leave aside the important road access built around the tunnel and further developments in Kent and Nord Pas-de-Calais regions.

The funding and governance of this unique transportation system represented however a succession of unprecedented challenges. The tunnel itself was financed by private capital exclusively - a mix of equity and bond - on request of the British government, in the early 1980s. Traffic forecast and financial analysis prior to the selection of Eurotunnel project, in 1986, ensured that the concession (of Build, Own, Operate and Transfer or BOOT type) could generate sufficient return to attract private investors. But cost increase, delays and traffic flows much lower than forecast hampered the repayment capacity. The financing and governance of the Channel Tunnel concession led to major rows and law suits between parties involved as well as successive restructuring plans.

The construction of the Channel Tunnel Rail Link between the tunnel and London, CTRL, now High Speed 1, was initially based on a privately funded project finance as well. But the failure of the second equity phase paved the way for a public subsidy to finalise the financing plan.

Since then, their business model stabilised: financial results are encouraging, debts are serviced and tunnel shareholders even received their first dividends.

The financial history of the bi-national Channel tunnel concession and the British CTRL is of utmost interest to understand drivers of major infrastructure projects. The biggest private rail projects of all times with respectively 10 and 6 billion pounds, they are a unique concentration of experience.

Associated high-speed lines on the Continent - Northern French and Belgian LGVs - followed a more conservative approach and were financed with mostly public money. But they are equally key to success for the cross-Channel venture.

Analysing "how the project, marred by many difficulties, both political and technical eventually reached its successful conclusion" (François Crouzet) in its financial and governance aspects is a challenge worth being met or, to quote its first co-chairman, André Bénard: "The Eurotunnel project

is not a model but a worthy reference". After twenty years in operation and as the 30<sup>th</sup> anniversary of the Canterbury Channel Tunnel Treaty will be celebrated in 2016, the research programme **Twenty years under the Channel, and beyond** puts the spotlight on this experience. The London conference aims at presenting existing research and initiating further studies to make the best out of this reference for major infrastructure projects today and tomorrow. Research papers, case studies, firsthand accounts are equally part of the discussion.

**Contributors are invited to submit papers on the following topics:**

**1) Funding and governance for the cross-Channel transport system: a 'back door PPP'? (Public-Private Partnership)**

- **"Not a single public penny": myth or reality?** The tunnel as such was allegedly exclusively funded by private money, but experts' estimations suggest that the two public sectors in France and the UK made interventions worth several billion pounds. All in all, public investment for the system as a whole may have been higher than private one. Legislative dispositions were taken in the UK in the early 1990s to facilitate the private funding of infrastructure - Private Finance Initiative (PFI), Transport and Works Act (1992) -, but the fact that the emergence of Public Private Partnerships is the restructuring of CTRL' contemporary is worth of notice. Which key drivers could be identified in this switch from exclusively private rail infrastructure ventures to mixed funding? Which kind of direct or indirect public funding was made available *ex ante* - connecting rail (and road) links, minimum user charge from nationalized railway operators - or *ex post* - subsidies, guarantees, liabilities, rolling stock buy-back? How was the dependency of the tunnel *versus* connecting infrastructures and operators taken into account in the original funding concept? How the CTRL case proved different?
- **Key actors and their strategies:** This bi-national project was conceived by a consortium of banks and public works companies. In 1986, a concessionary company was given responsibility for the major engineering project in the century, but neither governance nor funding was available yet. How was this made possible? Which role played building and engineering companies, banks, consultants? How did the mutual shaping of the practice of law and finance engineering answer to governance challenges in the successive stages of the fixed link?
- **Traffic forecast: why such a gap?** The overestimation of traffic in infrastructure projects is a general concern and the cross-Channel link provided no exception. Did earlier traffic studies made for the tunnel in the late 1970s and did the bank report 1985 contribute to the deviation? How was forecast elaborated and made persuasive by the actors? What were the circumstances then? Did these actors fall into line or not, and did they remain so through the successive stages - especially infrastructure builders *versus* rail operators? What do industrial decisions reveal (*e.g.* the undersized Eurostar terminal designed at Gare du Nord, which would never have coped with estimated traffic, compared to Saint-Pancras; rolling stock orders made by operators)? How do forecast justify the infrastructure and influence investment decisions?

A special attention is expected on the comparison of traffic forecast *versus* realisation in these cases, in order to question the models applied and their consistency through the projects' lifetime (including stress tests): e.g. profit price-time model for air-rail modal shift, gravity model for creation of traffic. Research should here rely upon project management / finance and economic literature (e.g. Flyvbjerg, 2003; Winch, 2009).

The analysis of vested interests, optimism and other biases should not leave aside the wider context, as analysed in the first conference of the **Twenty years under the Channel, and beyond** research programme (19 March 2015, Lille, available online at [www.ahicf.com](http://www.ahicf.com)); travel patterns have changed dramatically over the last 20 years, with the unforeseen coming up of low-cost airlines, Spain preferred to France as a major summer destination, while cross-Channel ferries stood up the competition more than expected. In the field of trainload traffic, containerisation and the increasing role of Asia in world trade altered cross-Channel rail freight flows.

- **Interactions tunnel - HS1 - LGVs:** three components combine to form the cross-Channel rail system. The funding of complementary assets to the tunnel (high speed rail and road infrastructure) is decisive to reach the highest potential traffic. In such a system, the success of each component depends highly on the others. Could systemic strategies be identified, from the start (France Manche - Channel Tunnel Group consortium), up to Saint Pancras inauguration in 2007? Does the fact that a project is launched stimulate further developments to maximise benefits for each of its components?
- **Financial green light, contracts, floating (Capital 1, 2, 3), and banking syndication.** For both Eurotunnel and CTRL, the study should take into account the inflationary context during the construction phase and low to flat inflation during operations. This unfavourable succession led the debt burden to become increasingly problematic.
- **Gains and losses: more complex than it seems?** Both lenders and shareholders suffered losses in Eurotunnel and, to a lesser extent, CTRL cases. Conversely, commissions and interests perceived by banks partly offset debt haircuts. The first Eurotunnel individual shareholders benefited from travel benefits, which proved substantial for some frequent cross-Channel travellers. As the companies now run on a more stabilised path, is it possible to draw the bottom line for investors?
- **Changing governance for a continuous service:** the governance of related parties - Eurotunnel, CTRL, Eurostar - was compelled to change over 20 years from specific agencies - Channel Tunnel Intergovernmental Committee and Safety Commission, national regulators for high speed lines - to a binational railway regulation. How did the governance for the system take into account its binational character and respective national components? How was regulation conceived in each country (UK, France, Belgium) and across the frontier to ensure service continuity? How was the Eurostar case (non-regulated monopoly at first) integrated in the system?

## 2) Public-Private Partnerships for major rail infrastructure projects in the perspective of the cross-Channel experience

A series of major railway infrastructure projects have been planned or realised in form of PPPs and project financing since the signature of the Treaty of Canterbury (1986), and when the flaws in the initial cross-Channel funding and governance scheme were being gradually identified. Among them are numerous tramways and urban light rail projects; Nîmes-Montpellier, Tours-Bordeaux and Bretagne - Pays de la Loire LGVs, CDG-Express in France; the Perpignan-Figueras and Lyon-Turin tunnel links; High Speed 2; California, Texas and Florida high-speed rail projects. The list is far from being an exhaustive one. Some of these projects experienced difficulties similar to those of the Channel rail link projects, a few went nearly bankrupt and almost all overestimated traffic forecast.

These attempts to fund privately major railway projects in the past three decades suggest that lessons from the Chunnel were not looked for nor systematically drawn. These case studies raise several questions which could only be answered by assessing to what extent the cross-Channel projects have been, or not, influential in the funding and governance of subsequent infrastructure. By way of example:

- Which specific innovations have been developed in financial engineering for major infrastructure, in the context of deregulated financial markets and the successive crisis of the 1990s and 2000s?
- Did expectations on return on investment change? Were externalities satisfactorily taken into account?
- Is decision time allowed to large infrastructure projects shorter? Have public consultations, launch and decision processes improved? How influential are they in the successful achievement of a project?
- How was regulation influenced by the Chunnel experience?
- How did concepts like “moral hazard”, “additionality”, risk sharing or transfers in each phase of the infrastructure life develop and change?
- What happens at the end of the concession-life?
- What do the US high-speed rail projects reveal, through their different stages in comparison with UK and other European projects?
- Did a corporate culture develop in major infrastructure projects? Has the management team in the starting phases of a project been addressed as a key challenge?
- Did the difficulties with ridership forecast met in early rail PPPs impact the choice between traffic-based and availability-based concessions?
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**26 – 28 February 2016**

**Men and Nature: Gender, Power, and Environmental Change**

Rachel Carson Center for Environment and Society, LMU Munich, Germany

The deadline for applications is **1 September 2015**

“Gender,” in the environmental humanities and social sciences, has long been synonymous with “women.” Feminist and ecofeminist scholars have produced a great deal of work on the links between femininities and environments and on women’s involvement in environmental politics and practices. More recently, the emerging field of queer ecology has troubled the binary construction of gender that traditionally has informed (eco)feminist research. What remains under-addressed are the myriad ways in which masculinities and masculinized roles, identities, and practices shape human relationships with the more-than-human world. Indeed, the few available scholarly articles that do interrogate masculinity and environment begin with the recognition (and a lament) that there is so little research available.

Of course, men of all backgrounds figure prominently in local and global environmental (his)stories, and elite men hold the most cultural and economic power to shape the contemporary environmental problematic. But rarely is their gender itself an object of critical inquiry and analysis. It is the purpose of this RCC workshop to shine light on and perhaps start to redress this curious lacuna in the environmental humanities and social sciences literature. The workshop aims to bring together academics, professionals, artists, writers, and activists who have an interest in exploring the



connections between masculinities and environmental change in the past, in contemporary societies, and in visions of the future.

Please send a proposal and brief biography to [conferences@rcc.lmu.de](mailto:conferences@rcc.lmu.de) by **1 September 2015**. Participants will be invited to make short (~10 minute) presentations, with notes/papers/artwork/etc. to be circulated in advance. The proposal format is open, but please include a statement of how you will engage with the topics and themes of the workshop, and a description of what your presentation might entail.

Please visit [http://www.carsoncenter.uni-muenchen.de/events\\_conf\\_seminars/calendar/160226\\_men\\_nature/index.html](http://www.carsoncenter.uni-muenchen.de/events_conf_seminars/calendar/160226_men_nature/index.html)

Please contact the organizers Sherilyn MacGregor (Keele University, UK) and Nicole Seymour (California State University, Fullerton, USA), by [conferences@rcc.lmu.de](mailto:conferences@rcc.lmu.de)

### **3 – 4 March 2016**

#### **Before Montucla: Historiography of Science in the Early Modern Era. Workshop at the Interdisciplinary Centre for Science and Technology Studies**

Bergische Universität Wuppertal, Germany

CFP – Deadline **18 July 2015**

During the last decades many new topics, approaches and research agendas emerged in historiography of science. The field extricated itself from descriptive positivism and celebratory Whiggism and began to take account of the various contexts of historical writings, creatively combining methods of the humanities and the social sciences with knowledge of the sciences. Historiography of science, however, still lacks evaluation and interpretation of its own history. In other words, the history of historiography of science has not been written yet. General overviews of the origins of history of science as a discipline usually go back to the end of the 19th century but historiography of science is much older. Some scholars say that it began in classical antiquity, among pupils of Aristotle. Other authors argue that the discipline originated in the efforts of early modern scientists to convey legitimacy and nobility to their field. Other authors argue that historiography of science arose in the Enlightenment in close relation to the study of the history of the human spirit. Every attempt to seriously study the history of historiography of science must therefore start with finding out when the moment came in which historiography of science emerged as a discipline with its own themes, specific methods and supporting institutions. We assume that historiography of science originated in the early modern period because at that time “science” in the modern meaning of the word emerged – and in order to be recognized as a producer of knowledge worth of knowing it had to offer its impressive pedigree. But still there are a lot of questions concerning the origins, aims, functions and methods used in the first outlines of the history of science.

The workshop wants to address these gaps in our knowledge. We welcome all contributions that relate to the history of historiography of science especially in the period from the Renaissance to the

beginning of the 19th century. We want to examine how the perception of the history of science was influenced by philosophical assumptions, mainly by philosophy of history: e. g. did scientists and historians view the history of science as a linear accumulation of knowledge or as a cyclical process in which periods of blossom and barbarism alternated? We are interested in how the themes of contemporary general historiography, including chronology or biblical history, affected the outlines of the history of science. Did scientists and historians synchronize the history of science with the political and socio-economic events (as in the Marxist historiography)? What factors were recognized as decisive in the development of science? Further, we are interested in the role of mythological and religious strategies in promoting particular points of view on the history of science. We are interested in nationalist, racist and religious prejudices that influenced different forms of interpretation of the history of science. We welcome papers that relate to the iconography of the historiography of science and various ways of graphical representations of and in the history of science. The literary strategies of early historians of science are an interesting problem as well. We want to discuss key concepts of the historical forms of historiography of science: the changing ideas of scientific progress, of history, of science; emancipation from prejudices, tradition, cumulativism etc. We are also interested in what scientists and historians expected of their historical overviews of the development of science, i.e.: what were the functions of historiography of science? What kind of transformations can be seen, especially in the period from 16th to the early 19th century? Who were the supposed (and real) addressees of such historical accounts. What was the public for which the outlines of the history of science had been prepared? And what effect and impact was expected?

The workshop is being organized at the Interdisciplinary Centre for Science and Technology Studies (IZWT) at the Bergische Universität Wuppertal. For further information on the topic, please get in touch with Volker Remmert, [remmert@uni-wuppertal.de](mailto:remmert@uni-wuppertal.de); or Daniel Špelda [spelda@kfi.zcu.cz](mailto:spelda@kfi.zcu.cz). The workshop's ambit invites interdisciplinary collaboration. Proposals for papers from all who can contribute to the topic are therefore welcome. Special consideration will be given to proposals from young scholars. The language of the workshop will be English. Submissions must include a title, an abstract (1–2 pages) of a 20 minute presentation, and a short CV (maximum one page). Submissions should be sent to Volker Remmert at [remmert@uni-wuppertal.de](mailto:remmert@uni-wuppertal.de) no later than July 18, 2015. Contributors' overnight accommodation costs will be covered. But because funds are limited, please let us know well in advance if you will need support to cover travelling expenses.

Volker Remmert (Wuppertal), Daniel Špelda (Pilsen)

Please contact Volker Remmert, Wissenschafts- und Technikgeschichte, Historisches Seminar, Bergische Universität Wuppertal, [remmert@uni-wuppertal.de](mailto:remmert@uni-wuppertal.de)

**30 March – 3 April 2016**

**Environmental History and Its Publics. Annual Conference of the American Society for**

**Environmental History, aseh**

Seattle , Washington

**CFP – Attention, deadline 8 July 2015**

The ASEH invites proposals for its annual conference, which will convene March 30 - April 3, 2016 in Seattle, Washington. Located on the shores of the Salish Sea and surrounded by lakes and rivers, Seattle's location serves as an evocative site to consider fluid and interdisciplinary themes in environmental history, with their commensurate ebb and flow of natures, peoples, ideas, goods, and microbes. The region is likewise home to powerful global corporations, including Boeing, Starbucks, Amazon, and Microsoft, ones that not only influence our interaction with the natural world but also provide an opportunity for historians to promote policy and decision-making beyond traditional academic venues. With a multitude of threats facing today's environment and the diverse people who depend on it, historians need to find the venues and craft the vocabularies necessary for reaching new audiences and contributing to knowledge making with direct applicability.

For this reason, the theme of Seattle's conference will be "Environmental History and Its Publics." Environmental history has grown over the past decade, especially on the international level, and is now poised to engage multiple publics who can benefit from the field's interdisciplinary approach. To reach these new audiences, environmental historians must begin to retool their message and methodologies to push society beyond its fixation on the present with a deeper understanding of the past so that better decisions can be made to shape the future of human and nonhuman life on Earth.

#### **Guidelines:**

The Program Committee welcomes teaching sessions, non-traditional formats, and sessions that encourage active audience participation. It encourages panels that include historians at different career stages and different types of institutions (academic and public) and that are gender and racially diverse. We strongly prefer to receive complete session proposals, although we will endeavor to construct sessions from proposals for individual presentations. Sessions will be scheduled for 1.5 hours. It is ASEH policy to allow at least 30 minutes for discussion in every session. No single presentation should exceed 15 minutes, and each roundtable presentation should be less than ten minutes since roundtables are designed to maximize discussion. Commentators are allowed but not required. Please note that individuals can propose to present or comment on only one panel, roundtable, or poster session in addition to chairing a second session.

Please visit <http://aseh.net/conference-workshops/seattle-conference-2016>

**24 – 27 August 2016**

**13th Conference of the European Association for Urban History, Session S25: Cities, Science and Satire: Satirical Representations of Urban Modernity and Scientific and Technological Innovation in the Public Space**

Helsinki

CFP – Deadline **31 October 2015**

European urban spaces underwent fundamental transformation due to unprecedented scientific and technological modernisation as well as the emergence of the urban press from the eighteenth century onwards. In the course of just a few decades, modern roads and transportation connected previously distant cities as well as city districts to each other and to the city centre; street lighting

made evenings safer and easier to navigate; and the provision of fresh water and canalisation prevented the spread of previously devastating epidemics and changed approaches to urban and personal hygiene. All these and other urban innovations were preceded by – and sometimes went hand in hand with – the increasing presence of scientific institutions in the urban landscape and the public sphere. Universities, academies, learned societies, clubs, casinos and coffee houses turned into places where the learned communities communicated with each other as well as presented themselves and their seemingly unchallenged knowledge to the broader public.

This rapid change was however not free from glitches and repeated failures, which was often regarded as inconvenience and nuisance to city dwellers: modern means of transportation squeezed people together challenging concepts of respectability and dignity, pipes broke, new urban projects caused visual and sensual embarrassment and often went wrong, and new scientific theories about urban betterment and “beautification” left the carriers of scientific authority embarrassed as well. Even the scientific quarters themselves – the new university campuses or the buildings of science and technology – often turned out inadequate to their initial purpose. The denizens of early modern and modern cities were not immune to these changes and liked to joke about them perhaps even more than we do today. The urban public sphere – the urban folklore, jokes that became stale from being transferred and readapted from generation to generation and from place to place, the boulevard press and other forms of sensational literature – were ideal venues to ventilate everyday grievances and discomforts through a creative use of humour and satire, and this led to the emergence and increasing popularity of the satirical press. This session will capitalise on the emerging new body of literature on the “urban turn” in the history of science and, at the same time, will zoom in even closer at specific urban projects and technological innovations that generated urban satire, revealing a much more complex and problematic representation of urban modernity.

Please submit your proposals online via the EAUH2016 website <https://eauh2016.net/>. Proposals sent by post or email will not be accepted. Abstracts of paper proposals should not exceed 300 words. Deadline for paper proposals submission: October 31, 2015. Notification of paper acceptance: December 15, 2015.

Please contact the organizers of the session, Markian Prokopovych, [markian.prokopovych@univie.ac.at](mailto:markian.prokopovych@univie.ac.at) and Katalin Straner, [stranerk@ceu.edu](mailto:stranerk@ceu.edu)

### **8 – 10 September 2016**

#### **Mobilising and Using Energy , from Antiquity to the Present Time**

Bordeaux-Montaigne University , France

CFP – Deadline **15 October 2015**

RUCHE, the French Network of Environmental Historians, organizes an international conference, that will take place at Bordeaux-Montaigne University on 8-10 September 2016, titled “Mobilising and Using Energy, from Antiquity to the Present Time.”

Please find the call for papers on: <http://eseh.org/cfp-mobilising-and-using-energy/>

### III. Miscellaneous

**Doctoral Programme “Environment and Society” of the Rachel Carson Center for Environment and Society, LMU Munich and the Deutsches Museum.**

The doctoral programme “Environment and Society” invites applications from graduates in the humanities, social sciences, and natural sciences who wish to research the complex relationships between environment and society on an interdisciplinary basis. The programme is based at the Rachel Carson Center for Environment and Society, a joint initiative of LMU Munich and the Deutsches Museum. Within the scope of the programme, doctoral students acquire the ability to understand the emergence and interactions of natural and social processes. The stimulating research environment, intensive supervision, and opportunity to form international networks offer excellent conditions for doctoral students.

For further information on the doctoral programme Environment and Society, including application details and FAQ, please visit the Environment and Society homepage, <http://eseh.org/cfa-proenviron-doctoral-programme-in-munich/>

Please contact Robert Emmett, programme coordinator, [proenviron \[at\] carsoncenter.lmu.de](mailto:proenviron@carsoncenter.lmu.de)

### IV. Recently Published Books

**Wosk, Julie:** *My Fair Ladies: Female Robots, Androids, and Other Artificial Eves*. Rutgers University Press, New Brunswick 2015.

The book highlights how artificial females have been represented as objects of desire in films, television, fiction, and art, and how “living dolls” have been manufactured as ultra-realistic robots today. Lavishly illustrated, the book ranges from early European mechanical automatons to Hollywood films like *The Stepford Wives* to work being done by both women and men in robotics today. Drawing on the author’s own experiences as a young female *Playboy* copywriter and child of the “feminine mystique” era, *My Fair Ladies* reveals how artificial females reflect changing technologies and changing attitudes toward women themselves, see [www.myfairladiesbook.com](http://www.myfairladiesbook.com).

### V. Join ICOHTEC

An ICOHTEC membership makes you a member of the scholarly network of the UNESCO-based International Committee for the History of Technology, ICOHTEC.

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