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Programme & Abstracts of the  
26th International Conference on  
the History of Cartography

**THEATRE OF THE WORLD  
IN FOUR DIMENSIONS**

SPACE - TIME  
IMAGINATION - SPECTACLE

Belgium | 12-17 July 2015

## Colophon

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# PREFACE

Antwerp has a great tradition in welcoming the world: international exhibitions in 1885, 1894 and 1930, host city to the 1920 Summer Olympics, but above all its international port. Despite its modest size – a lot smaller than a metropolis like New York – Antwerp counts more nationalities among its citizens than the Big Apple.

The earliest history of international conferences dealing with geography, including the history of cartography, can be traced back to Antwerp in the second half of the 19th century. The first ever *Congrès international des Sciences géographiques, cosmographiques et commerciales* took place in Antwerp in 1871. Although a local initiative, it was a model for later conferences in terms of organization, structure and choice of themes.

One of the key figures in the organization of that conference was Pieter Génard, city archivist of Antwerp. Now again the FelixArchief / Antwerp City Archives have taken the lead in organizing the 26th International Conference on the History of Cartography (IHC 2015), in collaboration with the University of Antwerp and Imago Mundi Ltd. This Conference's main theme – 'Theatre of the World' – is derived from the title of the very first modern atlas, published in 1570 by the renowned Antwerp map-maker Abraham Ortelius. The *theatrum mundi* metaphor has been extended into four theatrical dimensions as sub-themes: Space, Time, Imagination and Spectacle.

From the start several museums enthusiastically supported the initiative by planning cartographic exhibitions. We are proud to present a series of five, and one web exhibition, as the result of a fruitful cooperation between the various institutions.

- The MAS presents *The World in a Mirror*, depicting the history of the Western world view using unique maps and globes.
- The Museum Plantin-Moretus shows how the Golden Age of Antwerp changed its cityscape in *Drawing the City*, a co-production with the FelixArchief.
- The Hendrik Conscience Heritage Library opens the doors to its historical Nottebohm Room to tell the story of maritime chart-making in *The Seven Seas*.
- The Rockoxhuis focuses on the creation of historical maps in *Abraham Ortelius under the spell of Classical Antiquity*, a joint venture with the Museum Plantin-Moretus.
- The FelixArchief / Antwerp City Archives selected their most beautiful survey maps for the mini exhibition *Pearls of surveying*.
- Finally, the cooperation between Antwerp University Library and the FelixArchief resulted in the web exhibition *Geographical Initiatives in Antwerp*, featuring the promoters of the 1871 Conference who became the founding fathers of the Royal Antwerp Geographical Society.

Surrounded by such a cartographic wealth, the Conference is destined to be a success. The range of topics in its Programme looks very impressive and promising. No less than 70 lectures and 23 posters are awaiting your attention and applause.

Enjoy your stay in Antwerp this week. May you be inspired by the Conference, and may you go home with some spectacular memories!

Philip Heylen

Vice Mayor for Culture, Economy, City Maintenance and Property Management for the City of Antwerp

## SATURDAY 11 JULY – Pre-conference meetings

(venue: FelixArchief)

- 9.30 – 15.30 Meeting of the International Society of Curators of Early Maps (ISCCEM)  
open meeting, everybody welcome (co-chairs: Henrik Dupont & Ed Dahl)
1. Welcome and introduction of participants
  2. Reports from curators of various map collections
  3. Additional reports of major new projects and innovations in map curatorship worldwide  
(For example, the possibility of cooperation in scanning maps from different collections)
  4. Report from the new "Map and Geo-Information Curator Group" (MAGIC)  
This group replaces the European LIBER 'Groupe des Cartothécaires', which has combined with the International Cartographic Association 'Commission on Digital Technologies in Cartographic Heritage'
  5. General discussion of major issues in our field
  6. Discussion of how we can stay in touch with each other between meetings
- 16.00 – 18.00 Annual General Meeting of the International Society for the History of the Map (ISHMap)  
open meeting, everybody welcome  
(elections and voting: members only)

## SUNDAY 12 JULY – Day 1

(venue: AMUZ)

- 9.00 – 17.00 Registration: entrance hall AMUZ
- 13.00 AMUZ opens its doors to the audience of the Opening Ceremony
- 13.30 – 14.45 OPENING CEREMONY: *To see a world*
- SPACE: Clari Cantus sings *To see a world* (William Blake/Sven-David Sandström)
  - Welcome addresses:  
**Inge Schoups**, Antwerp city archivist  
**Tony Campbell**, chairman of Imago Mundi Ltd
  - TIME: Clari Cantus sings *In de lente is mijn liefde gekomen* (Lode Dieltiens)
  - Announcements:  
**Matthew Edney**, president and chairman of the American Friends of the J.B. Harley Fellowships  
**Joost Depuydt**, conference director ICHC 2015
  - IMAGINATION: Clari Cantus sings *O Magnum Mysterium* (Tomás Luis de Victoria)
  - Guest speaker **Manfred Sellink**, general director of the Royal Museum of Fine Arts Antwerp,  
Antwerp and cartography in the 16th century – a splendid marriage
  - SPECTACLE: Clari Cantus sings *Pick a bale of cotton* (traditional work song, arr. Maurice Gardner)

- 14.45 – 15.15 Coffee break
- 15.15 – 16.55 **SESSION 1. Mapping the city** (chair: Piet Lombaerde)
- **Dávid Derzsenyi**, Making knowledge in the mirror of Rome: Isaac Vossius' copy of the *Speculum Romanae Magnificentiae*
  - **Jean-Marc Besse**, New sight, old sites: editing Italy in the *Civitates orbis terrarum*
  - **Stéphane Demeter & Cecilia Paredes**, Gilles van der Hecken's map of Brussels (1535): exploring the centrality of pre-modern city spaces
  - **Marc Muylle**, Does Antwerp's 'oldest' city map and related 16th-century bird's-eye views have a common precursor?
- 18.00 Visit at the exhibition and reception at MAS

## MONDAY 13 JULY – Day 2

(venue: Aula Rector Dhanis)

- 8.40 – 17.00 Registration
- 8.40 – 10.20 **SESSION 2. World views** (chair: Tim Soens)
- **Klaus Geus & Irina Tupikova**, Explaining the errors in Ptolemy's world map
  - **Cornelia Dreer**, The *Polychronicon* maps: *mappae mundi* and memorization
  - **Thomas Horst**, New aspects to the world maps by Diogo Ribeiro: historical background and reception
  - **Julien Bérard**, Medieval world views and early modern cartography: the *Theatrum orbis terrarum* (1570 onwards) of Abraham Ortelius
- 10.20 – 10.50 Coffee Break
- 10.50 – 12.30 **SESSION 3. Map-makers of the 16th century** (chair: Jean-Marc Besse)
- **Karen De Coene**, Back to the first Lafreri's? Historical network analysis and the early Italian composite atlas
  - **Hugo Declair**, "In what place, therefore, lies that point, which the magnet so greatly seeks?"
  - **Joaquim Gaspar & Henrique Leitão**, Revisiting Mercator's world map of 1569: an assessment of navigational accuracy
  - **Dirk Imhof**, The distribution of individual maps by Ortelius via the Plantin Press after 1612
- 12.30 – 13.30 Lunch
- 13.30 – 14.45 **SESSION 4. Map use** (chair: Carme Montaner)
- **Linda Rui Feng**, What the map readers saw: writing and cartography in Tang dynasty China (618-907 CE)
  - **Maïka De Keyzer & Tim Soens**, Consuming maps and producing space: explaining regional variations in the reception and agency of cartography
  - **Quentin Morcrette**, Individuality on the map
- 14.45 – 15.15 Coffee break
- 15.15 – 16.30 **SESSION 5. Mapping in times of war** (chair: Catherine Dunlop)
- **Marian Coman**, *Theatrum belli*: the Ottoman-Habsburg Long War (1591-1606) and the making of a cartographic genre
  - **Valeria Manfrè**, Making war and maps: cartographic representation through the atlas of the Marquis of la Mina (1717-1720)
  - **Peter Vujakovic**, "All the world's a stage": maps as *spectacle* in reporting of threat discourse in the 20th century
- 18.00 Reception at the Antwerp City Hall

## TUESDAY 14 JULY – Day 3

(venue: Aula Rector Dhanis)

- 9.05 – 10.45 **SESSION 6. Borders and frontiers** (chair: Petra Svatek)
- **Mirela Altić**, Dalmatia and the southern Ottoman borderland in the eyes of Jan Janssonius
  - **Madalina Veres**, An untraceable border: cartographic projects during Habsburg-Parmesan negotiations (1750-1790)
  - **Catherine Dunlop**, Mapping Alsace-Lorraine: a story of cartographic exchange between France and Germany
  - **André Reyes Novaes**, Cartographic language and geopolitical discourses on Brazilian borders
- 10.45 – 10.15 Coffee break
- 11.15 – 12.30 **SESSION 7. State mapping** (chair: Francis Herbert)
- **Hirota Kawamura**, On the general maps of Japan compiled by the Tokugawa shogunate (1608-1867)
  - **Kory Olson**, A new way of seeing France: the case of 'Paris' from the Service géographique's 1906 *Carte de France*
  - **Zef Segal**, Geopolitics and the territorial state: the representation of new states in German atlases (1800-1939)
- 12.30 – 13.30 Lunch
- 13.30 – 14.45 **SESSION 8. Maritime charts** (chair: Junia Furtado)
- **Isabella Alexander**, Entering uncharted waters: maritime charts and copyright law in 18th-century Britain
  - **Maria Gussarsson**, The maritime atlas production of Gustaf af Klint: a unique chapter in Swedish cartographic history
  - **Yannan Ding**, The Paracels: cartographic fault and the transmission of geographical knowledge (c. 1800)
- 14.45 – 15.15 Coffee break
- 15.15 – 16.30 **SESSION 9. Map iconography** (chair: Mark Monmonier)
- **Ariel Tishby**, Arnold and Nicolaes van Geelkercken's map of the Holy Land: an iconographical study of a rare wall map
  - **Radu Leca**, The versatility of ship iconography on a 17th-century Japanese map
  - **Max Moerman**, The European airship and the Buddhist world map
- 16.30 – 16.35 Short break
- 16.35 – 17.35 **SESSION 10. Historical maps in historical GIS** (short presentations and panel discussion)  
(chair: James R. Akerman)
- **Kimmo Katajala & Antti Härkönen**, Mapping the urban spaces of a border town: Vyborg (Viipuri) from the 1630s to the present
  - **Ellen Janssens & Iason Jongepier**, Historic city maps and GIS: challenges and opportunities, using 'GISistorical Antwerp' as a test-case
  - **Juan Martín Giraldo, Stefania Gallini & Omar Ruiz**, Mapping the agricultural past of the Cundiboyacense high plateau, Colombian Andes mountains (18th – 20th centuries)
- 18.00 – 22.00 Exhibition visits at Museum Plantin-Moretus, Heritage Library Hendrik Conscience and Rockoxhuis

## WEDNESDAY 15 JULY – Day 4

(venue: Entrance Hall of Aula Rector Dhanis)

9.00 – 12.30 POSTER SESSION (with coffee break 10.30 – 11.00)

### THEME 1. Military mapping

- **Merve Senem Arkan**, Story of a city under siege (1570-1571): Stephano Gibellino's map of Famagusta
- **Jeroen Bos**, Agent of empire: the dual role of colonial military engineer Carl Friedrich Reimer
- **João Garcia, Enric Mendizábal & Francesc Nadal**, The Roussillon campaign (1793-1795): Portuguese military cartography of Catalonia
- **Martin Davis**, Soviet military mapping of the UK and contemporary Ordnance Survey mapping: a comparative analysis

### THEME 2. Maritime charts

- **Emmanuelle Vagnon**, Describing and illustrating maritime spaces: an illuminated portolan text at the court of François I
- **Marvin Falk**, The development of standards for the nautical charts of Russian hydrographers

### THEME 3. Cartographic discoveries

- **Dae-Young Jung**, A study of the old Korean map 'Ch'ŏnhajegukto' in the Collège de France
- **Antti Jakobsson, Leena Miekkavaara & Istvan Kecskemeti**, A rare printed map of 12 globe gores: one of the first maps containing the name 'America'
- **Vera Dorofeeva-Lichtmann**, A recently identified late 18th – early 19th centuries manuscript map of the Chinese Empire in Göttingen
- **Catherine Hofmann & François Nawrocki**, Early and modern globes in French collections

### THEME 4. Cartography across cultures

- **Sarah Molina**, Boundaries and frontiers: the Earthly and the Fantastic in al-Idrisi's Mediterranean
- **Ekaterina Simonova-Gudzenko**, Gyōki-type maps as the essential basis of visual representation of Japan

### THEME 5. Mapping the city

- **Keti Lelo & Valerio Baiocchi**, Metric accuracy of 18th- and 19th-century maps of Rome

### THEME 6. Toponyms on early maps

- **Gilsun Oh**, Redrawing of the five most important maps in the Song dynasty

### THEME 7. Map decoration

- **Jiajing Zhang**, The spreading and application of the Western contour method in modern China
- **Nataliya Vinogradova**, Peoples of the Russian Empire: how they appear on old Russian maps
- **Liudmila Zinchuk**, Artistic design of Russian printed maps of the 18th century

### THEME 8. Mapping new geographical knowledge

- **Sabrina Guerra Moscoso**, Francis Drake and the cartography of the New World

### THEME 9. Aspects of European cartography

- **Dániel Segyevy**, Map twins: the 1:200,000 ethnographical maps of Hungary (1918) in the shadow of Trianon
- **Lucyna Szaniawska**, Maps and atlases of Joachim Lelewel (1786-1861) accompanying his historical studies

- THEME 10. Showing status**
- **Alexander Kent**, Spectacle and status: the evolution of decoration in English estate maps (1630-1730)
  - **Luis Urteaga & Concepción Camarero-Bullón**, The last topographical survey of the royal site of Aranjuez (1864-1868)
  - **Paola Sereno, Maria Luisa Sturani & Paola Pressenda**, The *Theatrum Sabaudiae* as a part of a representation system celebrating the sovereign's power
- 12.30 – 13.30 Lunch
- 13.30 – 14.45 **SESSION 11. Aspects of 20th-century mapping** (chair: **Isabella Alexander**)
- **Mark Monmonier**, Inventors and cartographic creativity: map-related U.S. patents (1840-2012)
  - **Benjamin Sacks**, Airwave cartography: mapping British radio relays and propaganda power (1947-1991)
  - **André Ourednik**, The automobile world and the future of space: a cartographic perspective
- 14.45 – 15.15 Coffee break
- 15.15 – 16.30 **SESSION 12. Mapping the malleable** (special session) (chair: **Matthew Edney**)
- **Stephen Hornsby**, Picturing the world: American pictorial maps (1920-1970)
  - **Katariina Kosonen**, Passive resistance and raging propaganda: pictorial maps in the Finnish popular press (1900-1942)
  - **Kathryn Edney**, Mapping transitory events: Al Hirschfeld's summer stock caricatures of the 1930s and 1940s
- 16.30 – 16.35 Short break
- 16.35 – 17.35 **SESSION 13. Unlocking the treasure-houses of map collections**  
(short presentations and panel discussion) (chair: **Nick Millea**)
- **Martijn Storms**, The best of three worlds: merging three digital map collections
  - **G. Salim Mohammed**, Unleashing and exposing Stanford's historic maps: Project Ortelius & digital philanthropy
  - **Leif Isaksen, Elton Barker, Rainer Simon & Pau de Soto Cañamares**, Connecting cartography: Recogito and the Pelagios Project
- 17.35 – 18.05 History of Cartography Project: informational session
- 18.05 – ... **FREE EVENING**  
Meeting of the Directors of Imago Mundi Ltd

## THURSDAY 16 JULY – Day 5

(venue: Aula Rector Dhanis)

- 8.40 – 10.20 **SESSION 14. Late Medieval and Early Modern maps** (chair: Tony Campbell)
- **Chet Van Duzer**, “Let there be multispectral light”: imaging the c. 1491 world map by Henricus Martellus at Yale
  - **Ellen Klompaker**, The Scheldt maps of c. 1469 and 1505: regional and local cartography in late-Medieval Flanders
  - **Daniel Shelley**, A study of Andrés de Morales’ map of Hispaniola of 1509 and the origins of New World cartography
  - **Barbara Uppenkamp**, Space, time and spectacle in the Rantzau Plate (c. 1587)
- 10.20 – 10.50 Coffee break
- 10.50 – 12.30 **SESSION 15. Mapping new geographical knowledge across cultures** (chair: Carla Lois)
- **Catherine Burdick**, ‘Tabula Geographica Regni Chile’ (1646): early modern cartography at the Spanish Imperial periphery
  - **Junia Furtado**, The ambassador, the geographer, the writer and the discovery of South Africa’s geography (1720-1725)
  - **Mario Cams**, Cross-cultural cartography in practice: instruments and maps between Europe and China (1685-1735)
  - **Imre Demhardt**, Re-discovering the Arctic: cartographic treasure troves: 19th-century German geographic journals
- 12.30 – 13.30 Lunch
- 13.30 – 14.45 **SESSION 16. Medieval European, Asian and Islamic cartography**  
(special session) (chair: Karen De Coene)
- **Stefan Schröder**, The hybrid character of the 9th-century ‘Andalusian Map’ between Arabic and Latin cartography
  - **Alfred Hiatt**, Earth and water: rethinking the equinoctial ocean
  - **Hyunhee Park**, Islamic source maps for the 1402 Korean world map
- 14.45 – 15.15 Coffee break
- 15.15 – 16.30 **SESSION 17. Mapping between science and imagination** (chair: Evelyn Edson)
- **Sen-hao Yang**, Real and imaginary: the *feng-shui* maps for graveyard disputes in northern Taiwan (1878-1895)
  - **Nydia Pineda De Ávila**, Lunar maps as crossroads of technology, art and natural philosophy in the mid-17th century
  - **Gilles Palsky**, The philosopher’s map: cartography, Earth theory and spirit of Enlightenment
- 16.30 – 16.35 Short break
- 16.35 – 17.35 **SESSION 18. Bound images: maps and books since 1453** (panel discussion)  
(moderator: Matthew Edney)  
Panelists: **Jordana Dym, Carla Lois & Joost Depuydt**
- 18.00 – 22.00 Exhibition visits at Museum Plantin-Moretus, Heritage Library Hendrik Conscience and Rockoxhuis

## FRIDAY 17 JULY – Day 6

(venue: Aula Rector Dhanis)

- 8.40 – 10.20 **SESSION 19. Collecting maps** (chair: Martijn Storms)
- **George Carhart**, Maps and their place in the Enlightenment library: a consideration of the Fagel Library (1600-1802)
  - **Tom Harper**, Institutional collecting of early maps during the 19th century
  - **Sjoerd de Meer**, Collecting for the nation? Frederik Casparus Wieder and Willem Anton Engelbrecht
  - **Diana Lange**, Mapping Tibet in mid-19th century: The British Library's Wise Collection
- 10.20 – 10.50 Coffee break
- 10.50 – 12.30 **SESSION 20. Cartographic forms and shapes** (chair: Mirela Altić)
- **Andréa Doré**, Let's imagine a butterfly: animals, plants and anthropomorphism in geographical descriptions
  - **Markus Heinz**, German maps in pieces: a contribution to the early history of the jigsaw puzzle
  - **Petra Svatek**, Nature paintings and thematic cartography: early panoramic maps in Austria (1848-1884)
  - **Patrick Ellis**, The Panstereorama: *plans-reliefs* as public spectacle (1760-1851)
- 12.30 – 13.30 Lunch
- 13.30 – 14.45 **SESSION 21. Inspiration and imagination** (chair: Jordana Dym)
- **Inge Panneels**, Why do artists use maps?
  - **Charlotta Forss**, The Swedish Atlantis: Olof Rudbeck the Elder and early modern usages of cartography
  - **Carla Lois**, *Quinta pars, terra incognita* or imaginary place? Verisimilitude and mapping of the southern continent
- 14.45 – 15.15 Coffee break
- 15.15 – 16.30 **CLOSING CEREMONY**
- Thank you notes:  
**Joost Depuydt**, ICHC 2015 conference director  
**Tony Campbell**, chairman of Imago Mundi Ltd
  - Introduction to the next conference in Belo Horizonte, Brazil, 9-14 July 2017:  
**Junia Furtado**, chair of the ICHC 2017 organizing committee
- 20.00 Farewell dinner

## SATURDAY 18 JULY – Post-conference tour

(bus tour)

- 8.30 Departure from Antwerp
- 9.00 – 12.00 Visit at Mercator Museum (Sint-Niklaas)
- 12.00 – 14.00 Lunch & bus trip to Leuven
- 14.00 – 17.00 Visit at University Library (Leuven)
- 18.00 Arrival in Antwerp



# Clari Cantus

## Conductor: Michiel Haspelslagh

The youth choir Clari Cantus was founded on January 27 1990 as an equal voice choir. Ria Vanwing, the founder of the children's choir Clari Cantuli in 1989, transformed Clari Cantus into a mixed youth choir in 1992. Its members, whose average age is 18 years, are alumni of Clari Cantuli. They rehearse once a week for two hours on Monday.

This choir's repertoire is very diverse and includes choral music of Flemish, European and non-European composers from different style periods, from classic pieces to modern 21st-century compositions.

Clari Cantus can look back on a wide range of exciting activities and concerts at home and abroad. Successful concert tours were made to Germany, the Netherlands, Hungary, France, Austria, Spain, Switzerland and Poland. Clari Cantus also has good memories of musical concerts in Kaposvár (H) 1996, Vienna (A) 1997, Ochsenhausen (D) 1997-2014, Barcelona (E) 2003, Mainz (D) 2006, Strasbourg (F) 2006, Basel (CH) 2007, Vaison-la-Romaine (F) 2007, Warsaw, Łódź and Kraków (PL) 2012.

Clari Cantus was a finalist in the 'Choir of the Year 1999' competition and has already achieved nine consecutive first prize honours (in 2008 even with 94% in the highest category) in the European Music Festival for Young People, the international children's and youth choir contest in Neerpelt (Limburg, Belgium).

Michiel Haspelslagh, who is Ria Vanwing's son, took over the leadership of Clari Cantus in January 2010. On

their first appearance under his leadership they achieved another first prize in Neerpelt. On 2 April 2011 they won the prestigious titles 'Youth Choir of the Year' and 'Choir of the Year' – a title still held. On 5 May 2012 the choir received the honour to sing at the VE-Day yearly remembrance. A marvellous performance of the *Requiem* by John Rutter was the result. In 2013 Clari Cantus sang at the opening of the 21st EAS Conference/ISME European Regional Conference in Leuven. [\*]

Clari Cantus was selected in 2014, by SingUK, to be the Flemish delegation and representation in a major commemorative event in London: to remember The Great War (1914-1918). They had the tremendous honour to perform, along with 600 singers – one French, one German and 19 British youth choirs – and the Philharmonia Orchestra, *The Armed Man – a Mass for Peace* by Karl Jenkins in the iconic Royal Albert Hall (Kensington).

In February this year 17 members of Clari Cantus went to the 3rd Georgy Teratsuyants International Choir Festival in Petrozavodsk (Russia). The jury awarded Clari Cantus the First Prize for the best performance of music from a Northern European composer. According to the jury and audience the performance of *To see a world* by Sven-David Sandström was impressive, and deeply moving because of the perfectly controlled extremes in dynamic range, flawless intonation, vocal technique and blending of voices.

[\*] EAS = European Association for Music in Schools; ISME = International Society for Music Education





16th-century manuscript map of Antwerp (FelixArchief, 12#11667-11670)



# ABSTRACTS

## SUNDAY 12 JULY

## Session 1. Mapping the city

Chair: Piet Lombaerde (Universiteit Antwerpen, Belgium)

### DÁVID DERZSENYI

- Eötvös Loránd University
- Budapest, Hungary



Art historian attending the Renaissance Studies Master Programme at Eötvös Loránd University, Budapest. In 2013 he was a visiting student at Leiden University and a trainee in its Library's map collection; his tasks included the describing and cataloguing of maps in the Bodel Nijenhuis Collection and the Isaac Vossius Sub-collection. He then interned at the Museum of Fine Arts, Budapest. His major fields of interest are the history of cartography, map collecting and Renaissance art. He is a student member of the International Society for the History of the Map.



Throughout centuries Rome and Ancient Roman heritage always fascinated collectors, connoisseurs, travellers and armchair travellers from all over the world. A remarkable example of this abundant and versatile interest is the *Speculum Romanae Magnificentiae*, a rich compilation of individual prints and maps that were mostly produced by the heirs and followers of the so-called Lafreri circle of print makers in the second half of the 16th century in Rome. The imprints are dated from 1567 to 1632, indicating that the customers and the collectors might have compiled these volumes through several re-bindings. Leiden University Library holds two volumes of the *Speculum* that were sold to it – along with a vast collection of rare manuscripts, books, atlases and maps – in 1690 by the heirs of the Dutch librarian philologist Isaac Vossius (1618–1689). These two volumes might have interested Vossius because of their subject matter, i.e. maps, bird's-eye views and townscapes of Mediterranean cities, prints of ancient Roman architecture, monuments, statues and coins. Besides the *Speculum* the Vossius Collection also contains two sets of map series of unbound Lafreri-type atlases and five historical speculative maps of Ancient Rome after the design of Pirro Ligorio: the *Antiquae Urbis Imago* from 1561.

The maps and prints of the *Speculum* can be conceived as memorabilia of Vossius' adventurous "library Grand

Tour" and his ambitions in geography at a young age. In my paper I will present the way these prints and maps of 'Roma Moderna' and 'Roma Antiqua' became collectible for Vossius. I will also explore the network of scholars and collectors whom Vossius contacted to trace the background of his purchases. For this I shall compare Vossius' biography (F. F. Blok, 2000) with the most particular sheets, e.g. thesis prints, proof prints, drawings, etc. of the *Speculum*. Through this comparison I will propose that he obtained a considerable part of these sheets during his peregrination through Italy in 1642. It is very probable that a few pieces were given to him as gifts by his hosts like Cardinal Francesco Barberini in Rome. Staying at the *cardinalis nepos*, Vossius gained access to a prominent scholarly network hallmarked by Lucas Holstenius and Cassiano dal Pozzo – members of the Accademia dei Lincei. I will also introduce these antiquarian-connoisseur humanists as potential promoters of the *Speculum*.

Applying Michel Foucault's terms, these men of letters formed and witnessed the zenith of the Renaissance, and its shift towards the Classical, episteme. This tenet concerns the collecting and compiling of the images of Roman heritage. I will present how this 16th-century material contributed to knowledge at the dawn of the scientific revolution.

## JEAN-MARC BESSE

- Centre National de la Recherche Scientifique – CNRS
- Paris, France



Senior researcher at the CNRS, head of the team EHGO (Epistemology and History of Geography), head of the History Commission at the French Committee of Cartography.

## New sight, old sites: editing Italy in the *Civitates orbis terrarum*



From the very first volume published in 1572, the editors of the *Civitates orbis terrarum*, Georg Braun and Franz Hogenberg, present their city-atlas as a supplement (Johannes Keuning's term) to Ortelius's *Theatrum orbis terrarum*. Whereas Ortelius's book displays a world-view on a geographical scale, the *Civitates orbis terrarum* is, according to Braun, conceived to address the chorographical or topographical scale. Nevertheless, the two books seem to share a common intention, and they follow an identical spatial logic, derived from Ptolemy: in other words, the *Civitates orbis terrarum* must be read as an atlas.

But early modern atlases are geographical objects of a peculiar kind. They convey a set of specific intentions that are not merely cartographical, even if they have obvious relationships with map-making. As books of maps and views, these early modern atlases are editorial products, and they belong to the history of the book as much as to the history of cartography.

The problems involved in the making of atlases are linked to the presentation and the communication of maps and views. Of course, these problems have an impact on mapmaking, but, above all, they are linked to another field: like books, encyclopaedias, as well as museums or *Wunderkammern*, early modern atlases belong to the world of collecting. They are spaces designed

according to a specific scenography for the exhibition of knowledge, ideas, values, or objects of various kinds.

In this context two issues may be addressed. Firstly, we may want to look at the intentions expressed in the scenography of maps and views (i.e. their editing process); secondly, the effects of such scenography on what might be called the socialisation of the geographical knowledge, and its commitment to culture, should also be investigated.

The aim of this proposal is to follow the implementation of the editorial and scenographic project of the *Civitates orbis terrarum*. This analysis will be developed from a case study: the edition of Joris Hoefnagel's drawings during his journey in Italy in 1577-78, along with Ortelius. More precisely, the aim is to study the way these drawings were dealt with in the *Civitates*, and to evaluate their contribution to a visual imagination of Italy.

Hoefnagel's preparatory drawings, the engravings and texts printed in the *Civitates orbis terrarum* will be compared, and set in relation to the contemporaneous philological work carried out by Ortelius for his *Parergon* and *Thesaurus geographicus*. In so doing, the aim of this proposal is to investigate the editorial construction, within a city-atlas, of a geographical and historical image of Italy.

## STÉPHANE DEMETER

- Direction des Monuments et Sites, Région de Bruxelles-Capitale & Université libre de Bruxelles
- Brussels, Belgium



Stéphane Demeter holds Masters in Medieval History (ULB 1988) and in Public Administration (ULB 2003). He is attached to the Direction for Architectural Heritage of Brussels Region, where he has been in charge of the management of the Archaeological Heritage since 1996, and coordinator of the regional archaeological atlas. Since 2012 he is Head of the Heritage Documentation and Promotion Department. In parallel, he conducts researches on Brussels Medieval fortifications. At Brussels University he is an affiliated member of the Research Centre SOCIAMM.

Co-author: Cecilia Paredes (Direction des Monuments et Sites, Région de Bruxelles-Capitale & Université libre de Bruxelles, Brussels, Belgium)

## Gilles van der Hecken's map of Brussels (1535): exploring the centrality of pre-modern city spaces



The manuscript map drawn by Gilles van der Hecken in 1535 is in a codex conserved at the Bodleian Library in Oxford. It represents the first concept and depiction of the city of Brussels (30 x 17 cm): the two circles of city walls with seven main gates each, the river Senne and bridges, the locations of churches, patrician's houses, public fountains, and many other important buildings. If the map's circular and schematic form reflects the idealized heavenly city – characteristic of Medieval illuminations – van der Hecken's depiction also relies on a theoretical background and manifests topographical issues reflecting a new modern and humanistic vision.

Until now little attention has been paid by historians of cartography to this representation. We would like to make a first attempt by discussing its centrality, and equally in a symbolic way in a spatial and diachronic perspective. More precisely, we will replace van der Hecken's plan within the tradition of circular maps production and Brussels' cartographic history.

We would also like to discuss the role that a central tower, the umbilicus of the city, may have played in the

making of circular maps. Other circular maps offer a similar expression of centrality, such as that of Conrad Morant for Strasbourg (1548) and Nicolaus Meldemann for Vienna (1530): both are engraved on wood, 87.5 x 68.2 cm and 81.2 x 85.6 cm respectively, are coloured and highly detailed. Those plans are based on, and oriented according to, a central point in their cities: the cathedral tower (142 m and 137 m respectively). The central point of van der Hecken's map is Brussels city hall's tower (96 m), situated on the central great marketplace.

The panoramic and central view over the city, allowed by such high structures, corresponds to a new mode of perception of urban space, which emerged in the Northern Countries in the second half of the 15th century. Albrecht Dürer, in his *Four Books on Measurement* (1525) which apply geometry to architecture, suggests that "the belfry should be located in the most advantageous place and in the middle of the city so that from the top of the tower, one will be able to see the whole city".

## MARC MUYLLE

- Universiteit Antwerpen
- Antwerp, Belgium



MSc Marc Muylle (1949) Prof. em. in digital design communication of the University of Antwerp Promotor/ Co-promotor of PhD/MA theses in the field of the digital historical study of 16th- and 17th-century maps, churches and fortifications. Publication: M. Muylle and N. Poppe, 'Digital verification of innovative 17th-century illumination theories used in the design of Baroque churches in the Southern Netherlands' in: DACH 2007: the 2007 International Conference on Digital Applications in Cultural Heritage, Tainan 2007.

## Does Antwerp's 'oldest' city map and related 16th-century bird's-eye views have a common precursor?



On the recently conserved oldest anonymous late 16th-century manuscript city map of Antwerp many intriguing scenes can be noticed, such as the Spanish and Medieval ramparts drawn parallel to, and at a considerable distance from, each other: they were actually erected one on top of the foundations of the other. The manuscript is probably a late 16th-century composite copy of earlier maps, presenting a patchwork of buildings and structures that would have existed over a period spanning the entire 16th century and possibly earlier. The Medieval buildings are still drawn as a series of folded façades, in contrast to the Renaissance buildings that are already presented as a bird's-eye view. The city's Medieval parts are more schematically depicted whereas, for the late 16th-century additions such as the Citadel and Nieuwstad, an attempt was made at geographically correct representation.

The aim of the research was to learn more about the origins of this map and its potential precursors, particularly as it appears to have been drawn in several outdated styles, and with limited accuracy at a time when topographical maps and very detailed bird's-eye views of the city had existed for nearly 40 years. These bird's-eye views inevitably had to be included in the study. The method carefully compared the shape and dimensions of each block in the oldest city map with the corresponding block on a current map. The observed variations in accuracy were quantified using purpose-built software, and presented as a coloured overlay of blocks.

Clusters of blocks with approximately equal (colour) variations may indicate areas with greater homogeneity, possibly because they have been based on pre-existing well-measured property maps. Substantiation of this assumption would require that similar clusters could be retrieved from other contemporary maps. Three plans (dating from 1610 to 1662) and nine bird's-eye views (dating from 1557 to 1640) including the *Urbs Antverpia* by Virgilius Bononiensis (1565), were made available for this purpose.

R.L. Kagan (1989) has already indicated that the bird's-eye views of the cartographer van den Wyngaerde (c. 1512-1571) were constructed from a city map; the method used, however, was not described. In a sub-study the author describes a plausible and simple method that the cartographers could have used to transform a city map, using a vertical linear reduction, into the bird's-eye view or pseudo perspective. The reverse process can be used to digitally render the bird's-eye views back into city plans.

Using the above reverse engineering the blocks on the nine reconstructed maps, and the three original city plans, could then be compared with the building blocks on the current map.

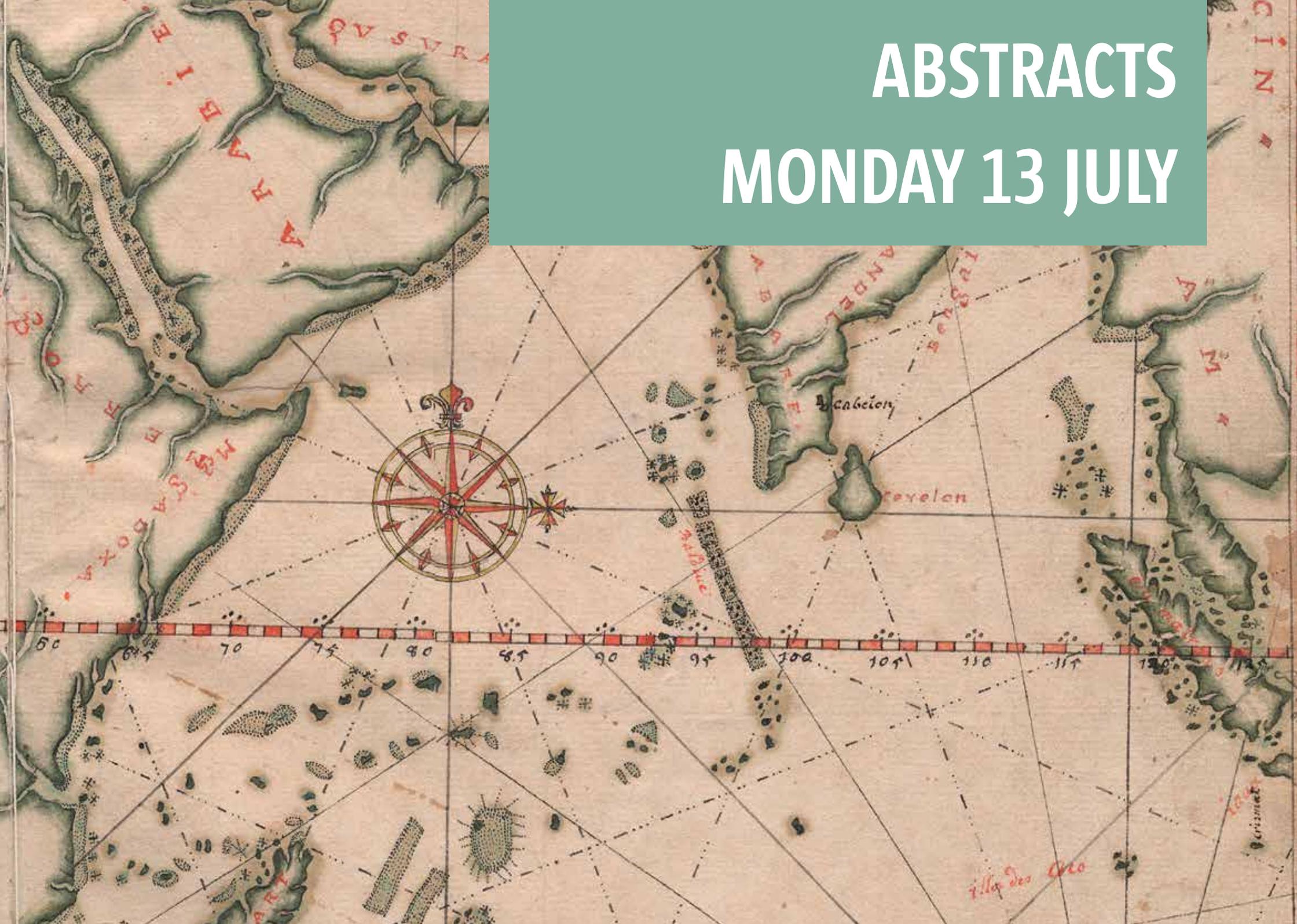
The paper further discusses the distinct similarities and differences between the maps rendered by the described method, and provides an initial impulse for possible explanations.



Manuscript map in logbook of 'De Arent', ship of the Ostend Company, 1724 (FelixArchief, GIC#5688)

# ABSTRACTS

## MONDAY 13 JULY



## Session 2. World views

Chair: Tim Soens (Universiteit Antwerpen, Belgium)

### KLAUS GEUS

- Freie Universität Berlin
- Berlin, Germany



Klaus Geus is an ancient historian, philologist and geographer. He earned his PhD at Bamberg in 1991 and worked afterwards in Mannheim, Jena, Bayreuth and Tübingen. In 2009 he was appointed full professor of the historical geography of the ancient world at the Freie Universität Berlin. Geus works in the areas of ancient geography and astronomy. Up to now he has published nineteen books and more than two hundred papers and articles. His most recent books are on ancient mapping (*Vermessung der Oikumene*, 2013), mental modelling (*Common Sense Geography*, 2014) and Ptolemy (*Travelling along the Silk Road*, 2014).

Co-author: Irina Tupikova (Lohrmann Observatory, Technische Universität Dresden, Dresden, Germany)

### Explaining the errors in Ptolemy's world map



One of the most notorious features of Ptolemy's world map is its gross longitudinal extent. Until now several explanations have been advanced, i.e. overestimation of length of the oecumene due to missing or inaccurate astronomical observations, different lengths of stades; wrongly-scaled local maps, scribal errors, etc. All attempts have produced 'results' in a bewildering, and thus unconvincing, variety. They cannot explain, e.g., why the distortion occurs mainly along the east-west direction. Our approach differs vastly from these attempts to explain the erroneous coordinates in Ptolemy's geographical work. We consider Ptolemy's adoption of 180,000 stades for the circumference of the earth as the point of origin for the distortion of his world map. We will demonstrate that by applying the 252,000 stades for the earth's circumference – the measurement of Era-

tostrhenes – the Ptolemaic coordinates for ancient places on the now 'bigger' earth fit very well their modern counterparts in the Ptolemaic oecumene. Our mathematical formulae now allow us to identify many hitherto unknown localities in Ptolemy's catalogue. This approach also clarifies the origin of many topological problems in Ptolemaic maps like the mutual rotation of local maps, or the gross misplacement of important places like Carthage or the Canaries.

In our presentation we will start with a short introduction to the mathematical approach and the cartographic consequence of Ptolemy's wrong mapping. In the second step we will outline a case study – the Silk Road in Ptolemy – and conclude finally with a recalculation of the coordinates of this area and an interpretation of the mentioned places.

## CORNELIA DREER

- Universität Kassel
- Kassel, Germany



Doctoral student of Prof. Dr Ingrid Baumgärtner at Kassel University, thesis on 'Knowledge, space, and identity. The *Polychronicon* by Ranulph Higden'; recipient of a scholarship from Kassel University (since April 2014); member of the Research Training Group 'Dynamics of Space and Gender' (since January 2014); studies in Art History, History, and Sociology at Kassel University (graduated in 2012) and at the University of Wisconsin-Milwaukee (2006-2007); studies in Industrial Design at Pforzheim University (graduated in 2003).

## The *Polychronicon* maps: *mappae mundi* and memorization



It is an often repeated fact in cartographic research that Medieval *mappae mundi* need to be interpreted along different standards than modern maps. The actual application of this paradigm, however, remains a challenge, since concepts that postdate the source material all too easily influence its reading. This might be one reason why the elaborate iconographic designs of some *mappae mundi* gained much more appreciation than their schematic structure. A case in point is the limited scholarly interest in 18 mostly utilitarian world maps that are extant within manuscripts of the universal chronicle *Polychronicon* of Ranulph Higden (c. 1299-1363/64).

Taking those maps as an example, this paper will discuss *mappae mundi* within a wider context: namely in regard to the gathering, conveying, and storing of knowledge. The aim is to show that schematic maps

were best suited for the task they intended to fulfil. To this end, it is necessary to consider not only maps but images in general. Certain qualities, which characterize *Polychronicon* maps as well as other Medieval works of art, can then be linked to the practice of memorization. Its facilitation did not provide an additional function but was an underlying concern of any representation of knowledge. Medieval society – whose everyday life was shaped by oral communication – influenced thus how authors of texts and images engaged with their medium. If, in consequence, the benefit of an image lay in its remembered content rather than in the use of the material object itself, then rich illusionistic detail must have seemed superfluous or even distracting. This reasoning can be applied to the production of maps too and valuable insights into *mappae mundi* may be obtained from this perspective.

## THOMAS HORST

- Centro Interuniversitário de História das Ciências e da Tecnologia – CIUHCT
- Lisbon, Portugal



Dr Thomas Horst studied History and Anthropology in Munich. After his PhD he specialized in the analysis of old globes. His book about Gerhard Mercator (1512–1594), which was translated into French and Dutch, has been distinguished by the Société de Géographie de Paris with a special award in 2012. Dr. Horst is Founding Member and Trustee of the International Society for the History of the Map (ISHM). Since September 2013 he has been working on a Postdoctoral project about ‘Maps, Globes and Texts: Cosmographical knowledge in early Modern Europe’ at the CIUHCT in Lisbon, Portugal.

## New aspects to the world maps by Diogo Ribeiro: historical background and reception



Renaissance maritime maps play an important role, not only for the history of cartography but also for the history of discoveries, because they illustrate one dimension of the ‘Theatre of the World’, the Space. This can be demonstrated for instance with the cartographic sources of the Casa de la Contratación, which was founded in Sevilla in 1503 as a government agency to organize Spanish expeditions to the New World. Most important to this is the official government chart, the *Padrón Real*, which was made (and always renewed) by official cartographers like the Portuguese mapmaker Diogo Ribeiro († 1533), who worked from 1519 for the Spanish kingdom – together with other Portuguese scientists (Pedro and Jorge Reinel, Ruy and Francisco Faleiro).

From Ribeiro, who can be called the ‘Mercator of the Iberian Peninsula’, we know two large scientific *mappae mundi* from 1529 which are in the Vatican and in the Herzogin Anna Amalia Bibliothek in Weimar, Germany. The layout of these huge manuscript maps, which gives excellent information about the geographical knowledge of the second decade of the 16th century and the dispute about the Moluccas, is unique, because they also show flags, coats-of-arms and – for the first time – instruments. If we compare these with other manuscript maps attributed to Ribeiro (the so-called ‘Castiglione map’ of 1525; anonymous *Carta Universal* of 1527 in Weimar, and two anonymous fragments of

world maps in the Studienbibliothek Dillingen, Germany [dated 1530], and in Wolfenbüttel [c. 1533]), we can see that they all show a close analogy in their style (so-called ‘Ribeiro type’).

But why were these maps drawn and how did they come to Italy and Germany? How are they connected to other contemporary *mappae mundi* like the ‘Salviati map’ (drawn around 1525 by Nuño García de Torenó) or the chart, which was made by Juan Vespucci in 1526? To respond to these questions I will give an overview of the historical background of these maps, which will show new aspects. Some of these charts are probably directly connected with the German trading houses of Fugger and of Welser, who established their global network on the Iberian Peninsula in the 16th century. Furthermore, the analyses of the coats-of-arms and other innovations of these maps will give further information that confirm my assumption.

The second part of the paper will deal with the reception of the 1527 and 1529 maps of Ribeiro. It will be presented that they were already studied in detail in the 18th and 19th centuries (amongst others also by Alexander von Humboldt), and that German cartographers like Franz Ludwig von Güssefeld (1795) or the Geographische Institut in Weimar (1860) even made facsimiles of them – a fact that has been largely forgotten.

## JULIEN BÉRARD

- University of Bayreuth
- Bayreuth, Germany



Born in Laval, Canada, in 1980, He moved to Germany in 2001 and studied history, economic history and classics at the Heinrich-Heine-University in Düsseldorf from 2002 to 2009. Since 2011, he has been working as an assistant lecturer at the Chair of Early Modern History of the University Bayreuth in Bavaria.

## Medieval world views and early modern cartography: the *Theatrum orbis terrarum* (1570 onwards) of Abraham Ortelius



Abraham Ortelius and his chief work, the *Theatrum orbis terrarum*, have often been understood as a prime example of modern cartography. This assumption is generally based on two leading points: firstly on the standardized format and style in which his maps are presented, and secondly, on the academic character of his atlas as a whole. Ortelius was indeed one of the rare Renaissance map-makers who systematically mentioned their cartographical and non-cartographical sources, thus applying a principle similar to modern footnotes. Furthermore, he understood cartography as a cooperative endeavour, which could only be achieved through collaboration and communication among map-makers.

At a second glance, however, Ortelius' cartographical work is far from filling the criteria of academic map-making as we understand it today. Neither Ortelius' purpose in map-making, nor his way in organizing knowledge on maps or their very content, could be strictly seen as 'modern'. His purpose, as he elucidated in the *prefatio* of the *Theatrum*, shows indeed more similarities to Medieval thoughts and principles than to modern cartographical science. In Ortelius' eyes, cartography should mainly aim at deepening understanding of history and at facilitating contemplation of God's creation, and has thus no manifestly practical function. Furthermore, many of his maps do not only depict geographical features and topographical names, but also exhibit descriptive text blocks and images of sometimes marvelous character. Combining images and texts to convey information and knowledge was, for instance,

typical of Medieval *mappae mundi*. Particularly, Ortelius made use of text blocks and images to fill maps or parts of certain maps for which empirical information was lacking. Thereby he was probably influenced or guided by the Aristotelian principle of *horror vacui* which was, as is generally known, also acknowledged in the Middle Ages but strongly challenged, and finally refuted, in the course of the so called 'scientific revolution'. One further salient Medieval characteristic of his maps consists in the kind of knowledge they contain. In addition to geographical and topographical information, his atlas also conveys plenty of historical, anthropological, religious and mythical knowledge. This encyclopedic trait of Ortelius' atlas is also characteristic of the Medieval mapping tradition. Moreover, the sources of this knowledge were mostly of Medieval and Classical origin and thus could not be considered to be 'modern' or empirical in any way.

For these reasons, and many more, it is inappropriate to qualify Ortelius' maps as 'modern' cartography, since they are too deeply rooted in Medieval traditions to be designated as such. It would be, however, also inappropriate to understand his maps as a mixture of modern and ancient cartographical concepts, since such a classification is obviously an ex-post construction, which does not correspond to contemporary perceptions. In fact, the apparent mixture of modern and ancient knowledge reflects the very nature of the late Renaissance world view and should therefore be considered as an independent way of mapping *per se*.

## Session 3. Map-makers of the 16th century

Chair: Jean-Marc Besse (CNRS, Paris, France)

### KAREN DE COENE

- Universiteit Gent
- Ghent, Belgium

MONDAY 13 JULY



Karen De Coene is a researcher at the Geography Department of Ghent University. Educated as an art historian, she started research in Medieval encyclopaedias and *mappae mundi*. After her PhD she got the opportunity to study historical maps at the Department of Geography, where she has been involved in several projects on historical cartography, historical networks and cartographical heritage.



In 1862, one year after the Society of Antiquaries of the Land van Waas (KOKW) was founded, a local noble family donated it 'un atlas de vieilles cartes'. The 96 bound engravings were soon identified as an Italian composite atlas. In 2008 the maps were listed in *The Cartographic Journal* (British Cartographic Society) where a comparative analysis with other IATOs ('Italian Atlas Assembled to Order') suggested a Roman origin. The KOKW volume had remained largely untapped ever since.

Due to the exhibition of KOKW's atlas in 2014 (twenty years after it was restored and the binding was removed), the maps were digitized by Ghent University and research of the atlas continued again. Next to classic map analysis, 86 watermarks have now been identified, while the most interesting results came from a historical network analysis (HNA) of cartographers, printers, publishers and papermakers involved. This combined methodological approach makes the research significant for a better understanding of the early development of the Italian composite atlases in three ways. First, although obvious after dating, it was never clearly stated that the KOKW atlas, with its most

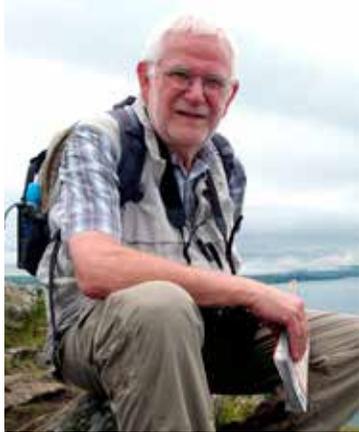
recent maps from 1567, is one of the oldest Italian composite atlases. It is contemporary to both the Casanatense atlas in Rome and the atlas of the Newberry Library in Chicago, with only the Hatfield House atlas predating it by one year.

Second, the HNA could trace the origin of the KOKW atlas back to a close cooperation between the printer Antonio Lafreri in Rome and the cartographer Giacomo Gastaldi in Venice. Their cooperation is well known, but the network graphs show a close connection of their networks, thus emphasizing the interregional aspect instead of the usual attribution to either solely a Roman or a Venetian origin.

Third, research of the binding questioned the simultaneity of compiling and binding maps during the late 1560s. Composite atlases were a product of the Italian print market, which places the origin of bound atlases within that of engravings being compiled in one volume. Examples are Lafreri's portraits of Italian jurists (1566), popes (1568) and Roman emperors (1568), Greek and Roman sculptures (1569) and especially his *Speculum Romanae Magnificentiae* (1573).

## HUGO DECLEIR

- Vrije Universiteit Brussel
- Brussels, Belgium



Hugo Declair is emeritus professor Climatology and Cartography at the Vrije Universiteit Brussel (VUB). He obtained his PhD from the Universiteit Gent and participated in a large number of expeditions to both the Antarctic and Arctic. From 1995 to 2010 he was president of the Belgian National Committee on Antarctic Research. Apart from his contributions to polar climatology and glaciology he co-authored a text book on world map projections and edited Roald Amundsen's 'Belgica' Diary.

“In what place, therefore, lies that point, which the magnet so greatly seeks?”



“Quo igitur sit loco punctus ille, quem tantopere sectatur magnes?” During his quest – over a period of more than thirty years – for the exact location of the magnetic (north) pole Gerard Mercator, the map-maker, introduced a simple yet elegant mathematical model describing the magnetic field of the earth. Assuming that the direction of the magnetic needle follows great circles converging at the terrestrial magnetic pole, the result is a model which can be solved as a case of spherical trigonometry. This proved to be a remarkable achievement of abstract physical thinking, at times when some people still searched for the magnetic attractive force in the heavens, while others erroneously attributed the deviation of the compass needle from true north to a peculiarity of the magnet concerned. The model permitted not only the possibility to pin-point the pole, it allowed Mercator to explain elegantly why the observed eastern deviation of the compass needle increased from true north in Western Europe. In this paper we will speculate how Mercator, based on this principle, accurately predicted the magnetic declination of Danzig (Gdańsk) starting from the observed value in Walcheren. More generally, Mercator complained of the ignorance of the shipmasters about this phenomenon, when he tried to reconcile portolan charts with other maps or data. The west-east coasts of some of the former were indeed ro-

tated due to this neglect of the compass variation. It testifies to the scrupulousness of Mercator as a map-maker. The main part of this paper is devoted to the recalculation of the different efforts made by Mercator over a time span of about thirty years to locate the magnetic pole. The outcome of his calculations is disappointing as each of his four attempts (in 1546, 1552, 1569 I, 1569 II) resulted in four different results for both latitude and longitude. Checking his calculations was made difficult as Mercator does not always provide us with the basic data (i.e. for some places we are ignorant of the latitude and longitude, or the choice of the prime meridian, or even the observed declination). However, basing the calculations on the geography of Mercator's 1569 world map (*Ad usum navigantium*) we find a very consistent result over time for the latitude of the magnetic pole. On this aspect our calculations corroborate those made by H. Averdunk and Dr. J. Müller-Reinhard in their 1914 pioneering study on Mercator. Unfortunately Averdunk and Müller limited their analysis to the latitude of the pole. Accepting the calculated values for the longitude in our calculations as correct, we infer a gradual shift with time of the Prime Meridian as chosen by Mercator from the east (east of Lanzarote) to the west (Cape Verde Islands), which is also a shift away from Ptolemaeus to modern geography.

**JOAQUIM GASPAR**

- CIUHCT, Universidade de Lisboa
- Lisbon, Portugal



Joaquim Alves Gaspar is a retired Navy officer and a specialist in marine navigation and mathematical cartography, now a postdoctoral researcher in CIUHCT – University of Lisbon, Portugal. His present research interests are the history of nautical cartography and the cartometric analysis of old charts. The most recent works were dedicated to the construction of Mercator's world map of 1569 (with Henrique Leitão): 'Squaring the Circle: How Mercator Constructed His Projection in 1569' and 'Globes, Rhumb Tables, and the Pre-History of the Mercator Projection' (*Imago Mundi*, vol. 66, 1; 66, 2).

Co-author: Henrique Leitão (CIUHCT, Universidade de Lisboa, Portugal)

## Revisiting Mercator's world map of 1569: an assessment of navigational accuracy



Little is known about the sources used by Mercator to compile his world map of 1569. According to one of the map legends, Castilian and Portuguese charts were compared with each other as well as with travel accounts, and it was "from an equitable conciliation of all these documents that the dimensions and situations of the land are [were] given here as exactly as possible". Mercator, however, said nothing about the methods he used to convert those pieces of information into a form that could be used to draw the map, that is, into a list of latitudes and longitudes. While the determination of latitude by astronomical observations was already a routine process in Mercator's time, that was not the case of the determination of longitude. Although the basic principles and methodologies were known since antiquity, the inaccuracy of the astronomical tables and the difficulties associated with the observations made the results untrustworthy for navigational purposes.

At the time Mercator engraved his world map navigational charts were constructed using the latitudes of the places and the magnetic courses connecting them. Before this information could be used in the new map it should be first transformed in such a way that the places were represented according to their correct longitude differences. Whether Mercator performed such transformation or just considered that the longitudes were

approximately correct is unknown. In order to shed some light into the question a cartometric analysis of his world map of 1569 was made focused on its navigational accuracy.

Three independent components of the map's accuracy are considered, all affecting its quality as a navigational chart: the accuracy of the graticule, which is measured by the agreement between the position of the meridians and parallels with the theoretical grid of the cylindrical conformal projection; the absolute positional accuracy of the places, that is, the accuracy of their latitudes and longitudes as measured on the scales of the map and then compared with the exact values; and the relative positional accuracy of the places, whose most important component is the accuracy of the rhumb-line directions connecting them.

It is a well-known fact that the Mercator projection was mostly ignored by contemporary pilots, and that its full adoption for marine navigation had still to wait some two hundred years: that is, until more was known about the spatial distribution of magnetic declination, and effective methods for finding longitude were developed. If the resistance of the pilots had anything to do with the lack of navigational accuracy of the map, this is a possibility that should be also investigated.

## DIRK IMHOF

- Museum Plantin-Moretus
- Antwerp, Belgium



Dirk Imhof is head of the library and archives of the Plantin-Moretus Museum in Antwerp. He studied classics and later library sciences in Antwerp and Ghent. In 2008 he earned his doctorate in history on the publishing activities of Jan Moretus I. In 2010-2011 he had the Munby fellowship at the University of Cambridge to prepare an annotated bibliography (published in 2014) of Jan Moretus' publications. He is co-author of the book *Christopher Plantin and Engraved Book Illustrations* (Cambridge, 2008).

## The distribution of individual maps by Ortelius via the Plantin Press after 1612



It is common knowledge that after the death in 1598 of Abraham Ortelius the Antwerp print publisher Jan Baptist Vrients acquired the copperplates used for Ortelius' atlas *Theatrum orbis terrarum* and subsequently published several new editions of it. Following his death, Balthasar I and Jan Moretus II, the managers of the Plantin Press in Antwerp at that time, bought the copperplates and remaining copies of the atlas from Vrients' widow in 1612. The reissued various editions of the atlas, with new title-pages, were sold by them under their own names. It is not generally known, however, that they also began to trade in the individual maps of the *Theatrum* in the following years. Hundreds of maps were sent to clients all over Europe: to individuals as well as to other map dealers such as Gabriel Tavernier

in Paris or Balthasar Caymox in Nürnberg. In addition, new impressions of the maps were made at various occasions at the request of other map publishers in Cologne and Amsterdam to include in their own atlases. Finally, as of the 1620s, in exchange for a certain fee, Balthasar Moretus loaned the copperplates to his relatives, the Galle family of print publishers. They, in turn, made new impressions of the maps and sold these through their own distribution network. In my talk I will give an overview of this, thus far unknown, distribution of Ortelius' maps in the first half of the 17th century, and will examine how the Moretuses profited from this extra trade following their 1612 acquisition of the plates. This will demonstrate how Ortelius' maps remained popular for a much longer time than expected.

## Session 4. Map use

Chair: Carme Montaner (Institut Cartogràfic i Geològic de Catalunya, Barcelona, Spain)

### What the map readers saw: writing and cartography in Tang dynasty China (618-907 CE)



As historians of traditional Chinese cartography such as Cordell Yee have convincingly demonstrated, the concept of map (*tu*) in pre-modern China was a highly capacious one, and existed as part of an interface across the genres of text, pictorial illustration (also termed *tu*), and painting (*bua*). Each of these genres, as forms of representational technology, was in turn subject to different degrees of loss and degeneration through time. This paper builds upon this premise of pictorial-textual permeability. It is part of a larger project to uncover a broader range of textual and graphic evidence associated with a more nuanced history for the making and reading of maps, along with cultural responses to the discovery and circulation of spatial knowledge during Medieval China.

Despite the fact that virtually no Chinese maps survive between the third and ninth centuries CE, there remains a good deal of para-cartographic evidence that shows how maps were perceived and used by contemporary viewers in the midst of this gap in artifactual record. In the Tang dynasty (618-907 CE) in particular, we have a rich corpus of writing (notebook jottings, anecdotes, poems, correspondence) by the literati élite who travelled continuously

between the empire's centre and peripheries, and who were also in the position to produce and maintain maps in their capacity as scholar-officials. They not only used maps, but also wrote about their experiences viewing and designing them. Even though we do not have access to the original maps, these textual traces present us with important clues that bridge the gap in our cartographic record: they can reveal how cartographic knowledge was deployed, read, anticipated and – in some cases – even feared, both in official and unorthodox contexts.

My inquiry begins with contextualized readings of informal narratives about maps from this period, which also include texts that situate maps in the cultural imagination, something we might call map lore—the imaginary extensions of cartography. This paper investigates the sources of such maps' perceived efficacy, and situates them in contemporary discussions about painting, cartographic, and illustrative practices. It raises the following questions: what did a Tang dynasty map viewer see, and how did such seeing acquire meaning for the map's beholders? What cultural logic guided this seeing and made it possible to create interconnections among image, text, and experience?

LINDA RUI FENG

- University of Toronto
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Education: Columbia University: PhD, Chinese Literature, 2008

Selected publications

Monograph:

- *City of Marvel and Transformation: Chang'an and Narratives of Experience in Tang Dynasty China* (forthcoming, University of Hawaii Press)

Refereed Journal Articles:

- 'Negotiating Vertical Space: Walls, Vistas, and the Topographical Imagination', *Tang Studies*, 29 (2011), 27-44;
- 'Chang'an and Narratives of Experience in Tang Tales', *Harvard Journal of Asiatic Studies*, 71.1 (2011), 35-68;
- 'Unmasking Fengliu in Urban Chang'an: Rereading Beili zhi', *Chinese Literature: Essays, Articles, Reviews*, 32 (2010), 1-21.

MONDAY 13 JULY

## MAÏKA DE KEYZER

- Universiteit Utrecht (The Netherlands)
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Maïka de Keyzer is a postdoc researcher at the University of Utrecht affiliated with the ERC project Coordinating for life. She has recently finished her PhD dissertation *The common denominator. The survival of the commons in the late Medieval Campine area*. Her current research project focuses on the endogenous and social causes of disastrous sand drifts within pre-modern communities. Her main expertise lies in commons studies, comparative analysis, disaster studies, rural history and environmental history.

Co-author: Tim Soens (Universiteit Antwerpen, Belgium)

## Consuming maps and producing space: explaining regional variations in the reception and agency of cartography



The acceptance of map-making in Medieval and early modern Europe was neither a uniform nor a linear process. What, at first sight, seems to be a story of a technological breakthrough initiating changes in spatial practices and territorial administration, does not hold when one looks in more detail at the highly divergent experiences and practices concerning space both before and after the ‘cartographic revolution’ of the 16th century. Comparing two neighbouring regions in the Low Countries, we explain the varying appetite for maps and map-making: first by unravelling how people dealt with space before the introduction of modern map-making and, second, by identifying the actors that actively promoted its adoption. This paper is based on an analysis of local and regional cartographical products (15th to 19th centuries) that were produced by land surveyors like Baudewijn Speelman or the Van Goethem family, and were commissioned by village authorities, abbeys or individual landowners.

Following previous studies that emphasized the history of power in the early modern construction of material space, we demonstrated that different constellations of regional power resulted in either a rapid consensus on the use of cartography as the major tool to represent and reshape material reality, or in prolonged competition between alternative means of spatial representation. In our first case study area, the Scheldt polder region,

all political and economically predominant actors after 1500 shared a preference for geometrically-represented and constructed spaces that guaranteed clear and unequivocal power claims and property rights. In this context the appeal of map-making occurred both early on and on a massive scale, becoming an uncontested and powerful tool with which to reconstruct material space. On the other hand, in our second case study, the Campine area, only some actors such as the large Norbertine abbeys embraced map-making at an early stage to pursue their private patrimonial interests. No consensus on map-making occurred, as well-organized village communities actively or passively counteracted the implementation of territorial map-making and geometrical representations of space, especially where the vital common heathlands were concerned. In this region, alternative, more ‘bottom-up’ concepts of space could not be easily overrun by the linear and geometric space depicted by cartography. Only the latter region remained characterized by political competition between actors with divergent concepts of space, and keeping a need to negotiate space alive. We would argue this provides a strong case for a social history of cartography to be written: one which considers the views of the different consumers of maps, the highly divergent ways these consumers organized and constructed space and the role map-making did, or did not, play in the permanent effort to shape and reshape material reality around them.

## QUENTIN MORCRETTE

- Université Lyon II
- Lyon, France



PhD Candidate in Geography, Université Lumière – Lyon II, fellowship from Région Rhône-Alpes, ARC 5. He studied geography in Paris III and Lyon II universities; in the latter he had a Master Degree in cultural geography and rural heritage. His PhD researches now focus on a diachronic and comparative study between French and American route maps (which he studied as Visiting Scholar at the Newberry Library in 2014), from the late 18th to the 21st centuries. He is mainly interested in the role played by medium changes in map use and semiology. He is lecturer in Geography at Lyon II University.

## Individuality on the map



This presentation focuses on maps of itineraries, that is to say maps showing the route from one specific place to another. The goals are both to develop a concept of these kinds of maps as a particular category and to treat them, from a specific aspect, as maps showing personal stories and, thus, individualities (opposed, therefore, to the concept of maps as ‘theatres’ of the world). Additionally, this study is from a large historical perspective, from paper maps of the 19th century to digital maps today.

Our researches led us to distinguish between different kind of maps of itineraries (the three main categories being: commemorative, exploration, and proposed – touristic), each one corresponding to a different kind of journey and reflecting a temporality linking the journey and the map (maps of itineraries already made, maps made *en route*, maps of itineraries yet to follow). Those maps are always, either before or after, the base maps: no base map without *traverse* (see Edney, 1990, *Mapping an Empire. The geographical construction of British India 1765-1843*), and (for example) no *itineraries* on Google Maps without topographical *layer*. The core of this communication will focus on studying those different kinds of maps as a whole, as maps showing individual journeys.

Thus, by showing maps from France and the United States, made for the three different purposes detailed above, we will argue that they always show the representation of one’s individuality. Exploration maps reflect the *methexis* (Surun, 2010, in *Naissance de la géographie moderne (1760-1860)*); commemorative itineraries reflect *biographical* elements; proposed or touristic itineraries are a sort of personalized mapping (in the sense that they are made for one particular group of people), constraining the uses of space (reducing the accessible space surrounding us, to a strip following the main ‘track’), and thus centred on an individual’s mobility. We will compare those different maps by confronting their semiology (linking with technological and cultural contexts) and how they narrate the journeys, how frequently they do so and what are the graphical solutions proposed.

This communication will therefore take personal relations to maps as its main object, and will lead to developing the theoretical link between a person and an itinerary. Using this kind of (more or less thematic) approach leads us to consider “maps of itineraries” as a particular category, placing representation of individuality at his core.

## MARIAN COMAN

- Institutul de Istorie Nicolae Iorga, Academia Română
- Bucharest, Romania



Researcher at the Institute of History “Nicolae Iorga” of the Romanian Academy and lecturer in Late Medieval History at the University of Bucharest. Education: University of Bucharest (BA), Central European University (MA), University of Oxford, Oriel College (Chevening research scholar), New Europe College (research fellow) and University of Bucharest (PhD). PhD thesis published in 2013: ‘Power and territory: The making of Medieval Wallachia’ (Romanian edition). Current project: two-year postdoctoral research entitled ‘Mapping the Enemy. Renaissance Cartographies of the Ottoman Empire’.

# Session 5. Mapping in times of war

Chair: Catherine Dunlop (Montana State University, Bozeman, USA)

## *Theatrum belli*: the Ottoman-Habsburg Long War (1591-1606) and the making of a cartographic genre



Military cartography bloomed in the 16th century, as the connection between mapping and warfare became stronger than ever before (John Hale: 2007). Along with bird’s-eye views of sieges and battlefield panoramas, whose origins went back to the late Medieval illuminations, fortress plans, route sketches and report maps became increasingly numerous. As the military cartographic genre was still to be defined, historians usually take a functionalist approach for classifying the Renaissance maps related to war. As a result, a distinction is usually made between those maps intended for a military use, with the two subcategories of aggressive and defensive map-making, and the commemorative and propaganda maps. Nonetheless, both military and propaganda map-making faced a common challenge: the spatial framing.

Renaissance wars were confined neither within the classic Ptolemaic framings, nor within the modern cartographic regions. In order to enclose an entire theatre of war on a single map, Renaissance cartographers had to imagine and to design new ways of dividing space. Arguably, the most difficult theatre of war to capture on a map was the Ottoman advancement in Central Europe. Not only that both Classical regional frames (e.g. Pannonia, Dacia) and the more recent ones (e.g. Lazarus’ map of Hungary) were inadequate, but the war was fought on multiple fronts. Certainly, some aspects could still be mapped using either the traditional cartography of sieges (Zsolt Török: 2007; Palmira Brummett:

2009), or the more recent military plan drawing (James Krokhar: 2008). However, an overall image of the war was very difficult to convey cartographically. Moreover, map-makers were under pressure to find a solution, as the growing cartographic literacy and the increasing audience for printed news required such maps.

In this paper I suggest that the mapping of the Ottoman-Habsburg Long War represents a key moment in finding new cartographic solutions to the difficult task of designing space frames relevant for a specific war. In the last decade of the 16th century more than 30 maps of the Long War, mostly regional ones, had been printed. Some of these maps had been specifically designed to illustrate news leaflets and pamphlets, which obviously required a continuous update. For instance, the first map of the Long War, printed in Frankfurt (Main) in 1593, was a map of Bosnia and Croatia, the region where the war had begun. A year later, the same map was reprinted, but this time a new sheet was added in order to include the Hungarian battlefield as well. Furthermore, in 1595, the spatial frame of the same map was further enlarged to the east, following the Long War extension up to the Black Sea.

The main contention of this paper is that the mapping of the Ottoman-Habsburg Long War played a significant role in the making of a new cartographic genre, which later will be labelled as *theatrum belli*.

**VALERIA MANFRÈ**

- Universidad Internacional de la Rioja – UNIR
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Valeria Manfrè received her PhD in Art History from the Autonomous University of Madrid, in 2014. Her major articles include 'La Sicilia de los cartógrafos: vistas, mapas y corografías en la Edad Moderna' (2013), and 'Memoria del potere e gestione del territorio attraverso l'uso delle carte. La Sicilia in un atlante inedito di Gabriele Merelli del 1677' (2010). She is currently working on the publication of her doctoral thesis (Urban images and geographical collecting in early modern Sicily) in which she analyzes a series of unpublished manuscripts of Sicilian city atlases.

## Making war and maps: cartographic representation through the atlas of the Marquis of la Mina (1717-1720)



Through the review of the growing importance of mapping in the domains of the Hispanic Crown I'll try to establish what role was played by cartography in the Mediterranean world, focusing on the production of the atlases of the Kingdom of Sicily and putting them in relationship with the Spanish Crown. Analyzing the Spanish Empire's cartographic production we must take into account that those maps had a concrete purpose. The need to know the territory was translated into the realization of single maps and atlases, made mostly for military purposes. As is known, maps became instruments of government – especially under the reign of Philip II.

The war in Europe led to a mass production of maps whose aim was to explore the territory, promoting also the emergence of the figure of the engineers who worked to produce plans and maps for practical purposes.

Each European dynastic crisis is reflected in some images of the Kingdom of Sicily like, for instance, a series of maps and atlases that circulated during the Messina revolt of 1674-1678, including the Gabriele Merelli collection dated 1677. Between 1719 and 1734 map production became more intense, and many maps connected to these dynastic shifts were created.

In this paper I plan to analyze an eighteenth-century manuscript collection, partially unpublished, entitled *Collección de cuadros y planos sobre la guerra de Cerdeña y Cecilia en los años 1717, 1720* [...]. This is a valuable atlas that complements the *Memorias militares* written by Jaime Miguel de Guzmán-Dávalos y Spínola, 2nd marquis of la Mina, a Spanish Army commander. The collection is connected with la Mina's military operations and represents the crucial moments of the war fought in Sicily by the Quadruple Alliance against Spain (1717-1720). Most of the maps reproduce the striking episodes of the expedition to Sardinia and especially Sicily: the landing at Palermo, the naval battles of Capo Passero, Milazzo and Francavilla, and the siege of the citadel of Messina. We attempt to illustrate the different types of maps produced and to describe their content with an assessment of their effectiveness in planning and executing the Spanish Army's campaigns. Furthermore, a comparison of maps with the *Memorias militares* has permitted the clarification of the Marquis' main objective: to create faithful representations of the siege in order to keep alive the memory of military action for a military-pedagogical purpose.

## PETER VUJAKOVIC

- Canterbury Christ Church University
- Canterbury, Kent, UK



Peter Vujakovic is Professor of Geography at Canterbury Christ Church University. He has written extensively on maps and geopolitics, particularly in the news media. He is currently co-convener of the British Cartographic Society's Map Design Group and a former editor of *The Cartographic Journal*.

## “All the world’s a stage”: maps as *spectacle* in reporting of threat discourse in the 20th century



Mark Monmonier has stated that “... *the news media are society’s most significant cartographic gatekeeper and its most influential geographic educator*”. His point seems apt given most people’s reliance on the ‘press’ and broadcast news, and more recently the internet, for their understanding of international issues. His statement, on the surface, appears to assume a simple communication model of transmission of factual information. If, however, we broadly accept Guy Debord’s contention that in modern society passive identification with ‘spectacle’ has supplanted genuine critical engagement, we may turn Monmonier’s aphorism on its head: “... *the news media [become] society’s most influential geographic entertainer and its most significant cartographic ‘make-theatre’*”. ‘Spectacle’ in modern society constructs compliant populations of submissive consumers of commodities and images, and the news media, as ‘infotainment’, are complicit in this. This is particularly apparent in the use of maps in reporting of war and geopolitics (especially issues concerning security threats) during the 20th century. The paper draws on two case studies of representations from the mid-20th century to the recent past to exemplify this process.

The first focuses on the innovative cartography of Richard Edes Harris, amongst others who, during WWII, used novel representations to demonstrate the strategic importance of ‘air-power’ as the new force in geopolitics. These new representations helped the public to understand the new geopoliti-

cal conditions in which they lived, especially in the post-war world of ‘mutually assured destruction’ (MAD), intercontinental ballistic missiles, and the militarization of the Arctic. This innovative mapping was subsequently adulterated as the producers of more recent news graphics failed to understand the real geography behind their portrayals and fell into misrepresentation, inaccuracy and superficiality of visual entertainment – war as video game.

The second case study focuses on the way in which late 20th-century news mapping adopted older, traditional representations of ‘theatres of war’ to illustrate a range of other geopolitical issues. Dynamic symbols used to show the disposition of troops and troop movements, for instance, have been adopted for representations of security and to bolster ‘threat discourse’ in the post-Cold War world. This has often created unwarranted, or potentially negative, connotations and characterisations that could bias public understanding of important geopolitical issues: for example, Russia’s post-Soviet role as a regional and global power.

Douglas Kellner, in *Media Spectacle*, has argued that Lebord’s consumerist complacency through ‘spectacle’ has been replaced by a ‘spectacle of fear’ since 9/11 that immures populations to the demands of the state’s war on terror. The paper concludes by considering the historical lessons of news media mapping of the post 9/11 world.



BARBARIYA

NATOLIA



ITALIA

HUNGARIA

Duitsche



Provence

Lombardia

Isria

Croatia

SERIA





## Session 6. Borders and frontiers

Chair: Petra Svatek (Universität Wien, Vienna, Austria)

### MIRELA ALTIĆ

- Institut društvenih znanosti “Ivo Pilar”
- Zagreb, Croatia



Mirela Altić is a chief research fellow at the Institute of Social Sciences in Zagreb, Croatia. She specializes in historical geography and historical cartography of the Balkans. As full professor at the Department of History, University of Zagreb, Dr. Altić lectures on the history of cartography and historical geography. She is the author of numerous scholarly papers and a contributor to The History of Cartography Project. She was awarded the David Woodward Memorial Fellowship at the University of Wisconsin, Madison. Recently, she was awarded the McColl Research Fellowship at the University of Wisconsin, Milwaukee.

### Dalmatia and the southern Ottoman borderland in the eyes of Jan Janssonius



Southeastern Europe had attracted little interest from the European cartographic community prior to the Ottoman invasion. After the invasion the region gained visibility in military and strategic terms, suddenly becoming the focus of attention for Western European cartography. Since the mid-16th century, the maps of countries such as Croatia, Slavonia, or Dalmatia – which had previously been comprised only in the cartographies of the countries directly concerned (the Republic of Venice, the Habsburg Monarchy, Hungary) – became an indispensable component of most Dutch atlases. However, due to continuing warfare, it was impossible to carry out extensive field surveys, and the few surveys that were conducted for the purpose of military operations were mostly kept as military secrets.

This, when they tried to represent the broader area of the Venetian-Ottoman borderlands in Dalmatia, was the biggest problem for all Dutch cartographers. These problems arose because of shortcomings in the more detailed Venetian maps which, until the late 18th century, gave only very generalized pre-Ottoman invasion pictures of Dalmatia. The first major step forward in the representation of Dalmatia and its border with the Ottoman Empire was taken by Jan Jansoni-

us (1588-1664) with his map of northern Dalmatia (*Iadera, Sicum et Ænona ... in parte Dalmatiæ boreali*), a copy of which was published in his *Atlas Maritimus* (Amsterdam, 1650). Janssonius' map of Dalmatia, for the first time in such detail, showed not only the area of the Dalmatian region and the southern Ottoman borderland, but was also a very accurate depiction of the Venetian-Ottoman borderlands in 1536 and 1570: that was not then to be found in any of the Venetian maps. The extraordinary achievements of Janssonius' map were to be surpassed only by the appearance of Coronelli's maps of Dalmatia, compiled from 1688 onwards.

The paper reports the results of the original research project based on a comparative analysis of the map by Jan Janssonius and others by his contemporaries. We discover which map sources were used by Janssonius for his representation of Dalmatia and for the text printed on the map's verso. We trace the special roles of Croatian cartographers and of Venetian and Ottoman reports dealing with the border. Furthermore, the paper evaluates the importance of Janssonius' map in disseminating knowledge about the geography and history of Dalmatia, and his map's influence on the perception of the countries bordering the Ottoman Empire in general.

## MADALINA VERES

- University of Pittsburgh
- Pittsburgh, USA



Madalina Veres is a PhD Candidate at the University of Pittsburgh. Her work focuses on cartography in the 18th century Habsburg Monarchy and she is defending her thesis, “Constructing Imperial Spaces: Habsburg Cartography in the Age of Enlightenment”, on April 24, 2015. Madalina published in the *Austrian History Yearbook* and *Itinerario: International Journal on the History of European Expansion and Global Interaction*, and in volumes related to the history of cartography. She presented her work at international conferences on cartography and early-modern empires in Europe and North America.

## An untraceable border: cartographic projects during Habsburg-Parmesan negotiations (1750-1790)



In the beginning of 1779 Habsburg ruler Maria Theresa ordered Carlo Firmian, plenipotentiary minister of Lombardy, and Francesco Belcredi, general commissary for the borders of the State of Milan, to prepare a list of people who could notify the government of any sudden changes to the imperial frontiers in Lombardy. In his answer Belcredi wrote that, in selecting the personnel, “I managed to restrict [the choice] as much as possible to appraisers or engineers, or at least surveyors, because in my opinion these are the most suitable for such responsibilities, and capable to prepare a more detailed report, also containing a map, making [the report] more conclusive.” Maria Theresa’s request and Belcredi’s answer suggest that, by the end of the 1770s, the Viennese Court relied heavily on maps to ensure the preservation of a clearly defined system of imperial borders for their lands in Lombardy. Furthermore, the presence of a border commissary, engineers and surveyors, implies the existence of an advanced institutional framework capable of inspecting borderlines and detailed geographic plans regarding any changes. However, the use of cartography to ensure the inviolability of Habsburg borderlines in Lombardy remained in some cases more of an aspiration rather than the reality.

Using cartographic material from archives in Vienna, Milan and Paris, this paper explores the reasons why one of the most powerful eighteenth-century European empires, the Habsburg Monarchy, failed for over four decades to demarcate the border segment towards one of its weakest neighbours, the Duke of Parma. This out-

come is even more puzzling if we consider the strong contemporary cartographic tradition and trained personnel present in the Italian Peninsula. Indeed, the discussions over the position of the Parmesan-Lombardy boundary relied on cartographic representations of the disputed area. Both the Infant and the Habsburg rulers considered maps essential in illustrating their rivals’ territorial violations and constructing a strong case for promoting their own agenda regarding the borderline’s position. Moreover, from the 1750s onwards Vienna had successfully negotiated a series of border treaties accompanied by detailed border maps with states such as the Republic of Venice, the Kingdom of Sardinia or the Duchy of Modena. However, despite their vast experience in demarking boundaries in the Italian Peninsula, the Habsburgs repeatedly failed to close Lombardy’s borderline towards the Duchy of Parma, Piacenza and Guastalla.

Vienna’s determination to impose a fixed border on the Po River alarmed the Infant of Parma, who feared the Habsburgs’ encroachment on his lands. Relying on his Bourbon protectors, the kings of France and Spain, he managed to transform a bilateral negotiation between Parma and Vienna, into a never-ending trans-imperial diplomatic discussion involving four rulers. Therefore, despite the acceleration in the production of borderlands maps, the Habsburg failure to establish a clear demarcation line between Lombardy and Parma proves that maps were a necessary but not a sufficient condition for the success of such projects.

**CATHERINE DUNLOP**

- Montana State University
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Assistant Professor of History, Montana State University, 2010 to present PhD in History, Yale University, 2010 MPhil in History, Yale University, 2006 MA in History, Yale University, 2004 BA in History, Stanford University, 2002. Book: *Cartophilia: Maps and the Search for Identity in the French-German Borderland* (University of Chicago Press, 2015). Article: 'A New Kind of European Boundary: Mapping the Language Border between Modern France and Germany,' *Imago Mundi*, 65.2 (2013), 253-267.

## Mapping Alsace-Lorraine: a story of cartographic exchange between France and Germany



When historians write about Franco-German relations during the 19th and 20th centuries their narratives typically focus on stories of conflict, hatred, and violence. But a closer examination of underexplored archives reveals a far more nuanced history of cross-border collaboration and scientific exchange between rival French and German nations. This paper underscores the “entangled history” of modern France and Germany by focusing on evidence from cartographic archives. Concentrating on maps from the disputed borderland of Alsace-Lorraine, it will demonstrate the importance of transnational exchange in the creation of French and German maps, even during times of violent military conflict.

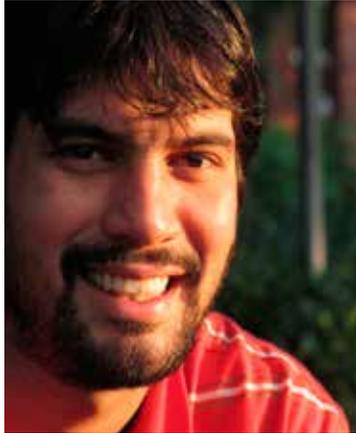
The paper begins by highlighting the close relationship that developed between the French and German surveyors who worked on the bi-national French-German Border Commission. This Commission, comprised of equal numbers of French and German surveyors, was responsible for delimiting, drawing, and maintaining the Franco-German border in Alsace-Lorraine’s Vosges Mountains between 1871 and 1914. Archival evidence demonstrates that the French and Germans mapped their border together, using the same instruments and shared cartographic standards. In fact, every official map of the Franco-German boundary had to be signed and stamped by one French, and one German, surveyor. The general agreement between them on what constituted a “good border map” reflected a European consensus on the procedures for defining modern state boundaries.

Even during The Great War (World War I), when French and German soldiers engaged in violent confrontations on the battlefields of Alsace-Lorraine, the pattern of transnational cartographic exchange continued. A collection of captured German war maps located in the French military archives in Vincennes reveals that French and German army reconnaissance units went to great lengths to recover maps from cadavers strewn across muddy no-man’s-lands. Visual details from Alsace-Lorraine’s battlefield maps demonstrate how these were later used. The French military printed their battle plans on top of captured German maps of the war zone, helping the French state to assert its newfound ownership over its lost border territory.

After World War I, the transnational exchange of French and German maps took on yet another dimension. The Paris Peace Conference in 1919 stimulated the creation of thousands of maps that represented alternative visions of Europe’s territorial future. Revanchist Germans left the Conference with a determination to keep alive an alternative map of Europe, in which Alsace-Lorraine and other formerly German regions were still part of German territory. French interwar maps, meanwhile, proposed a significant French presence on the Rhine River and in the German Rhineland. In exchanging these “rhetorical maps” with one another, French and German nationalists used cartography as a means of engaging in a cross-border debate over Europe’s territorial future.

## ANDRÉ REYES NOVAES

- Universidade do Estado do Rio de Janeiro
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Professor in Human Geography Department at the State University of Rio de Janeiro, Brazil. Received his PhD from the Federal University of Rio de Janeiro and was an academic visitor at the Royal Holloway University of London and The University of Nottingham. In his PhD thesis he studied the Brazilian popular imaginative geographies concerning South American borders. Nowadays, his research interests include visual methods, popular geopolitics and critical cartography. He is currently the coordinator of the PhD Program and one of the editors of the journal *Space and Culture*.

## Cartographic language and geopolitical discourses on Brazilian borders



The history of Brazilian geopolitical thought has been studied from different perspectives in recent decades (e.g. Child, 1979; Myamoto, 1981; Hepple, 1992). However, little attention has been given to the language of maps accompanying textual arguments in books and articles written by Brazilian geopoliticians throughout the 20th century (Dodds, 1993). This paper seeks to study the cartographic practices applied to represent the history of Brazil's borders, considering how geopolitical arguments were often disseminated through pictorial maps with great popular appeal. By dialoguing with the language of journalistic and propagandistic maps, the cartography produced, to accompany geopolitical texts, helped to disseminate specific ways of telling the borders' story. In order to collect these maps I conducted a search in the archives of military institutions, looking for books and articles produced by geopoliticians during the 20th century to represent our border history. Authors such as Mario Travassos (1891-1973), Golbery do Couto e Silva (1911-1987) and Carlos de Meira Mattos (1913-2007) were very influential in Brazilian geopolitical thought, and their publications are full of

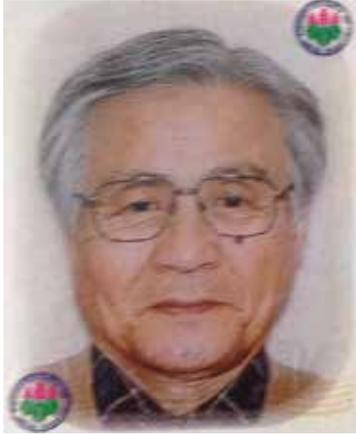
figurative maps illustrating geopolitical arguments on South American borders. By representing important episodes and agreements in the formation of Brazil's political boundaries, such as the Tordesillas [Tordesillas] Treaty (1494) and the Treaty of Madrid (1750), these publications present a series of maps that sought to justify and glorify Brazilian expansionism and to legitimize the so-called "*uti possidetis*" as a diplomatic argument. More than to just identify national discourses in the maps collected, the purpose here is to discuss the use of pictorial languages in order to construct geopolitical narratives and "images of the past" (Black, 2005). The simplification, the silencing and the use of figurative language are common practices in maps produced in different geopolitical contexts (†Harley, 2002). General Karl Haushofer, for instance, advocated the need to simplify geopolitical maps to "maximize the psychological effects on the audience" (Herb, 1989). This suggestion seems to have been heard by Brazilian geopoliticians, which produced quite 'flashy' and dynamic maps to represent the history of national borders.

## Session 7. State mapping

Chair: Francis Herbert (Royal Geographical Society with IBG, London, UK, retired)

### HIROTADA KAWAMURA

- University of East Asia / Toua Daigaku
- Yamaguchi, Japan



Dr Kawamura was professor at Yamaguchi University (1978-1996) and at the University of East Asia / Toua Daigaku (1997-2007). He is now visiting professor at the University of East Asia / Toua Daigaku. He is a specialist in the research of *kuni-ezu* (provincial maps) and *nihon-sozu* (national map of Japan) completed by the shogunate. He has published twice in *Imago Mundi* (vols 41 and 49).

### On the general maps of Japan compiled by the Tokugawa shogunate (1608-1867)



It was a political tradition in Japan that the central government should prepare a complete map and cadastre. The Tokugawa shogunate government adhered to that tradition. The government ordered the major feudal lords (*Daimyō*) of each *kuni* (province) to produce personally their own *kuni-ezu* (provincial map), and present it to the shogunate. From those 68 provincial maps of all the traditional *kuni* in Japan, the government then compiled nationally the *nihon-sozu* (national map of Japan). It is now confirmed that *nihon-sozu* were produced at six times by the shogunate government throughout the 260-year Edo period (1608-1867), except the last one – the *Dainipon-enkai-yōchi-zenzu* of Inō Tadataka.

Inō's map was not compiled from *kuni-ezu*: the making of his map, rather than work of the government, was a big personal endeavor and is therefore not the subject of this paper.

Here I clarify the processes and results of the research about the *nihon-sozu* made twice in the *kan-ei* era year (1624-1643) of the early Edo period. And I want to straighten misconceptions about the establishment of so-called "*keichō nihon-sozu*", housed in the National Diet Library. It was mistakenly considered customary that the original drawing of this *nihon-sozu* was made in the *keichō* year of the early Edo era.

## KORY OLSON

- Richard Stockton College
- Galloway NJ, USA



Kory Olson is Associate Professor of French at Richard Stockton College. He has published on the history of cartography in France, focusing on cartographic discourse on maps of Paris in journals such as *Modern and Contemporary France*, *Contemporary French Civilization*, *Contemporary French and Francophone Studies*, *French Cultural Studies*, and *Imago Mundi*. He currently teaches all levels of French.

## A new way of seeing France: the case of ‘Paris’ from the Service géographique’s 1906 *Carte de France*



Following the Napoleonic campaigns France began a century-long cartographic project based on the concept of the Cassini maps that, thanks to improved technology, had become outdated. By creating a professional corps of surveyors and engravers, in 1818 the Dépôt de la guerre began triangulating a topographic military *Carte d'état-major*. Following the 1870 Franco-Prussian War, the newly-created Service géographique de l'armée started a subsequent *Carte de France* destined for the public. The introduction of geography into the national curriculum under the Third Republic; the significant growth of rail travel and accompanying travel guides; and the call for official plans for large cities created markets for these maps themselves, or employed them as a base for their own plans. The documents served as a base for a generation of French maps and thus began the bureaucratic assimilation of state cartography, which influenced and regulated how the nation's landscape appeared and, more importantly, what French citizens saw.

This paper will examine the Service géographique's 1906 *Carte de France* “Paris” sheet (*feuille XXIII-14*), which documented the greater Seine Department.

Upon first glance, the sheet shows the changing shape of the capital city at a time of suburban industrial growth. Yet further investigation demonstrates how the government used this agency to professionalize and homogenize state cartography at the start of the 20th century. In response to commercial demand the Service géographique created a consumer-friendly set of 950 map sheets, known collectively as the *Carte de France*, at a scale of 1:50,000. Each sheet, published and sold individually, could be viewed alone or combined with others depending on the reader's needs. In regards to their appearance however, the agency established strict guidelines on how the maps should appear. For example, to record elevation, it replaced previously used hatching with contour lines: a step that shortened the cartographic process considerably, but also made the map clearer to the average reader. The agency also decided to complete all map colouring in Paris, where it could better limit discrepancies. In addition to other modifications (text, font, shapes) that affected how the French map-reader saw and experienced the Seine Department, I will investigate the politics behind (and necessity of) creating this new cartographic norm in the French Third Republic.

**ZEF SEGAL**

- Ben Gurion University
- Beer-Sheva, Israel



Received his Doctorate from the Department of General History at Tel Aviv University in 2013. Since then he has had several post-doctoral fellowships at the Hebrew University and Haifa University. He is currently a post-doctoral fellow at the Department of Government and Politics of Ben Gurion University, and the Center for the Study of Place in Modern Jewish Culture at the Hebrew University. He has published various articles in journals and books on the connection between communication, infrastructures, cartographic semiotics and collective identities, especially in 19th-century Germany.

## Geopolitics and the territorial state: the representation of new states in German atlases (1800-1939)



“Territorial states”, “nation states” and “sovereign states” are used almost synonymously to describe the building blocks of the modern international landscape. Furthermore, this is seen as an integral part of the modernization of political structures and international relations. While the historiography of this process has focused on the territorialization and nationalization of the individual state, it has neglected the issue of the “other state”; the perception of foreign territorial states as international building blocks. In fact, the perception of international uniformity is almost taken for granted, and the history behind it has never been told.

This research takes an initial step towards such a story by examining the cartographic depiction of new sovereign states in German atlases between 1800 and 1939. Through the deconstruction of maps depicting states in their first two decades of their existence, I question the concept of uniformity and shed new light on the role of sovereignty and territoriality in the international land-

scape. This is done by using both quantitative methods, analyzing the number of maps depicting each state and the temporal change in these figures; and qualitative methods, examining the semiotic role of state symbols in the various maps.

Contrary to the general assumption that the territorial state had become prominent during the 18th and 19th centuries, this paper shows that even in the early 20th century the correlation between territoriality and sovereignty was an issue of the geopolitical standing of the state in question. Although states were important as actors in the international politics, they were not necessarily seen as the most important territorial entities. European, South American, African, Arab and South-East Asian states were treated differently in German maps, and were given completely different cartographic roles, which were rarely the leading ones, as colonies, empires and sub-state regions were regularly seen as more crucial for the map-maker.

## ISABELLA ALEXANDER

- University of Technology
- Sydney, Australia



Dr Isabella Alexander PhD (Cambridge) BA (With honours) LLB (With honours) ANU is an Associate Professor in the Faculty of Law at the University of Technology Sydney where she teaches intellectual property law and criminal law. Her research interests lie in the fields of copyright law and legal history. She has published a monograph entitled *The History of Copyright Law in the 19th Century* (2010) and is currently researching the history of copyright law in maps in 18th-century Britain.

## Session 8. Maritime charts

Chair: Junia Furtado (Universidade Federal de Minas Gerais, Belo Horizonte, Brazil)

### Entering uncharted waters: maritime charts and copyright law in 18th-century Britain



In 1767 the British Parliament passed legislation which, for the first time, explicitly extended the protection of copyright law to cover maps, charts and plans. Thereafter, map-makers could bring legal actions in the courts of Britain against anyone making and selling copies of their maps. Ten years later that protection was further strengthened by a second Act which increased the remedies available against copiers. In the following three decades six cases involving the unauthorised copying, or piracy, of maps were brought before the courts; three of these cases involved sea charts.

The charts involved in these three cases were different: the first involved charts of North America and the West Indies; the second, of the east coast of England; and the third, of the coasts of France and the Iberian Peninsula. Every case, however, had the same defendant – John Hamilton Moore, a colourful character on the London chart-selling scene, and one who made firm friends and vindictive enemies. Moore was often charged with inaccuracy and plagiarism, and at least twice his charts were blamed for the loss of ships at sea. He did, however, leave an enduring legacy as the founder of one branch of a publishing house still in business today. He also left his mark, albeit unwittingly and unwillingly, on the emerging law of copyright through his role as defendant in a case often said to provide the foundation of the copyright defence of fair use, or ‘fair dealing’.

The aim of this paper, however, is not to consider Moore’s role in the development of copyright doctrine, but rather to examine what these cases can tell us about the production of sea charts for commercial purposes in the late 18th century. The cases reveal a trade exploring the possibilities offered by new legislation to put pressure on their rivals. In addition, they provide a vivid demonstration of the interplay between legal regulation and the growing concerns with science, accuracy and authority that were increasingly being demanded of maps and charts of the period. While many purchasers of charts were concerned solely with the appearance of scientific precision, sea captains and navigators had long bemoaned the lack of accurate charts available to them.

Mary Pedley has described the various suggestions made by 18th-century geographers and map-makers to improve the standard of cartography. She concludes that, in Britain, economic forces were more effective than government control or royal edict in changing the nature of the map trade (Pedley 2005, p. 196). This paper shows how those market forces were themselves shaped by the new law of copyright and its interpretation in the maritime chart cases. It further suggests that, through these cases, copyright law did not just regulate plagiarism but sought also to discipline other aspects of cartography, such as claims to authority, utility, reliability and accuracy.

**MARIA GUSSARSSON**

- Swedish Military Archives / National Archives
- Stockholm, Sweden



PhD in history at Stockholm University. Working as archivist in the Swedish Military Archives and lecturer at the Swedish Defence College. Has written books and articles mainly focusing on two fields of research: the European integration and military cartographic history. One of three writers of *Med kartan i fokus. Svensk kartproduktion från 1600-till 1800-tal* (2013). Has also made presentations in Sweden and abroad on various aspects of Swedish military cartography.

## The maritime atlas production of Gustaf af Klint: a unique chapter in Swedish cartographic history



In 1798 the naval officer Gustaf af Klint (1771-1848) was commissioned to take charge of the production of a Swedish maritime atlas. This was a continuation of a work set up and executed by the Military already in the middle of the 18th century as part of an effort decided by Parliament to make travelling by sea safer. But the work was now carried out on a different basis than previously – as a contract between the State and af Klint as a private person. The arrangement meant that af Klint was entitled to use charts set up, or collected, by the Navigation bureau and could make certain survey efforts using the ships he commanded. He must arrange the engraving and printing of the atlas, and would, in return, keep the income from its sale. After his death the production reverted to the military organisation.

Here new aspects of af Klint's atlas production will be discussed, such as the preconditions (economic and organisational, in relation to other chart-makers in Sweden and abroad etc.) for this work, and the advantages, disadvantages and consequences of the special contract between the State and af Klint. Also to be discussed is the uniqueness of af Klint's atlas production. Only during this period was maritime atlas production not performed by a State institution; nor was general land mapping at any stage performed on a private basis. The question is, thus: how can this unique episode in Swedish cartographic history be explained? And what has it meant to Swedish maritime chart-making?

## YANNAN DING

- Shanghai Jiao Tong University
- Shanghai, China



Assistant Professor of Historical Geography, School of Humanities, Shanghai Jiao Tong University. Education: PhD in Geography, KU Leuven (Belgium), 2012; MA in Historical Geography, Fudan University (China), 2006; BA in Literature, Fudan University, 2003

## The Paracels: cartographic fault and the transmission of geographical knowledge (c. 1800)



This paper deals with the cartographical representations of the Paracels up until the early 19th century, and the conditions of a few related surveys to chart these mysterious islands, reefs and shoals. Western navigators who had, for nearly three centuries, been advised to avoid the vast dangerous area called 'Paracels' in the upper part of the South China Sea, as depicted by many famous European cartographers, would only find most of the dangers non-existent. In fact, the faulty representation of the Paracels on charts is one of the most enduring and significant mistakes in the history of cartography. While the origin of the mis-conceptualization is hard to determine, it is possible to briefly reconstruct the process by which such a mistake became popular.

It was eventually corrected by hydrographical surveyors of the Royal Navy (Bombay Marine) in 1808.

In addition, I will discuss the transit of geographical knowledge concerning the Paracels in the world of the South China Sea and in Europe. In particular, the roles of missionaries, colonial officers and naval officers will be discussed against the historical milieu when geography and cartography were at their tipping point toward modernity. In terms of epistemology this case demonstrates that the history of science is not only about science per se, and the mechanism of knowledge transit constitutes one of its most important parts.

## Session 9. Map iconography

Chair: Mark Monmonier (Syracuse University, Syracuse NY, USA)

### ARIEL TISHBY

- The Israel Museum
- Jerusalem, Israel

TUESDAY 14 JULY



Ariel Tishby is the Curator of Maps, Norman Bier Section for Maps of the Holy Land, The Israel Museum, Jerusalem. He graduated Art History and Interdisciplinary Studies at The Hebrew University, Jerusalem, and Museology Studies at Tel Aviv University. He has been working at the Israel Museum since 1987. In recent years he has led a major transformation in the Museum's Map Section, due to highly important map collections that were gifted.



A large engraved wall-map on ten joined sheets was created by the brothers Arnold and Nicolaes van Geelkercken in the early 17th century. The map was titled *Terrae Sanctae seu Terrae Promissionis nova descriptio* and is known in four states but in very few copies. The first state by Nicolaes van Geelkercken, 1619, was probably designed by Arnold during his stay in Venice c. 1600 (Göttingen State Library; Bavarian State Library, Munich); the second state was published in Leiden, 1621 (Rijksmuseum, Amsterdam); the third state was published by Jan Janssonius in Amsterdam, 1631 (Bibliothèque Nationale de France, Paris); and a fourth state was published by Frederik de Wit in Amsterdam c. 1670 (BnF, Paris; Israel Museum, Jerusalem).

The Geelkercken brothers are among the lesser-known Dutch cartographers, yet, as J. Keuning already wrote in 1954 in *Imago Mundi*, they deserve a closer examination.

Arnold van Scherpenseel (c. 1570-1602) was also known during the 1590s as Arnaldo di Arnoldi, when he worked in Venice as an engraver of maps and scientific instruments for the Italian astronomer, cartographer, and mathematician, Giovanni Antonio Magini, and in Siena for the publisher Matteo Florimi. During the early 1590s he had travelled to the Holy Land. Arnold was the elder brother of the map-maker and 'all-round' scientist, draughtsman, engraver, publisher and writer, Nicolaes van Geelkercken (c. 1585-1656).

The map under discussion is an exemplary representa-

tion of 17th-century Dutch 'Golden Age' of cartography as, in that period, the Dutch Republic was a cultural and commercial centre, where publishers, scholars, and artists collaborated in producing large wall-maps. These maps, which were influenced by Flemish and Dutch paintings, served presumably also as a status symbol for the *bourgeoisie*, indicative of the householder's education. Geelkercken's map, dedicated to Christian Lubens, was initiated in Italy by Arnold, but finished by Nicolaes in Amsterdam, with the help of Philipp Clüver and Petrus Bertius. The map, oriented to the east, is based very closely on Christiaan van Adrichom's influential map of the Holy Land (*Situs Terrae Promissionis...*, Cologne, 1590). Yet, aside from the numerous miniature biblical illustrations and citations of events from the Old and New Testaments, it is surrounded with vignettes of biblical scenes in its three margins, and two inset maps of the Peregrinations of Abraham and of Exodus, in the two upper corners. The narrative is very clear, as it begins lower left corner with the 'Original Sin' of Adam and Eve in Paradise, and ends in the right lower corner with the Last Judgment. In the lower centre, above a frieze with ten engravings of ritual implements from the Temple, interspersed with figures of the apostles, an image of Jesus as 'Savior of the World' is depicted very prominently.

The aim of this paper is to carefully deconstruct and analyze the major illustrations, intermingled in and around the map, in order to define the artistic and cartographic sources, and to determine the complex iconography of the complete map, with its strict and elaborate religious messages.

## RADU LECA

- SOAS, University of London
- London, UK



Radu Leca is an art historian based in SOAS, University of London. His doctoral research analysed the significance of visual production for the construction of the social imagery of 17th-century Japan. Radu's recent article, 'Brazilian Cannibals in 16th-century Europe and 17th-century Japan', *Comparative Critical Studies*, 11, Supplement, discusses a trans-cultural iconographic transfer through the cartographic medium, and the significance of this transfer for the formation of pre-modern identities.

## The versatility of ship iconography on a 17th-century Japanese map



This paper discusses the dual agency, both political and aesthetic, of 17th-century cartographic production in Japan. I focus on Ishikawa Ryūsen's 1688 reprint of 'The General Map of All Countries' (*Bankoku sokai zu*). This map of the world has been interpreted as a mere pastiche of Western cartographic elements filtered through Matteo Ricci's production in China. However, I argue that this map projects an updated world-view specific to 17th-century Japan, by including the depiction of a ship belonging to the Great Qing empire sailing towards a Japanese ship equipped for war.

Firstly, I interpret this martial stance as projecting the image of a Japan ready for sea-battle against the forces of the Great Qing empire. Five years before the publication of this map, Qing forces had taken over the last outpost of the Ming loyalists, the maritime trade centre of Taiwan. This had an immediate impact on trade activity in Japan's only international port, Nagasaki: quotas were introduced for ships trading from China. Underlying this measure was a concern over an invasion of Japan by the Qing empire, expressed in the intellectual discourse of the period. The iconography of the Japanese ship in Ryūsen's world map can thus be interpreted as symptom of a fear of invasion by the Qing empire proliferat-

ing among the urban population which constituted the audience for such a map.

Secondly, I argue for a simultaneous dimension of this map: it enabled imaginary travel across the sea, at a time when this was not physically possible. We can get a hint of how the cartographer Ryūsen envisioned the use of his maps by considering his choice of a seal with a variant of his name meaning 'drifting ship'. Ryūsen thus associated his identity as a cartographer with one of the map's iconographic elements. This points to a performative aspect of the map – it was meant as a facilitator for travel aboard an imaginary drifting ship. This dimension is reinforced by contemporary novels which co-opted ships into the spatial rhetoric of commercial success: for example, in Ihara Saikaku's novel *Japan's Treasury of the Ages*, published in the same year as Ryūsen's map, the ambitious spirit of a merchant was compared to an ocean-going trade ship sailing to lands of treasure overseas.

This paper's analysis of the aesthetic and political connotations of a map of the world speaks towards the versatility of an East Asian cartographic tradition which adapted Western cartographic elements to the concerns of the local audience.

**MAX MOERMAN**

- Barnard College, Columbia University
- New York NY, USA



Associate Professor, Department of Asian & Middle Eastern Cultures, Barnard College, Columbia University. Education: 1999 PhD Stanford University; 1986 A.B. Columbia University. Publications: *The Japanese Buddhist World Map: Religious Vision and the Cartographic Imagination* (in press); 'Locating Japan in a Buddhist World', in *Cartographic Japan*, University of Chicago Press (in press); 'Demonology and Eroticism: Islands of Women in the Japanese Buddhist Imagination', *Japanese Journal of Religious Studies*, 36.2 (2009); *Localizing Paradise: Kumano Pilgrimage and the Religious Landscape of Premodern Japan* (Harvard, 2005).

## The European airship and the Buddhist world map



When Iberian merchants and missionaries sailed to Japan in the mid-16th-century they carried with them European maps that presented a view of the world radically different from Japan's cartography of a flat earth limited to Buddhist Asia.

In 1553 a Kyōto aristocrat wrote:

The Southern Barbarians say that the world is round and that they have traversed the mountains and seas and crossed the oceans from the west to the east and that if one were to travel across the seas from east to west one would eventually return to one's point of origin. Although this seems doubtful, the Barbarians refer skeptics to a picture of the world that represents their view.

By the end of the 16th century the maps of Mercator, Ortelius, Plancius, van den Keere, Blaeu, Ricci, and others were depicted on Japanese painted screens and, from the mid-17th through the late-19th century, were reproduced in popular woodblock prints and as plates in books as well. Many of the Japanese versions of European world maps included ubiquitous images of ships sailing across the world's oceans or circumnavigating a spherical earth.

This paper examines the iconography of ships in the Japanese cartographic record where one would least expect to find them: on 18th- and 19th-century Japanese

Buddhist world maps that otherwise vehemently rejected the cartography of European exploration and its attendant cosmology of a global earth. I analyse one of the most spectacular and unusual examples of Japanese Buddhist cartography: a 19th-century manuscript map which entirely excises the presence of Africa, the Americas, Australia, and Antarctica and provincializes Europe as a few peripheral islands scattered at the margins. The world represented is largely limited to Buddhist Asia and is surrounded by five sailing ships of various East Asian origins. In the location where Europe would normally be depicted the map includes, perhaps as a synecdoche for the displaced continent, a sixth 'Dutch' sailing ship. Yet it is a seventh vessel that presents the most curious cartographic detail: an airship fitted out with balloon, sail, paddle wheel, rudder, and keel sailing in the sky. The bird's-eye view that the hot air balloon affords, however, is subsumed within the panopticism of the Buddhist map. The very mechanism that might otherwise challenge the classical Buddhist vision of a flat earth is here incorporated into its proof. This combination of the modern technology of European travel and observation, with the traditional geography of Buddhist Asia, may seem disturbing to those who assume a universal trajectory of cartographic history.

But such cartographic hybridity, this paper argues, remained coherent in the visual and intellectual culture in which such maps were produced and consumed: one in which multiple world-views that may seem to us incommensurable were not, to those of the time, incongruous.

## KIMMO KATAJALA

- University of Eastern Finland
- Joensuu, Finland



Kimmo Katajala is full Professor of History in the University of Eastern Finland; Docent (adjunct professor) in history in the University of Tampere; Member of the Finnish Academy of Science and Letters (2012-); Member of the editorial board of the *Scandia* journal (Lund, Sweden, 2012-); Secretary-General of the Nordic Historians Conference (2012-2014); Member of the editorial board of *Kirchliche Zeitgeschichte/Contemporary Church History* (Dresden, Germany, 2014-); about 100 scientific publications, over 70 popularizing writings.

Co-author: Antti Härkönen (University of Eastern Finland, Joensuu, Finland)

# Session 10. Historical maps in historical GIS

Chair: James R. Akerman (Hermon Dunlap Smith Center for the History of Cartography, The Newberry Library, Chicago)

## Mapping the urban spaces of a border town: Vyborg (Viipuri) from the 1630s to the present



This presentation will analyse the formation of the urban plan and spaces of Vyborg's Old Town from early modern times to the present through the use of old maps. Vyborg (Viipuri) today is situated in Russia near the Finnish border; however, it has a long and complex history being first a Swedish, then Russian, Finnish and again a Russian settlement. Vyborg Castle was founded in 1293 by the Swedes and the town that developed on the nearby cape was the eastern-most military and trading settlement of the Swedish Kingdom until the Peace Treaty of 1721 that ceded the region to the Russian empire. During the Napoleonic Wars Russia conquered all of Finland and, in 1812, Vyborg and the surrounding areas were incorporated into the autonomous Grand Duchy of Finland. Vyborg was the third largest city of independent Finland from 1917 until the Second World War, after which the Treaty of Moscow of 1944 awarded it to the Soviet Union. Since the collapse of the Soviet Union in 1991 Vyborg has been a modern Russian city. All these historical phases – Swedish, Russian, Finnish, Soviet and Russian again – are visible in the urban space and architecture of the town's core.

The research and analysis of old maps and town plans will be carried out using Geographic Information Systems (GIS) technologies. The first task in the project is to digitalise historical cartographic data. The method

could be described best as 'retrospective urban landscape study', and it is part of a wider context of 'spatially-oriented history' or 'historical GIS'. The data used in the project consists of, among others sources, town plans, fortification plans and topographical maps from the 1630s to the present kept in archives in Sweden, Finland and Russia. The principal aim of creating digital raster and vector maps is to offer a concrete basis for qualitative assessment of the general change in the urban landscape of Vyborg Old Town. The potential for quantitative analysis is limited by the primitive nature of early modern maps and their inaccuracies, especially in depicting hilly terrain such as where Vyborg is located. Due to changes in the landscape, e.g. the varying water levels, it is challenging to geo-reference the older maps. In this study and presentation the maps are compared as pairs to detect changes during each period. Our presentation will discuss the methods, difficulties and results of this digitizing work.

This study is one part of a three-year joint research project entitled 'Meanings of an Urban Space' funded by the Academy of Finland and the Russian Academy of Sciences. Using old maps will depict how, and on which basis, the multi-cultural urban space of Vyborg Old Town was constructed. The entire project will analyse how people understand and experience the meanings of these historical urban spaces.

TUESDAY 14 JULY

**ELLEN JANSSENS**

- Universiteit Antwerpen
- Antwerp, Belgium



Ellen Janssens (1990) is PhD student at the Centre for Urban History, University of Antwerp (Belgium). Specialising in urban environmental history of the 19th century, she is preparing a PhD on spatial and social practices of water supplies in the 18th- and 19th-century European city. Together with her supervisor Tim Soens and Iason Jongepier she is collaborating in the 'GISistorical Antwerp' project, which turns historical city maps into a virtual laboratory for urban history.

Co-author: Iason Jongepier (Universiteit Antwerpen, Belgium)

## Historic city maps and GIS: challenges and opportunities, using 'GISistorical Antwerp' as a test-case



Turning historic city maps from objects of art into tools for historical spatial analysis usually implies integrating them in a GIS environment, with the Urban Historical GIS (HisGIS) turned into the digital alternative of the historic city atlas. Although more and more cities have their Urban HisGIS-platforms developed by academics, heritage managers or enthusiasts of urban history and old maps, a comprehensive approach is lacking. Furthermore, in this digital age, GIS-based representations of the historical city often lag behind on what users expect from digital platforms: a high degree of intuitiveness and interactive communication. An in-depth examination of human and non-human actors in time and space requires more than a mere digitization and spatial overlay of old maps enriched with uniform datasets on houses, streets and households. This paper explores some of the new techniques as well as the scientific debates that underlie them, which aim to bring academic mapping projects closer to the urban public for whom they were envisioned.

The University and City of Antwerp's 'GISistorical Antwerp' project (<https://www.uantwerpen.be/en/projects/gistorical-antwerp/>) serves as a laboratory for experimenting with new forms of mapping. A micro-level GIS environment is currently being developed for the historical inner city and the first databases, based on the precise geo-location of the data (at the level of individual houses or plots), have been integrated. However, this method has proven to be very time-consuming. Moreover, when working further back in time, accommodat-

ing the available historic cartographic material within the rigid GIS infrastructure becomes increasingly challenging. In the case of Antwerp the beautiful 16th-century plans (like the panoramic view by Virgilius Bononiensis) are not simply turned into GIS vector layers.

Therefore, a second cluster of research methods will be explored. 'Deep mapping' is defined as a new creative space that is visual, structurally open, multi-media and multi-layered, and integrates large textual *corpora* into a narrative about place. Deep mapping was conceived as an answer to the inability of traditional GIS technology to analyse textual sources without having to fit them into a database structure, bringing about a severe loss of information. An exploration into this research method will, firstly, allow the 'GISistorical Antwerp' project to link more (types of) data to the GIS database faster and, in addition, make the existing infrastructure more suitable for crowd-sourcing and interaction with Antwerp's inhabitants.

Although devised to integrate textual data into GIS faster, deep mapping might also enhance the integration and exploration of old maps which, just as textual narratives about space, are socially-biased constructions which tell a 'story' about how space was conceived by their authors. Therefore, the confrontation of historical city maps with the 'deep maps' derived from textual *corpora* might offer a promising new way to analyse the former and their representation of (urban) space, and to share them with a broad audience.

## JUAN MARTÍN GIRALDO

- Universidad Nacional de Colombia
- Bogotá, Colombia



Historian of the National University of Colombia with experience in different fields of research, including topics such as politics and religion, colonial taxation, armed conflict and environmental history. Extensive experience in archival work, and academic research. Active member of the Latin American Project Team Sustainable Farm Systems based in the National University of Colombia, in which he serves as co-investigator with responsibility for mining documentary and cartographic data, also development of digital resources and research issues.

Co-authors: Stefania Gallini & Omar Ruiz (both Universidad Nacional de Colombia, Bogotá, Colombia)

## Mapping the agricultural past of the Cundiboyacense high plateau, Colombian Andes mountains (18th - 20th centuries)



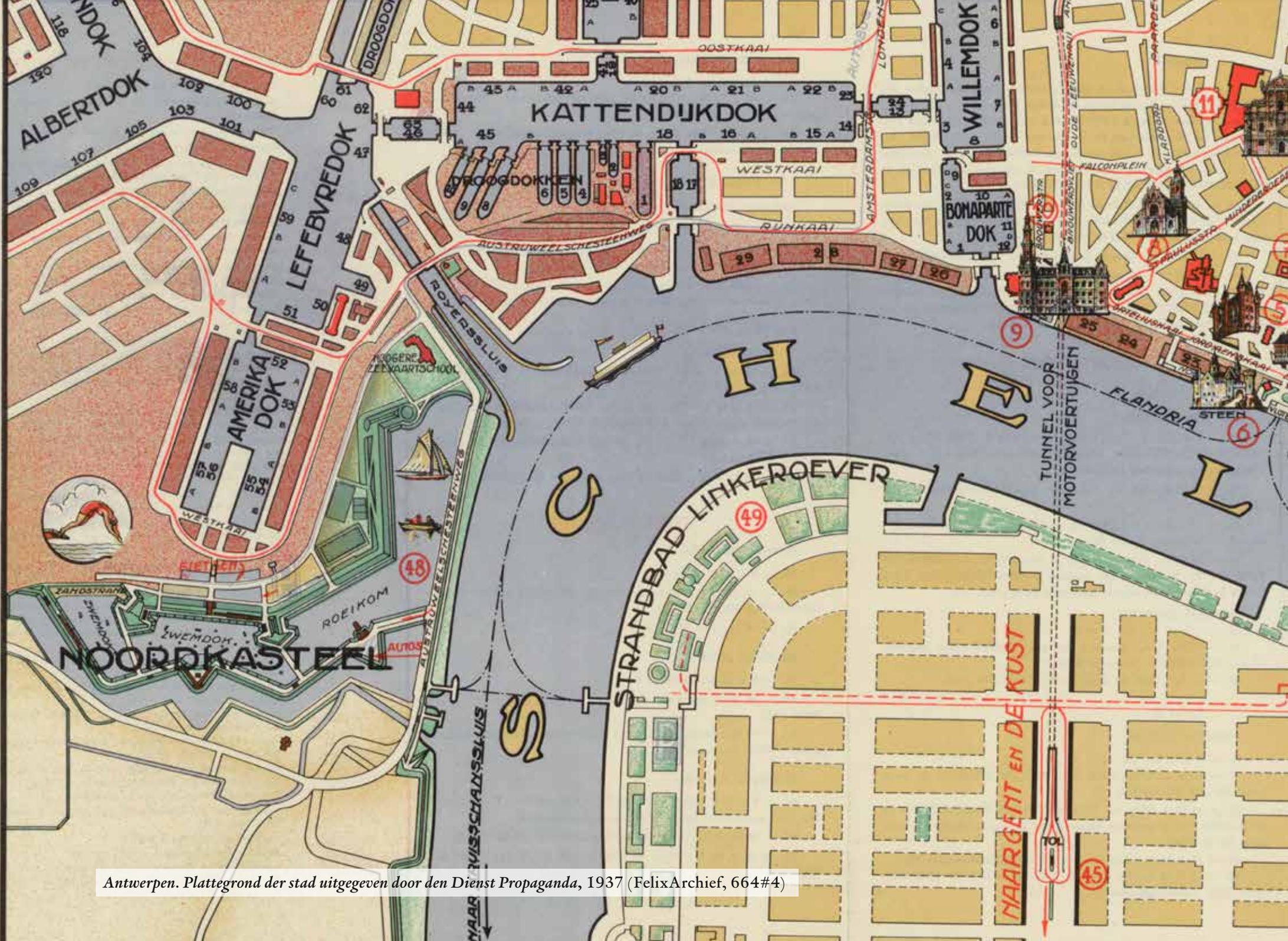
This paper is meant to present the contribution of historical cartography to the study of environmental history, specifically about socio-ecological transformations in agriculture between the eighteenth and twentieth centuries for the case of Colombian Cundiboyacense high plateau. This forms part of the research conducted within the framework of the Sustainable Farm Systems (SFS) project, an international effort led by the University of Saskatchewan, Canada. It aims to reconstruct patterns of sustainability in farm systems around the western world, based on the theoretical and methodological framework of the social metabolism: an approach that begins by considering the farms as agro-ecosystems, to measure their flows of energy and soil nutrients toward the landscapes, and to trace their behaviour through space and time.

The Cundiboyacense high plateau has been the epicentre of settlement and agriculture in the north-eastern Andean mountain range since pre-Hispanic times. It is a landscape rich in water resources, fertile lands and native biodiversity, and is where the Spanish crown placed the capital of the Viceroyalty of Santafé de Bogotá, the New Kingdom of Granada. Since the 18th century many maps have been made of this territory; in their content, techniques and projections it is possible to explore cartographic knowledge through the historical processes, especially regarding the use and tenure of land during the transition from traditional to industrial agriculture.

In this sense the paper seeks to describe the three main

stages of the interdisciplinary exercise between history and geography, performed during the 2014 work period, by the SFS Colombian team. 1) The history of cartography of the Cundiboyacense high plateau, for which a catalogue was compiled with about 100 historical maps between the Borbón colonial period of 18th-century reforms, and the first attempt of agrarian reform in Colombia at 1936; both political junctures that have in common two important initiatives for mapping this territory. 2) The first steps of our Historical Geographic Information System (H-GIS) developed with certain maps of that catalogue, specifically those that contain valuable information on land tenure, resources use and landscape changes. 3) Another H-GIS exercise made with the maps compiled by the Colombian lawyer and historian, Juan Carrasquilla Botero, of the Savannah of Bogotá in the late 1970s; maps compiled on the basis of notarial and judicial documents from the 18th to 20th centuries, most of them already disappeared, but whose data promises an invaluable potential for urban history and planning.

In short, the paper seeks to weigh the meanings of cartographic knowledge and historical geography for researches about the agricultural past, and also to disclose the wealth of historical maps in the National Archives of Latin America. We aim to open the door for future investigations related to historical, environmental and cartographic matters by providing research tools of public use through the facilities of the digital era, like the ones we are developing with the elements previously exhibited on the website <https://sites.google.com/site/sfscolombiangroup/>.



Antwerpen. Plattegrond der stad uitgegeven door den Dienst Propaganda, 1937 (FelixArchief, 664#4)

# ABSTRACTS

## WEDNESDAY 15 JULY



## Session 11. Aspects of 20th-century mapping

Chair: Isabella Alexander (University of Technology, Sydney, Australia)

### MARK MONMONIER

- Syracuse University
- Syracuse NY, USA



Mark Monmonier (PhD, The Pennsylvania State University, 1969) is Distinguished Professor of Geography at Syracuse University's Maxwell School of Citizenship and Public Affairs, where he teaches courses on map design and the societal implications of cartographic technology. He is the editor of Volume Six of the *History of Cartography*, which focuses on the 20th century, and the author of sixteen books, including *Air Apparent: How Meteorologists Learned to Map, Predict, and Dramatize Weather* (1999) and *Lake Effect: Tales of Large Lakes, Arctic Winds, and Recurrent Snows* (2012).

### Inventors and cartographic creativity: map-related U.S. patents (1840-2012)



As a parallel literature distinct from the discourse of conventional academic and governmental cartography, the patents system is a useful lens for exploring a neglected aspect of cartographic creativity. A key to this exploration is the classification system used by patent examiners, who assess originality and non-obviousness. Although the United States Patent Classification has several non-exclusive categories relevant to map-making and map use, in the pre-electronic era the most pertinent clusters have been the class/subclass 283/34 (Printed Matter/Maps) and its subordinate "indented" class/subclass 283/35 (Printed Matter/Indexed Maps), which collectively account for 304 individual inventions patented between 1840 and 2012. Temporal trends for these two categories are only partly explained by the business cycle, wider currents in technological innovation, and the Third Industrial Revolution, which followed World War II. Peak periods are apparent between 1910 and the late 1920s and between the mid-1980s and roughly 2004. A refined categorization of published patents relates the former cluster to navigation, principally by motor vehicle, and the second to the convenient compactness of innovative folding techniques. This refined classification also reveals a variety of other themes, including geographic referencing systems, map-based calculators, land records, map projections, pedagogy, games, and relational databases useful in business. Because few cartographic inventions would seem, at least at first glance, to have reached the development or production stage, much less earn a profit, pursuit of fame might be as strong an incentive for patent

filings as hope of financial reward. In the second part of the paper two case studies illustrate how "Big Microdata" vendors like Ancestry.com can help map historians probe the backgrounds and possible motives of individual inventors like Ernest Albert Jones (b. 1880) and John Byron Plato (1876-1966). Jones was one of a handful of inventors whose mechanical route-indicators anticipated the in-vehicle GPS navigator by more than half a century. In 1914 he was awarded a U.S. patent for a mechanism that compensated for the driver's inability to follow a perfect course along the centreline of the road. Plato's invention also involved navigation: in 1915 he patented a georeferencing system that gave rural residents a unique and meaningful address, just like their urban counterparts, and framed a series of "Rural Indexes" published for central and western New York counties from 1919 through the late 1930s. Although Plato worked for over a decade at a firm founded to exploit his invention, Jones' invention seems incidental to his employment as a consulting engineer and might never have been exploited commercially. Ancestry.com can track Jones from his birth in Saratoga, New York through his move to Britain around 1903 and various attempts through the mid-1920s to maintain his U.S. citizenship – but not beyond. Similarly, Ancestry.com follows Plato from his birth in Illinois to his relocation to Ithaca, New York, around 1919 but loses track of him in the early 1930s, when he moved to Washington DC and became a government map-maker. Three decades later the newspaper obituary that celebrated Plato's life did not mention his invention.

## BENJAMIN SACKS

- Princeton University
- Princeton NJ, USA



PhD Candidate, History, Princeton University (2011-Present); MA, History, Princeton University (2013); BA, Summa cum Laude, Tufts University (2010).

Published in: *Reviews in History* (2014); *Immigrant Entrepreneurship* (2012); *Oxford Handbook on History of Consumption* (2011); *Companion to World History* (2011); *Gilder-Lehrman Institute* (2011); *New England Quarterly* (2011).

Awards: Montequin Prize for Best Colonial Planning History Paper, SACRPH (2013); Elected FRGS (2012); Beinecke National Scholarship (2009).

## Airwave cartography: mapping British radio relays and propaganda power (1947-1991)



The British Broadcasting Corporation (BBC) entered the post-Second World War period in an extraordinary position.

Uniquely amongst the wartime powers, Britain's broadcasting services enjoyed both an increasingly international audience and a strong reputation for neutrality and journalistic rigour. Officials in the Foreign Office, the BBC, and in far-flung embassies gradually realised that, in a Cold War environment increasingly dominated by the military weight of the United States and the Soviet Union, Britain would have to use other, 'softer' means of socio-political and economic influence if it wished to maintain a leading international role. In 1947, a polyglot group of politicians, engineers, and intellectuals embarked on an ambitious project: the dream of the BBC reaching every household in the world. Over the next three decades, they designed and erected a series of short wave, medium wave, and FM radio relay stations on every inhabited continent.

They planned their new 'empire' with *radio maps*: topographical or political base layers on to which relay stations, theoretical radio coverage, and the changing international landscape was calculated, amended, erased,

and negotiated. Declassified in the mid-1990s, these radio maps – often simplistic outline charts marked up in layers of crayon and pencil – revealed how this ambitious group negotiated a new, 'soft' power empire of broadcasting and influence as Britain's old, traditional empire collapsed. They used these maps to plan the future of British influence whilst fighting constant budgetary restrictions from various government ministries, Arab sheiks' unstable personalities, Soviet jamming and American competition.

Too, these maps demonstrated their users' personal perceptions of a tumultuous and often dangerous world. As late as the 1960s, the Foreign Office liaison to the BBC External Services (now the World Service) continued to sketch out his thoughts on pre-Second World War maps, drawing out signal ranges and possible transmitter sites on colonies and even countries that no longer existed. At the other extreme local BBC agents or businessmen appeared to know the future, adding in theoretical boundaries for prospective states, cities, and alliances. Relay maps provide an important, fascinating, and previously unknown visual means into understanding Britain's global strategy since 1945.

**ANDRÉ OUREDNIK**

- Laboratoire Chôros, École polytechnique fédérale de Lausanne
- Lausanne, Switzerland



André Ourednik is geographer and cartographer, currently senior post-doc at the Chôros Laboratory (EPFL) and lecturer at the College of Humanities (EPFL). He has conducted research in spatial analysis, thematic cartography and interactive web mapping at the University of Lausanne and lecturing activities in the field of sociology of tourism and mobility at the Università degli Studi di Bergamo. His fields of research include phenomenology of space, cartography of mobility and dynamic modelling.

## The automobile world and the future of space: a cartographic perspective



That there exists a dialectical relationship between spatial representations and spatial practices is a familiar idea, which received extensive theoretical development by thinkers as diverse as Henri Lefebvre, Gunnar Olsson or Franco Farinelli. My aim is to explore this relationship by focusing on the mutually reinforced development of road maps and of motorized individual transport in the 20th century. Doing so, I also wish to identify tendencies in contemporary mapping practices, which possibly forebode the emergence of a post-car world.

In North America, Europe and its colonies, automobile maps for the individual driver evolve in the early 20th century, mostly from earlier bicycle maps. The first Soviet maps of the kind emerge after WW2. In the “West”, production and distribution is promoted by private companies, drivers associations and public actors with the aim of stimulating car-related consumption, local tourism, or the sense of national or continental identity. In the first stages of development maps help to make the car usable by identifying the most drivable road segments.

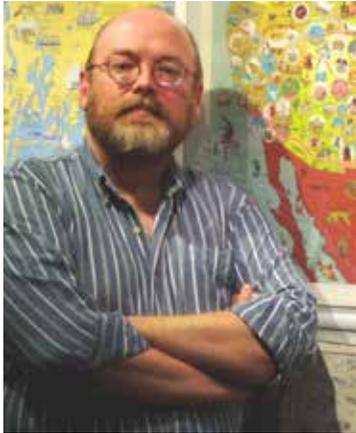
Beginning in 1917 Rand McNally (USA) articulates its *Auto Trails* maps to a system of numbered highways, and is directly involved in the erection of corresponding roadside signs. This process, soon imitated in other countries, contributes to a general transformation of the lived space, in which spatial orientation comes

to depend less on architectural and topographic landmarks and more on formalized signs, whose interpretability closely depends on maps. The lived space evolves from landscape into a linear sequence of signs, well incarnated by objects such as the first on-board navigators *Iter Avto* (Italy, 1930) or *Plus Fours Routefinder* (UK, 1927). The process also involves a radical generalization of all mapped elements not directly accessible by car, while emphasizing car-related amenities (e.g. *Guide Michelin*, France, beginning 1900). In parallel – among the professionals of space – the development of zoning schemes in land-use planning intensifies, and at times enforces, the use of the car between large mono-functional areas.

From the mid-1980s road maps are increasingly digitized and incorporated as onboard navigation systems, further participating in the ‘automobilization’ of space. Extensive car use allows the commercial development of these systems that, however, also push the frontier of the mappable itineraries while mutating into mobile phone applications. The *StreetPilot* app for Android and iPhone, for instance, considers public transportation options, such as trains, trams or busses when calculating pedestrian routes. Thus, while cartography has played an important role in making the car usable, it might well play a central role, today, in the evolution of a car-dominated space to a space of multi-modal mobility.

## MATTHEW EDNEY

- University of Southern Maine
- Portland ME, USA



Matthew Edney is Osher Professor in the History of Cartography at the University of Southern Maine, and director of the History of Cartography Project at the University of Wisconsin-Madison. He edits, with Mary Pedley, *Cartography in the European Enlightenment*, Volume Four of *The History of Cartography*. He is currently president of the American Friends of the J.B. Harley Research Fellowships, Inc., a director of Imago Mundi Ltd, and a trustee of both the J.B. Harley Research Fellowships Trust and the International Society for the History of the Map.

## Session 12. Mapping the malleable (special session)

Chair: Matthew Edney (University of Southern Maine, Portland ME, USA)

### Mapping the malleable: popular maps and the fixing of cultural and political identities after 1900 (session abstract)



Increasingly recognized as a major element of modern cartography, pictorial maps proliferated across the pages of the modern mass media in the first half of the 20th century. Historians have paid attention to more formal maps in the mass media (news and propaganda maps, etc.), allegorical maps (e.g., of the roads to Heaven and Hell), and, to some degree, in satirical and anthropomorphic maps. One recent book has studied the construction of a specific regional identity in pictorial maps – Dori Griffin’s *Mapping Wonderlands: Illustrated Cartography of Arizona, 1912-1962* (Tucson: University of Arizona Press, 2013) - but the wider genre and functions of pictorial maps in modern culture remain largely unstudied.

The three papers in this session provide three cuts at the subject of pictorial maps in the first half of the 20th century, adopting a progressively narrower focus. **Stephen Hornsby** opens the session by exploring the contours of the genre as a whole and identifies five primary sub-genres in U.S. pictorial mapping, from their first explosion in the 1920s and 1930s through the 1960s. The paper is especially concerned with the

formal character of U.S. pictorial maps as products of professional graphic artists who deployed a variety of visual languages, starting with Art Deco and the strip cartoon. **Katariina Kosonen** examines the political role of pictorial and anthropomorphic maps drawn by caricaturists and other graphic artists in the Finnish popular press, revealing the persistent design elements of their work even as the precise subject matter varied with Finland’s shifting political situation through the first half of the 20th century. **Kathryn Edney** provides a detailed analysis of one small corpus of pictorial maps made by a prominent U.S. caricaturist in the 1930s and 1940s, images that reconfigured not the map per se but the apparent context of the map’s presentation and consumption.

Edney’s analysis explicates a key theme running through the first two papers. Specifically, by playing with and reacting to formal cartographic conventions, but without completely abandoning them, pictorial maps mapped what was otherwise unmappable. Behind the humor and satire, they worked to pin down and fix malleable cultural and political identities in an effort to make those identities permanent and concrete.

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**STEPHEN HORNSBY**

- University of Maine
- Orono ME, USA



Director of the Canadian-American Center and Professor of Geography and Canadian Studies at the University of Maine. He has published extensively on the historical geography of northeastern North America and the Atlantic World. His books include the award-winning *Surveyors of Empire: Samuel Holland, J.F.W. Des Barres, and the Making of The Atlantic Neptune* (2011), the *Historical Atlas of Maine* coedited with Richard Judd (2014), and a book manuscript on 20th-century American pictorial maps (currently under review).

## Picturing the world: American pictorial maps (1920-1970)



From the 1920s to the 1960s American popular culture and commercial map-making intersected to produce an enormously creative period in the history of Western cartography. During those decades dozens of graphic artists and cartographers, a significant number of them women, created thousands of pictorial maps depicting the history, geography, and culture of the United States and lands overseas. Although English graphic artist MacDonald Gill has been recognized in recent years as one of the leading pictorial map-makers of the early 20th century, American graphic artists greatly expanded and developed the pictorial map genre. The extraordinary efflorescence of American popular culture, the influence of Art Deco, and a booming economy produced a great outpouring of pictorial maps during the late 1920s and early 1930s. Even during the Depression

and Second World War, pictorial maps continued to pour off the presses. Covering a wide range of genres, American pictorial maps displayed remarkable creativity and striking design.

Drawing on two collections in the Library of Congress, this paper examines the rise of pictorial mapping in the United States. It identifies six principal sub-genres: maps to amuse, maps to instruct, maps for industry, maps of place and region, maps for war, and maps for post-war America. The paper makes two arguments: first, the enormous influence of American popular culture in the early 20th century shaped a new and exciting popular form of cartography; second, pictorial maps, by mapping qualitative information such as history, biography, memory, and romance, provide a humanistic challenge to the scientific basis of map-making.

## KATARIINA KOSONEN

- University of Helsinki
- Helsinki, Finland



Katariina Kosonen (PhD, Geography, University of Helsinki, 2000) lectures on the history of cartography and visual methodology, and has also held map history research courses, at the department of Geosciences and Geography, University of Helsinki. Her research interests include early tourism maps in Finland, Finnish press cartography, advertising maps, children's atlases, and cartographic communication. She is a member of the board of the Cartographic Society of Finland, president of Chartarum Amici, and archivist for the Geographical Society of Finland.

## Passive resistance and raging propaganda: pictorial maps in the Finnish popular press (1900-1942)



Pictorial and anthropomorphic maps are a recurring element in map history, since at least the 14th-century works of Opicinus de Canistris, and have fulfilled a variety of purposes and messages depending on their particular historical and political contexts. The 19th-century rise of nationalism and mass literacy gave such maps a new political urgency. The application of chromolithography to popular, mass-market publications allowed the proliferation of politically oriented cartographic satires, such as Fred. W. Rose's well-known "serio-comic" map *Angling in troubled waters* (1899), in which each of Europe's countries was depicted anthropomorphically. The purpose of the maps was definitely to amuse readers, but also to express deeper and more serious undertones.

It is no coincidence that the heyday of Finnish pictorial and anthropomorphic maps, in the first half of the 20th century, was also when the press in Finland was highly politicized. Many of the Finnish press maps were drawn by leading Finnish caricaturists, among them Aleksander Federley, Aarno Karimo, and Eric Vasström. However, some artists – and especially those who published in the leftist press – did not sign their drawings at all. Their work is considered in two parts.

First, they used several strategies to present opinions on maps. They already made a strong statement by choosing the area and subjects to be portrayed: Finns strongly defended their territory and identity in press maps. In anthropomorphic maps the appearances of the characters were often rather bluntly drawn: an innocent and beautiful Finnish maiden was often harassed by the untidy and stupid-looking Russian bureaucrat, soldier, octopus, or devil. Importantly, such maps did not abandon regular cartographic elements and styles. Conventional map symbols were used with pictorial ones – line and area symbols had particular importance – and the messages were emphasized with colour, orientation, or symbol size.

Second, we can identify discrete phases in the use by newspapers and magazines of political caricature maps: before 1917, to comment on Russian rule in Finland during the autonomous period; with independence, to portray a growing fear of communist Russia in the 1920s and 1930s; and then to serve as nationalist propaganda during the Winter War and Continuation War (1939–1944). Throughout, the press used satirical maps to mock political opponents and conflicts in domestic politics.

## KATHRYN EDNEY

- Regis College
- Weston MA, USA

Kathryn Edney (PhD, American Studies, Michigan State University, 2009) is currently assistant professor of History, World Languages and Cultural Heritage at Regis College, Weston MA.

## Mapping transitory events: Al Hirschfeld's summer stock caricatures of the 1930s and 1940s



Albert “Al” Hirschfeld (1903-2003) famously drew caricatures of Broadway stars, mostly in black ink with a genuine crow’s quill, for the *New York Times* and other major newspapers and magazines from 1924 almost until his death. For over 75 years, he shaped the public’s visual image of Broadway and its stars. He also, in the 1930s and 1940s, drew maps for the *New York Times*: the newspaper’s leisure section carried, on the first Sunday in July, a list of all the productions planned across the entire summer theatre season in New England, together with Hirschfeld’s caricatured maps showing the theatres’ locations.

Theatre is inherently transitory. By its nature, live performance is impermanent and always losing out to time; performances always disappear. ‘Summer stock theater’ is doubly transitory. Beginning in the late 1920s Broadway producers, crews, and stars followed the annual exodus from the summer heat of New York to New England’s (usually) milder airs. The result – variously known as the straw hat circuit, the barn circuit, the silo

circuit, and the mosquito circuit – was perceived to be both informal and transitory, subject to the whims of nature and Broadway stars alike.

In the early years of summer stock, once established – but before it became a fixture of summer social life – Hirschfeld mapped New England for the *New York Times*, locating the theatres active during each season. The maps themselves were conventional, but were placed within playfully rustic settings: for example, on the side of a barn where it could be examined by barnyard animals. That is, Hirschfeld did not seek to caricature the maps themselves, by reducing the geography of New England to a few well-chosen lines and exaggerated features. Rather, he adhered to cartography’s conventional emphasis on delineating permanent features and excluding transitory phenomena. In presenting this unique corpus of hitherto unstudied popular maps, this paper accordingly examines how, by failing to caricature the map *per se*, Hirschfeld sought to concretize the world of New England summer theatre, and transform it from a transitory, into a permanent, phenomenon.

## MARTIJN STORMS

- Leiden University Libraries
- Leiden, The Netherlands



Martijn Storms (Arnhem, 1978) studied human geography at Utrecht University. He is curator of maps and atlases at Leiden University Libraries and project coordinator of Koeman's *Atlantes Neerlandici* at Brill publishers. In his function as map curator he chairs the working group for maps and GIS in the consortium of Dutch research libraries (UKB). He is also a member of the editing board of *Caert-Thresoor*, the Dutch magazine on the history of cartography, and the national representative of the Netherlands for *Imago Mundi*.

# Session 13. Unlocking the treasure-houses of map collections

Chair: Nick Millea (Bodleian Libraries, University of Oxford, UK)

## The best of three worlds: merging three digital map collections



Leiden University Libraries hold a collection of c. 100,000 maps, 3,000 atlases and 25,000 topographical prints and drawings. With the addition of the collections of the Royal Tropical Institute (KIT) in 2013 and Royal Netherlands Institute of Southeast Asian and Caribbean Studies (KITLV) in 2014, the size of the collection almost doubled and the emphasis was placed more on maps of the former Dutch colonies. Leiden University Libraries now hold the biggest collection on Indonesia.

The colonial collection of the Royal Tropical Institute is accessible with a special map viewer. All maps have been georeferenced. With an extensive register of place-names you can search for a location in Indonesia, Suriname or the Dutch Antilles. Alternative toponyms have been added too (for instance: Jakarta, Djakarta and Batavia). By linking coordinates to these, the application can show all maps that include a place-name in a single search. The order of results is shown from large scale

to small scale. You can refine them by specific periods, map types and scales. A practical feature is the possibility to navigate from sheet to sheet within the various map series. You simply click the arrow symbols in the margin. For map series you will also find a clickable index. A part of the maps of the UBL and of the KITLV collections has been digitised too, but accessible only via a general image database without specific geographical search options. Our challenge for the coming years is to make one entry point for all digitised maps. Maps and topographical images can always be linked to a specific location. By adding coordinates to the map (georeferencing), these maps can be linked to their geographical location and even overlaid on a modern reference map.

In addition, Dutch libraries are trying to cooperate in an online presentation for their map collections. Not only for digitised and georeferenced paper maps, but also for Dutch geodatasets that came available for free use in education and research.

WEDNESDAY 15 JULY

**G. SALIM MOHAMMED**

- Stanford University
- Palo Alto CA, USA



Digital and Rare Maps Librarian, Stanford University (2011-current); Maps/GIS Librarian, University of Hawai'i at Manoa Library, (2007-2011). Education: MA Information Studies (2006) and MS Geography (2005) from University of Wisconsin-Madison; MBA, University of Maine-Orono (1993); Bachelor of Arts, St. Olaf College, Minnesota (1990); Bachelor of Commerce, Bangalore University, Bangalore, India (1986). Many articles, posters, presentations, grants, scholarships and other honours – focusing on maps, historical maps and atlases including digital.

## Unleashing and exposing Stanford's historic maps: Project Ortelius & digital philanthropy



The importance of digital derivatives cannot be under-emphasized. Through Project Ortelius, a comprehensive workflow, Stanford University has been adding digital map content to its collections for the last five years. There are four streams of digital content that are placed in the Stanford Digital Repository (SDR):

- Maps that are in the public domain and those out of copyright.
- Paper maps that we acquire through purchases and donations.
- Digital donations from cooperating entities which send us scans and metadata on a regular basis. We systematically scan the first two streams and receive the third stream for mediated placement into the SDR.
- Through our cartographic digital philanthropy programme we borrow, from individual collectors, materials that would ordinarily not be available for scholarly use: this through a robust, well-tested and defined protocol that begins with donor contact and proceeds all the way through to deposit into the SDR. Digital donors are excited about exposing their historical cartographic materials to academia, and this serves to enrich Stanford's offerings by making available large numbers of, otherwise hidden, maps and atlases.

Underpinning all these efforts is an emphasis to make maps digitally available for free to the world. The number of maps and atlases being prepared at Stanford for

free digital availability grows each year. In 2013 we scanned 8,477 images of maps and atlas pages; in the first six months of 2014 we scanned 10,996 – well over the 2013 number in less than half the time. This excludes other historic collections waiting 'in the wings': over 20,000 images from a digital donor and growing, and over 54,000 (as of October 2014) from the David Rumsey Map Collection. Stanford now has made available several historic collections, such as Maps of California as an Island and Maps of Africa, with several others waiting for accessioning; these include a stellar collection of Renaissance era maps and atlases via the digital philanthropy programme. Maps are available for print quality download with no human intervention; we also make other derivatives, such as Geographic Information System (GIS) files, so these historic maps can be brought into a GIS for analysis and visualization.

My paper will outline the process of interfacing with the physical maps and/or content owners and then proceed to illustrate how map librarians work closely with cataloguers, the metadata unit and Digital Library Systems and Services (DLSS) to make items searchable and downloadable. I will showcase some of our resources and different portals to access these. To complement what we continue to add through the web platform I will offer a glimpse of the upcoming David Rumsey Map Center, which we expect to open in early 2016. The Center will house all our historic map collections and bring together both the David Rumsey Collection and the collections already at Stanford. The Center will collocate the physical rare map with its digital derivative, and will push the boundaries of digital discovery and manipulation to visualize and analyze maps in pioneering ways.

## LEIF ISAKSEN

- University of Southampton
- Southampton, UK



Dr Leif Isaksen is a Lecturer in Digital Humanities and co-directs the Web Science Centre for Doctoral Training at the University of Southampton. He is a director of the Pelagios, and Google Ancient Places projects, applying new computational approaches to the discovery, analysis and visualization of online Classical resources. His further research interests lie in the historical development of geographic thought and representation and he has published articles on Claudius Ptolemy's *Geographike hyphegesis* and the Roman Itineraries.

Co-authors: Elton Barker (The Open University, Milton Keynes, UK), Rainer Simon (Austrian Institute of Technology, Vienna, Austria), Pau de Soto Cañamares (University of Southampton, UK)

## Connecting cartography: Recogito and the Pelagios Project



This paper describes the progress of the Pelagios 3 project [1], funded by the Andrew W. Mellon Foundation, which is digitally annotating place references in early geographic documents. In recent years much digital work has concentrated on georeferencing of historic maps, and descriptive recording of captions and other text. This has enormously facilitated our ability to discover and compare historic maps visually [2]. Despite these advances however, many apparently trivial functions are still not susceptible to digital approaches. Ostensibly simple retrieval tasks, such as 'return me maps from multiple collections containing a reference to Southampton, UK' are not easily resolvable by machines. Comparisons between maps with irregular or non-existent geodetic systems, let alone geographic texts, are equally difficult. Geographic Information Systems, with their emphasis on geometry and localised identifier schemes, are not well suited to dealing with these problems.

Pelagios 3 has been developing a Web-based infrastructure that allows place references in any online document – whether image, text or database record – to be annotated with reference to global gazetteer systems based on Web addresses. Such gazetteers, including Geonames, Pleiades and PastPlace [3], can be aligned with one another, permitting documents of different eras to be processed differently but ultimately interconnected. This provides a number of benefits, including the ability to discover maps with content of interest irrespective of language or toponym, compare documents statistically or look for anomalies, and to automatically hyperlink between maps and texts hosted independently of one another. By recording toponyms as well, we can also look

at the development of naming trends through time, identify periods of change, or rapidly see the names used in other maps when identifying locations.

Pelagios 3 has developed an online interface called Recogito [4] to facilitate a human-driven annotation process. Over the course of a two-year project, finishing in September 2015, it is annotating pre-Modern geographic documents, including maps and texts, from the Greek, Latin, early Christian, early Islamic, early Chinese and maritime traditions. All annotations are made freely available under a public domain license at the time of creation, and point directly to online sources where available. Documents which are not available online are referenced in a manner allowing users to identify and obtain it as appropriate, and generate proxy maps indicative of their general content for the purpose of evaluation. Thus, Pelagios does not provide content itself, but acts as a digital intermediary between independent documents containing related material. The potential for this kind of interconnectivity is limited only by access to such materials and the willingness of the wider community to annotate them; we will conclude with comments on developments in these areas.

[1] <http://pelagios.org>

[2] C. Fleet, K. C. Kowal & P. Přidal (2012), 'Georeferencer: Crowdsourced georeferencing for map library collections', *D-Lib Magazine*, 18 (11), 5

[3] <http://geonames.org>; <http://pleiades.stoa.org>; <http://pastplace.org>

[4] <http://pelagios.org/recogito>



Map of the river Scheldt, from Rupelmonde to the North Sea, c. 1505 (FelixArchief, 12#2473-2482)

# ABSTRACTS

## THURSDAY 16 JULY



## Session 14. Late Medieval and Early Modern maps

Chair: Tony Campbell (Imago Mundi Ltd, London, UK)

### CHET VAN DUZER

- independent scholar
- Los Altos Hills CA, USA

THURSDAY 16 JULY



Chet Van Duzer has published numerous works on Medieval and Renaissance maps. His study of the 1550 manuscript world map by Pierre Desceliers will be published by the British Library in the autumn of 2015.

### “Let there be multispectral light”: imaging the c. 1491 world map by Henricus Martellus at Yale



Henricus Martellus, a German cartographer who worked in Florence in the latter part of the fifteenth century, made manuscripts of Ptolemy's *Geography* and also of his own *Insularium illustratum*, an island-book illustrated with maps, as well as some separate world maps. The world map that Martellus made in about 1491, currently housed at the Beinecke Library at Yale University, is much larger and more detailed than his other surviving world maps. Its cartography is thought to have influenced the geographical thinking of Christopher Columbus, and also to have been used as a source by Martin Waldseemüller in making his world map of 1507. As such, the Yale Martellus map is one of the most important of the fifteenth century, but it has been little studied in the past fifty years, because most of the features and texts on the map are obscured or illegible due to fading and damage.

Multispectral imaging permits the recovery of text and images from manuscripts and books that have been damaged in various ways, particularly by fading, water

damage, over-painting, palimpsest, and wrinkling. In August of 2014 I was part of a project funded by the US National Endowment for the Humanities to make multispectral images of the Yale Martellus map in the hope of rendering the information on the map available for study in ways that it had not been previously.

In this paper I will offer a brief introduction to the Yale Martellus map, and explain multispectral imaging and the benefits it can offer in the study of damaged manuscripts and books. I will then discuss several multispectral images of the map to show what they reveal in comparison with images made with natural, and with ultraviolet, light. The images help to analyze what the newly-revealed texts imply about the map's influence, particularly on Martin Waldseemüller's world map of 1507.

I hope that my paper will spark consideration of other damaged historic maps whose study would be facilitated through multispectral imaging.

## ELLEN KLOMPMAKER

- independent researcher
- Ghent, Belgium

MA in History, University of Ghent (2013)

# The Scheldt maps of c. 1469 and 1505: regional and local cartography in late-Medieval Flanders



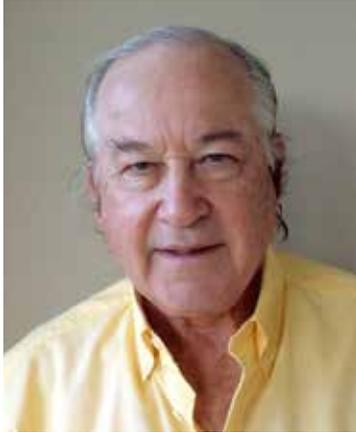
In the National Archives of Belgium in Brussels and the FelixArchief (City Archives Antwerp) two remarkably large, late Medieval maps are held, drawn before the introduction of scientific cartography in this area. 'De Scheldekaart van Rupelmonde tot aan het Zwin en het eiland Walcheren' (National Archives) dates back to around 1469 and measures more than 5.21 m (c. 17 feet). Despite its vulnerable state it is a special document for cartography and for the many toll disputes on the river Scheldt. A similar map, 'De Scheldekaart van Rupelmonde tot aan de Noordzee', was drawn in 1505 and measures 5.47 m (c. 18 feet). Both maps show the river Scheldt from Rupelmonde (birthplace of Gerardus Mercator) near Antwerp to the shores of the North Sea. After these maps were drawn the area changed considerably due to floods and human intervention.

No list of local and regional maps of (a part of) Flanders made before 1500 is available yet. A first survey reveals about fourteen, of which the Scheldt map of c. 1469 is

the largest by far. Since 2008 the 1505 Scheldt map has been protected by the 2003 *Topstukken decreet* (Masterpiece Decree). This Decree relates to the protection of the most important movable cultural heritage because of its special archaeological, historical, cultural, artistic or scientific significance. The latest research on the Scheldt maps was published in 1950. Digital images now available facilitate research on these large maps and their interrelationship. In this presentation the following topics will be discussed. What types of maps are the Scheldt maps and why were they made? Is there a relationship between these and other Medieval regional and local maps produced in this area? What historical information do the maps provide concerning land occupation, infrastructure, borders, shipping, tolls and late Medieval map-making techniques? Furthermore, an until now unnoticed difference in paint colour between the 1505 map's left and right sides sheds light on the question about the interrelationship between these two maps.

**DANIEL SHELLEY**

- independent researcher
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Daniel W. Shelley received his BS and MS degrees in Physics and Management, respectively, from MIT. Since then he has acted as a management consultant, a professor of Business at the University of Puerto Rico and as a principal of real estate development and nautical enterprises. He has sailed around the Caribbean for decades and explored it by helicopter. He has an extensive collection of antique maps of the Caribbean. In recent years he has been doing research on the history and pre-history of the indigenous people of the Caribbean.

## A study of Andrés de Morales' map of Hispaniola of 1509 and the origins of New World cartography



Founded by Columbus on his First Voyage in 1492, Hispaniola was the seat of the first European settlement in the New World and the first theatre of European acts in America.

In 1508 the Board of Navigators (Junta de Mareantes) composed of Juan de la Cosa, Vicente Yañez Pinzón, Amerigo Vespucci and Juan Díaz Solís met in Burgos to create a new system for the administration of Spanish cartography and navigation in the New World, which included the establishment of the Office of a Chief Navigator (Piloto Mayor). It became mandatory for all captains heading to the New World to acquire the official maps authorized and stamped by the Piloto Mayor. Upon return to Spain, all captains and navigators were required to meet with the Piloto Mayor and return to him the used maps, which were marked up with all the new discoveries and amendments found during the voyage.

From time to time new maps, including all past discoveries and corrections, were prepared and issued by the Piloto Mayor, and most of the old marked-up maps were destroyed. This practice, and the secrecy in which Spain kept its maps of the New World, caused many to be forever lost.

We are therefore very fortunate that two unique versions of the map of Hispaniola allegedly published by Andrés de Morales in 1509 had survived. Morales had sailed as pilot throughout the Spanish Main and was considered at the time, equally with Juan de la Cosa, as the most knowledgeable navigator and cartographer in the New World. In 1516 he worked as Piloto Mayor in Seville but died in 1517, before being officially appointed to the post. According to Peter Martyr, Morales was the original discoverer of the Gulf Stream.

In this study we will analyze both versions of the Morales map of 1509, the first large-scale cartography of a region in the New World. The first version is an early 16th-century map, in sepia, from the collection of the Duke of Alba, in Spain; the second is a colourful map, published in or before 1516, from the archives of the University of Bologna.

We shall determine, by using cartographic, nautical and historical tools, which of the two versions is the authentic map prepared by Morales. We will then analyze the content of both to glean historical information about Hispaniola and early 16th-century navigation. Then, together with information provided by 15th-century chroniclers and the pre-Columbian toponyms marked on the maps, we will be able to shed some light on the pre-history of Hispaniola and to locate the sacred mountain of its indigenous inhabitants, the Tainos.

## BARBARA UPPENKAMP

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She studied Art History, Philosophy and Indo-European studies at the University of Hamburg. Research interests: art and architecture c. 1500-1800, religious and political iconography, history and theory of architecture, issues of methodology and visual culture. She authored numerous essays and books on North European Renaissance and Baroque art and architecture, among others on Hans Vredeman de Vries and Peter Paul Rubens. Her current research concentrates on the painter and cartographer Daniel Frese.

## Space, time and spectacle in the Rantzau Plate (c. 1587)



The regent for the Danish crown in the Duchies of Holstein and Schleswig, Heinrich Rantzau (1526–1598), was an important commissioner of maps. He provided the views of many North German cities for the fourth volume (1st edition, 1588) of *Civitates orbis terrarum* by Georg Braun and Frans Hogenberg. Most of these city views were drawn by Daniel Frese (c. 1540–1611), appointed painter of the city council of Lüneburg. Around 1587 Frese painted a map on a copper plate (78 x 54 cm) for Heinrich Rantzau. This painting, the so-called Rantzau Plate, shows the regions of Schleswig and Holstein, combined with a genealogical tree of the Rantzau family. The map is designed as a bird's-eye projection with topographic details. Little scenes showing important political and military events in the history of the Rantzau family are scattered in the landscape. The Rantzau Plate's frame is decorated with representations of the seventy noble houses possessed by the Rantzau family, and the whole Plate is an exceptional example of the representation of lineage, dignity, and power

in the form of a painted map. Daniel Frese created an extraordinary combination: a map with a family tree, text cartouches, coats-of-arms, miniature battle scenes, and other incidents of great significance for the Rantzau family. The Plate addresses an educated audience, who is able to read and understand the visual messages. It invites the beholder to unravel the connections between time and space, history and territory. In order to reach a wider, but still elite, public the plate was disseminated as a print by Hogenberg and bound into copies of the Rantzau genealogy book (*Genealogia Rantzoviana*, 1587) and in some copies of the Braun and Hogenberg city atlas. This paper will investigate the Rantzau Plate in its historical and political context, with special attention to the self-fashioning of Heinrich Rantzau as a major player in the North European interplay of forces between Denmark, the Holy Empire, and local groups at the end of the 16th century. It offers new results from actual research on the painter and cartographer Daniel Frese.

## Session 15. Mapping new geographical knowledge across cultures

Chair: Carla Lois (CONICET, Universidad Nacional de La Plata, Buenos Aires, Argentina)

### CATHERINE BURDICK

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Catherine E. Burdick PhD, Art History, Pre-Columbian and Colonial Representation of Latin America. Publications: 'Patagonian Cinnamon and Pepper', *Imago Mundi*, 66.2 (2014), 196-212; 'Collecting (across) Cultures: Cartographic Exotica in Tabula Geographica Regni Chile (1646)', *Proceedings VII Jornadas del Historia del Arte* (2014); 'Paradise and Perdition: Jesuit Visions of Santiago, Chile before and after the Earthquake of 1647', in *The City in the Early Modern Spanish World*, eds. L. Gordo-Peláez and P. Niell (in progress).

### 'Tabula Geographica Regni Chile' (1646): early modern cartography at the Spanish Imperial periphery



This study explores 17th-century Chilean identity as it was conveyed in cartography by Santiago native and Jesuit Alonso de Ovalle (1603-1651). As this *criollo* (creole) argued to Spanish king Philip IV in his map *Tabula geographica regni Chile* (1646), a work he created to bolster his petition for missionaries, much of Chilean early national identity was tied to its floral, faunal, and mineral wealth. This study demonstrates that Ovalle took up a series of interwoven arguments in this pictorial cartography to assert the natural merit of the peripheral territory: Chile as a garden paradise before the Fall, a golden chain of mountains, a New World pharmacy, and an exotic hunting ground. Ovalle's cartographic claim of varied and abundant lucre countered widely accepted early modern European conceptions of Chilean pover-

ty, disconnectedness, violence, and what would come to be known as tropicality.

Broadly, the present study explores the importance of New World *criollo* intellectuals for shaping conceptions of their homelands, both in the Americas and abroad. To this end it asks how a particular *criollo* vision of Chile in the early modern era became codified in Ovalle's map, and what specific arguments its author made regarding the territory's natural advantages. On one hand it confronts scholarship that has interpreted colonial descriptions of South America as mythological or imaginary. On the other, in its interpretation of the depicted resources of Chile as riches at the disposal of the Spanish Crown, the present work engages with current discussions of the role of cartography in empire building.

## JUNIA FURTADO

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Full Professor of Modern History at Universidade Federal de Minas Gerais, Brazil. Nominated to Joaquim Nabuco chair at Stanford University, 2012. Has books and articles on history of cartography such as *Oráculos da Geografia iluminista*, 2012, and *The map that invented Brazil*, 2014, that won Clarival do Prado Valadares Prize and Jabuti Prize in 2015 as the Best Brazilian Book in Human Science.

## The ambassador, the geographer, the writer and the discovery of South Africa's geography (1720-1725)



In 1725 the Portuguese ambassador, Dom Luís da Cunha, and the French geographer Jean Baptiste Bourguignon D'Anville, collaborated to produce a map of Southern Africa. The aim was to find a possible route to connect the Portuguese colonies of Angola and Mozambique on the west and east coasts respectively. *The Plan for a route linking establishments in Africa* was then produced and sent to King Dom João V of Portugal. In his letter presenting the project to the King, Dom Luís da Cunha maintained that it would be possible to construct an overland connection between Angola and Mozambique, and that this vision came to him as an epiphany. In another part, however, he confesses that this concept wasn't totally new, as he had "found it in a printed report from that country." What source might have inspired the ambassador's dreams and why he didn't name it? After all, it is not true that, at this time, to base one's works on older writings would confer certain authority and reinforce arguments in a project's favour. All signs indicate that the book that truly inspired the ambassador would be some text unbecoming of this aim – on the contrary, it is most likely that it reinforced the idea that this was nothing more than a fantastical, nearly im-

possible, adventure. It could include adventure novels, describing imaginary, hardly believable places – even though many of them were based on oral accounts from travellers, particularly sailors and pirates who set out on the vast oceans opening up to European navigators. One of the greatest authors in this genre, at the dawn of the 18th century, was Daniel Defoe. Just a year after *Robinson Crusoe* he released *The Life, Adventures, and Piracies of the Famous Captain Singleton* in 1720. This book maintains the adventurous tone of its precursor. The narrative begins when an English cabin-boy, on board a Portuguese galleon bound for Goa, India, is abandoned with a few Portuguese sailors on the island of Madagascar. The boy soon becomes the leader of the group, which begins calling him Captain Singleton. After examining a number of possible escape routes, he convinces his companions to navigate through the strait separating the island from the continent and then, from the Mozambican coast, to travel overland to Angola or the Gold Coast. The book tells the story of this imaginary trip. My aim is to show how this imaginary adventure inspired the discovery of South African geography and to link it to the major changes that D'Anville's maps introduce in the geographical representation of the area.

**MARIO CAMS**

- KU Leuven
- Belgium



Mario Cams is a PhD candidate at the University of Leuven (Belgium). A sinology graduate, Mario spent two years at China's Southwest University before returning to his Alma Mater in order to join the Department of Sinology's research group in 2011. His main research interests include late imperial Chinese history and the history of cartography. Mario's current project, funded by The Research Foundation – Flanders (FWO), focuses on the exchange of cartographic knowledge between Europe and China at the turn of the 18th century and its repercussions on both continents.

## Cross-cultural cartography in practice: instruments and maps between Europe and China (1685-1735)



In 1718 a group of Chinese officials and European missionaries presented an atlas to the Kangxi emperor (reigned 1661–1722) at the imperial palace in Beijing. It covered not only the Chinese provinces but also Manchuria, Mongolia, parts of Siberia, Tibet, and even Korea. This atlas, known in Chinese as *Huangyu quanlan tu* 皇輿全覽圖 or 'Overview maps of the imperial territories', constituted a milestone in the history of cartography because it was the direct outcome of the largest mapping endeavour, based on exact measurements, that the world had ever seen. Yet, surprisingly little is known about its impact on cartography as a whole: key questions regarding the unprecedented Sino-European cross-cultural exchange of cartographic material surrounding the project have remained unanswered.

This cartographic collaboration between Europe and the Qing Empire (China) was the result of a converging of interests of several actors: the French Académie des sciences, the Jesuit order and the Kangxi emperor. A first direct consequence of this converging was the emulation, and eventually the adaptation, of European surveying instruments by the Qing court. This led the Emperor to commission field surveys on an unprecedented scale, initiated in 1708 and completed nearly a decade later.

The surveys involved large teams of map-makers, including European missionaries, drawing regional maps on the basis of direct observations for latitude combined with the triangulation of road distances for longitude.

For this, European techniques and methods of surveying were embedded within Chinese scientific practice, slightly altering scientific practice in the field.

On the basis of the surveys several editions of the resulting atlas were printed at the imperial palace in Beijing. This led to a relatively short, but intense, period of exchange in the two decades or so after 1718 by an extended network of intellectuals and officials that mainly operated from Beijing, Paris, and Saint Petersburg. In Paris, a European incorporation of the Chinese atlas was published in 1735, when a four-volume work on China appeared that included 41 maps executed by French cartographer Jean-Baptiste Bourguignon d'Anville.

As a result of these events an extended cross-cultural network was formed at the turn of the 18th century, one that allowed for the circulation and mutual exchange of cartographic knowledge between China and Europe. This ultimately left map-makers on both sides of the Eurasian continent eager to fill in the gaps left on the map of Eurasia in subsequent decades. This paper aims for a deeper understanding of this circulation by tracing the trajectories of two kinds of material objects – surveying instruments and maps – thereby closely following the process of their many adaptations. In doing so, it emphasizes the role of material goods, and reveals some of the often unstudied patterns and dynamics involved in the practice of cartography from a cross-cultural perspective.

## IMRE DEMHARDT

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Garrett Chair in the History of Cartography. Research and publications on post-Enlightenment cartography, colonialism and regional studies with focus on Central Europe, Sub-Saharan Africa and North America. Serving associations (currently e.g. President of the Society for the History of Discoveries) and projects (currently co-editor of *History of Cartography* Vol. 5).

## Re-discovering the Arctic: cartographic treasure troves: 19th-century German geographic journals



When the Enlightenment thinking blended with the emerging second age of discoveries at about 1800 it ushered in the 'golden era of geography'. This coincided with a never before, or after, experienced popular interest in travel accounts, regional geography and associated cartographic products. The educated classes across Europe followed the adventures and discoveries of idolized travellers like Humboldt, Franklin, Livingstone or Hedin who took the readers to the many corners of the globe hitherto little known, or unknown at all, to the Occident.

While the historiography of explorative cartography always made good use of primary sources – monographs published by the explorers and, of course, the secondary literature – it appears that an exceptional vibrant category of sources for mostly logistical reasons was not yet fully appreciated: contemporary geographical journals.

When taking, as a case study, Germany – one of the powerhouses of geographical thought and exploration in the 'long 19th century' (1780s – 1914) – one is surprised to find out that there were at least about 30 contemporary journals with a geographical focus. But for a long time only a handful, like *Petermanns Mitteilungen* or *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*,

were consulted internationally. Beyond these regulars, however, there was a vibrant scene of periodicals which deserves more attention because they provided broader audiences with almost 'real time', and thus a perception forming coverage of geographic discoveries and cartographic unveiling. The adversaries responsible for hitherto 'flying beneath the radar' include, but are not limited to, an often odd journal structure: mushrooming, yet short lived, appearances, hard-to-find complete paper runs at major scholarly libraries – even within Germany – and, not only for foreign researchers, the gothic typesetting.

Thanks to the advances in the digital age such journals become increasingly accessible and, with the help of OCR and translation software, digestible even for scholars with a different mother tongue. Against this technological backdrop the paper reports results of a research project aimed at identifying trends in the exploration coverage and accompanying cartographic visualizations. The paper will address challenges and benefits of researching rare journals, present overall findings of the project (including pointing to digital access points) and, finally, will highlight four key Arctic areas: the Northwest Passage, Bering Strait with Wrangell Island, Franz-Josef-Land and Greenland.

## Session 16. Medieval European, Asian and Islamic cartography (special session)

Chair: Karen De Coene (Universiteit Gent, Belgium)

### ALFRED HIATT

- Queen Mary, University of London
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Alfred Hiatt holds a PhD from the University of Cambridge and a BA from the University of Sydney. He is Reader in Medieval English Literature at Queen Mary, University of London. Hiatt is the author of *Terra Incognita: Mapping the Antipodes before 1600* (2008), and several articles on the history of cartography, including essays on maps in Walter of Châtillon's *Alexandreis*, and Macrobius maps before 1100, for which he received the Imago Mundi prize in 2009. He currently leads an International Network on Cartography between Europe and the Islamic World 1100-1600.

## Medieval European, Asian and Islamic cartography: shared spaces, divergent traditions (session abstract)



This session explores interactions between Medieval European and Islamic cartographic cultures on the one hand, and on the other, the influence of Islamic maps on Asian cartography. All three papers consider the question of exchange between different societies through maps and spatial description. They aim to act as a contribution and a stimulus towards the development of comparative approaches to cartography.

**Stefan Schröder** examines a rare example of cross-cultural cartographic production: the so called 'Andalusian Map' of the 9th or 10th century. Part of one of the earliest manuscripts of the *Etymologies* of Isidore of Seville, the map contains about 30 place names and inscriptions in Arabic and one legend in Latin. The paper analyses the map's adaptation of both Arabic and Latin geographical knowledge within the context of the manuscript and in comparison to other contemporary maps. It considers the historical background of Andalusia at the time of the map's production, and discusses it as an example not only of the hybridisation of knowledge, but as the outcome of the self-positioning of Iberian Christians living in the Arabic-Islamic culture of Andalusia.

**Alfred Hiatt** considers the response of 13th-century European scholars to the description of seas, gulfs and

ivers in Asia and Africa contained in Islamic sources. The paper examines the world map in Albertus Magnus' compilation, *De causis proprietatum elementorum* – a rare example of a map apparently translated from Arabic into Latin – which illustrates the relationship between the Indian Ocean, the Persian Gulf, the Red Sea and Mediterranean with the encircling world ocean. Here, as in the mid-13th-century *climata* map of John of Wallingford, the representation of the southern part of the known world was correlated with more traditional authorities such as Macrobius, who described an equatorial ocean, from which the Red Sea and the Indian Ocean derived. These images offer a clear case of Islamic 'influence' on European maps, but they also suggest processes of comparison and assimilation within Medieval scientific culture.

**Hyunhee Park** looks in depth at the Islamic sources of the impressive 'Kangnido' map of the world. This Korean map of 1402 drew on Islamic maps for its western sections, but the possible sources of the map have not received detailed attention. This paper compares extant Islamic maps with the *Kangnido* map to provide a clearer idea of its sources, and in the process it will advance scholarly understanding of interaction between Islamic and east Asian cultures.

## STEFAN SCHRÖDER

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Stefan Schröder holds a PhD in Medieval History from the University of Kassel, Germany. He has worked as postdoctoral researcher and lecturer at the Universities of Kassel, Erlangen-Nuremberg and Helsinki (2007-2015). He has published a book on 'Otherness' in late Medieval travel reports to The Holy Land and written several articles related to Medieval pilgrimage and cartography (e.g. on climate maps, power and knowledge in maps). Currently he is working on a monograph examining the exchange of geographical and cartographical knowledge in mediaeval Arabic-Islamic and Latin-Christian maps.

## The hybrid character of the 9th-century 'Andalusian Map' between Arabic and Latin cartography



Research regards the Iberian Peninsula as the most important contact zone between the Latin-Christian, the Jewish and the Arabic-Islamic world in the Middle Ages.

In contrast to other contact zones like the Holy Land or South Italy, members of the three monotheistic religions lived over a period of several centuries in close contact. Even if the cultural diversity of Christians, 'Mozarabs', Jews, Muslims and other groups was less peaceful and harmonic than shown in the romantic imagery of the 19th and 20th centuries, the coexistence (*la convivencia*) between the groups provided a fertile ground for cultural exchange and intermingling.

Yet this is not represented in cartographical representations of the time. Maps with an Iberian provenance like the maps of Albi (8th century) and Ripoll (11th century) show no signs of the transcultural situation in Spain or elsewhere. The same goes for the maps accompanying the commentary on the *Apocalypse* written by Beatus of Liébana. They display the world exclusively from a Christian viewpoint. By omitting the Muslim presence on the Iberian Peninsula and partly depicting re-conquered cities, as well as Santiago de Compostela, one

can argue that the map-makers even accentuated the Christian character of this region.

With the so called Andalusian Map of the 9th or 10th century, however, there is one rare exception preserved. Part of one of the earliest manuscripts of the *Etymologies* of Isidore of Seville, it represents a shared cultural knowledge. While based on a simple TO-type, one or even more scribes inserted about 30 place-names and inscriptions in Arabic and one legend in Latin. The map shows the adaptation of both Arabic and Latin geographical knowledge and offers, as a result, a most unusual spatial conception in the Christian framework of Isidore's encyclopaedic work.

In my paper I analyse firstly the content of this map within the context of the manuscript and in comparison to other contemporary cartographical images. In considering the historical background of Andalusia at the time of producing the map, I secondly discuss its possible functions as an example not only of the hybridisation and transformation of knowledge, but as outcome of the self-positioning of Iberian Christians living in the Arabic-Islamic culture of Andalusia.

**ALFRED HIATT**

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Alfred Hiatt holds a PhD from the University of Cambridge and a BA from the University of Sydney. He is Reader in Medieval English Literature at Queen Mary, University of London. Hiatt is the author of *Terra Incognita: Mapping the Antipodes before 1600* (2008), and several articles on the history of cartography, including essays on maps in Walter of Châtillon's *Alexandreis*, and Macrobius maps before 1100, for which he received the Imago Mundi prize in 2009. He currently leads an International Network on Cartography between Europe and the Islamic World 1100-1600.

## Earth and water: rethinking the equinoctial ocean



The extent of the impact of Islamic geography on European spatial representation remains an unresolved question. One area in which there was undoubted Islamic influence was in the theoretical geography practiced by European savants of the thirteenth century. One of the rare examples of a map translated from Arabic into Latin can be found in Albertus Magnus' compilation of pseudo-Aristotelian material, *De causis proprietatum elementorum*. Here geography derived from Arabic sources seems to have been particularly valued for hydrographic information. Sources such as 'Albumazar' (Abū Ma'shar) seemed to offer an authoritative description of the relationship between the Indian Ocean, the Persian Gulf and the Red Sea, and the Mediterranean. This enabled scholars such as Albertus, as well as Robert Grosseteste – and Grosseteste's student, Roger Bacon – to understand the relationship between seas and land masses, and to correlate the picture derived from Islamic sources with more traditional authorities such as Macrobius and Martianus Capella. Macrobius in particular described an equatorial ocean, from which the Red Sea and the Indian Ocean derived, and these bodies of water, along with the Caspian Sea, were standard

features of Medieval Macrobius maps. Islamic sources offered both a different representation of the equatorial region (habitable, rather than excessively hot), and of the major seas, gulfs, and rivers in Asia and Africa. The results of the confrontation of European and Islamic sources can be seen in images such as the mid-13th-century *climata* map of John of Wallingford: it has a lengthy inscription describing the 'equinoctial sea', alongside a representation of the northern hemisphere divided into eight climatic bands (an adaptation of the traditional seven *climata* of Classical and Islamic science). Similarly, the map that accompanied *De causis proprietatum elementorum* is used to illustrate the relationship between the principal hydrographical features of the south with the encircling world ocean. Through an examination of these images and their sources, this paper will argue that, while relatively few features of Islamic world maps entered into European *mappae mundi*, it is in texts that are primarily interested in expounding scientific principles about 'the nature of things' that genuine impact can be found. Such images also have something to tell us about the processes of comparison and assimilation within Medieval scientific culture.

## HYUNHEE PARK

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Hyunhee Park (PhD, Yale University, 2008) is an associate professor of history at the City University of New York, John Jay College. Her book *Mapping the Chinese and Islamic Worlds: Cross-Cultural Exchange in Pre-Modern Asia* (Cambridge University Press, 2012) explores Medieval contact and exchange between the Islamic World and China by utilizing geographic and cartographic information. Her new research project encompasses world mapping and other types of information transfers spanning Medieval Afro-Eurasia and the Early Modern Atlantic World.

## Islamic source maps for the 1402 Korean world map



*The Map of Integrated Regions and Terrains and Historical Countries and Capitals* (*Honil gangli yeokdae gukdo jido*, produced in Korea in 1402), hereafter referred to as the 'Kangnido', following Gari Ledyard's abbreviation, has become a sensation among many historians and geographers in the decade since a Kyōto University research team undertook a full-scale analysis of it as part of a map study project. However, this map has not received the scholarly attention that it deserves because it is very difficult to obtain the right to reproduce it. Because this map is a product of the unprecedented Afro-Eurasian connections and contacts made during and after the Mongol period, it requires extensive research from different angles and perspectives. This paper focuses on its cartographic features.

The Korean authors of the 'Kangnido' combined data from different maps to compose its various parts. These base maps are no longer extant, yet scholars have assumed that the authors used Li Zemin's 14th-century *Map of the Resounding Teaching* to draw the western part

of the world because another 16th-century map, *The Broad Terrestrial Map* (*Guangyu tu*), used Li Zemin's map to depict the southern section of Africa. Because Chinese cartographers had not drawn the western part of Eurasia before the Mongol period, the original sources of Li Zemin's map must have been alternatives: the Islamic maps that were brought from West Asia in the 13th century, or those made as part of the Yuan dynasty's greatest geographical project by the scholars of the Mongol court of China who used the Islamic maps. Despite the importance of contemporaneous Islamic maps as the ultimate body of sources used for depicting the western part of the 'Kangnido', few in-depth comparative analyses of Islamic maps with the 'Kangnido' have ever been done. This paper will compare some predominant features of world maps drawn and circulating in the Islamic Middle East, in order to determine the possible sources for the 'Kangnido'. I hope this study will stimulate more in-depth study of this important map and contribute to our better understanding of the development of cartography in Asia.

## Session 17. Mapping between science and imagination

Chair: Evelyn Edson (Piedmont Virginia Community College, Scottsville VA, USA)

### SEN-HAO YANG

- National Taiwan University
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THURSDAY 16 JULY



PhD student, Department of Geography, National Taiwan University. Research interests: historical geography, the history of cartography, and GIS and digital humanities. Recent research: The history of cartography between (pre)modern regimes: a case study on Taiwan, 1683-1945.

### Real and imaginary: the *feng-shui* maps for graveyard disputes in northern Taiwan (1878-1895)



*Feng-shui* is a Chinese traditional cosmography about the relationship between a building and its surroundings such as mountain ranges and rivers. It is also represented on cosmographic maps/diagrams, which differ from the paradigm maps discussed and argued in the history of Chinese cartography. Legal proceeding documents, now in the Tan-Hsin Archive (THA), that were handled by Qing dynasty local county governors, contain 182 maps. These show how ordinary people asserted and defended their property rights – including land disputes about graves – through the litigation system. Although paradigm maps could show ‘real’ (not ‘imaginary’) locations and boundaries of disputed lands, both plaintiffs and defendants preferred to use the *feng-shui* (cosmographic) map, instead of a general or cadastral map, to illustrate the environment of graves under the aegis of *feng-shui* concepts.

This essay analyzes 13 *feng-shui* maps used in 11 lawsuits. First, I argue the elements of cartography in the maps. Two basic elements – the directions of mountain ranges and rivers – show how the graves surrounded by

the valleys connect to *feng-shui* concepts, especially to the blessing and protection of the deceased’s offspring. Observation and presentation of relief, therefore, is the main theme in *feng-shui* maps. These, however, are often distorted by the *feng-shui* concept to become more ‘accurate’ in the surroundings than other maps such as cadastral maps. Second, following the locations recorded in the THA, I traced the disputed graveyards and compared them with the digital terrain model (DTM)’s relief data. Then we can identify where are located the ‘real’ and the ‘imaginary’. DTM helps us to understand the spatial cognition of *feng-shui* concepts in the Qing dynasty.

This essay further examines two graveyard disputes argued in front of the Hsin-Chu county governor between 1878 and 1895. These *feng-shui* maps referred to in the disputes not only show the boundaries of the lands but formulate the spiritual concepts alleging health problems and injuries. Therefore, these maps showed a growing tendency in their purpose to win an adjudication, although some map-makers might be acting illegally from the beginning.

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- Queen Mary, University of London
- London, UK



Nydia Pineda is a PhD student in English, at Queen Mary, University of London (QMUL). She is affiliated to the Centre for Editing Lives and Letters, UCL, and a member of the laboratory Groupe d'études doctorales sur les savoirs à la Renaissance in the Institut d'Histoire Moderne et Contemporaine of L'École Normale Supérieure in Paris. Her research is funded by QMUL and the Mexican Council for Science and Technology. Her doctoral dissertation investigates maps of the moon as windows into technological, philosophical, artistic and religious cultures of the 17th century.

## Lunar maps as crossroads of technology, art and natural philosophy in the mid-17th century



This paper will reflect on early modern lunar maps as conflicting spaces where theory and observation, aesthetic practices, political interests and philosophical beliefs of astronomers and map-makers converge. Three cartographic representations of the moon, printed in three consecutive years, will provide material for this discussion: Michael Van Langren's *Plenilunii Lumina Austriaca Philippica* printed in Brussels in 1645; the sequence of lunar phases in Francesco Fontana's *Novae coelestium, terrestriumq(ue) rerum observationes*, printed in Naples in 1646; and, finally, the *Selenographia* of Johannes Hevelius printed in Danzig (Gdańsk) in 1647. Firstly, I will briefly give a description of these images, discuss their reception and indicate their survival rate in European repositories. In the second part of the presentation I will

discuss the relationship between the production contexts of these lunar maps and the representational styles used for translation and promotion of astronomical observations. Finally, I will address the complex politics and toponymy found. Through this analysis I wish to illustrate that the earliest printed lunar maps were not merely visual translations of recorded data to serve as convincing "virtual witnesses" of astronomical observations. They were carefully crafted representations, reflecting interests and practices of different communities of knowledge, and were published in response to an active competition. These considerations intend to shed further light on the dynamic relationship between astronomical knowledge and practice, and the creation of celestial cartographic languages in the 17th century.

**GILLES PALSKY**

- Université de Paris 1 Panthéon-Sorbonne
- Paris, France



Professor of Geography at Paris 1 Panthéon-Sorbonne University and member of the research unit Epistemology and History of Geography. He chaired the History of Cartography Commission of the French Committee of Cartography (1999-2007). He is a trustee of the International Society for the History of the Map. His research revolves around the role of images in the building of geographical knowledge and the development of thematic mapping. He is also engaged in theoretical issues in cartography: visualization of spatial dynamics, participative mapping, and semiology of graphics.

## The philosopher's map: cartography, Earth theory and spirit of Enlightenment



Nicolas-Antoine Boulanger (1722-1759) was an engineer of bridges and roads, who was involved in the vast undertaking of the French *Encyclopédie*, and was portrayed by Diderot as the “ideal philosopher”. He was the author of a unique map, the *Nouvelle mappemonde dédiée au progrès de nos connaissances* (New *mappa mundi* dedicated to the progress of our knowledge), published anonymously in 1753 and re-published posthumously under his name in 1760. I examine in this paper the source and context of this world map, which was original in many aspects. Boulanger aimed at depicting the state of contemporary geographic knowledge in a period of long-haul navigation. He admitted to being only a makeshift geographer, and he based his work on information gathered by Philippe Buache and Joseph-Nicolas Delisle, well-known geographers of 18th-century

France. However, his *Nouvelle mappemonde* had a significant symbolic dimension. The map appeared as a metaphor of knowledge and of maritime navigations in order to illustrate the advancement of science. This metaphor was not new (it could be found in the work of Francis Bacon, then of Diderot), but it was there reinforced by the decorative elements of the cartouche, which referred directly to darkness and light. Besides, the map presented a particular feature. Instead of displaying in two hemispheres the old and the new worlds, as was generally the case, Boulanger opposed a maritime with a continental hemisphere where were brought together “the four parts of the World which have been so far disunited”. I study the implications of this innovative solution and connect it with Boulanger’s ideas about the Earth, the Flood and the formation of continents.

## JORDANA DYM

- Skidmore College
- Saratoga Springs NY, USA



Jordana Dym is Professor of History and Director of the John B. Moore Documentary Studies Collaborative at Skidmore College, and author of *From Sovereign Villages to National States: City, State and Federation in Central America, 1759-1838* (2006), and articles on Central American history and the history of cartography.

### Other panelists:

Carla Lois (CONICET, Universidad de Buenos Aires, Argentina)  
Joost Depuydt (FelixArchief / Antwerp City Archives, Belgium)

# Session 18. Bound images (panel discussion)

Moderator: Matthew Edney (University of Southern Maine, Portland ME, USA)

## Bound images: maps and books since 1453

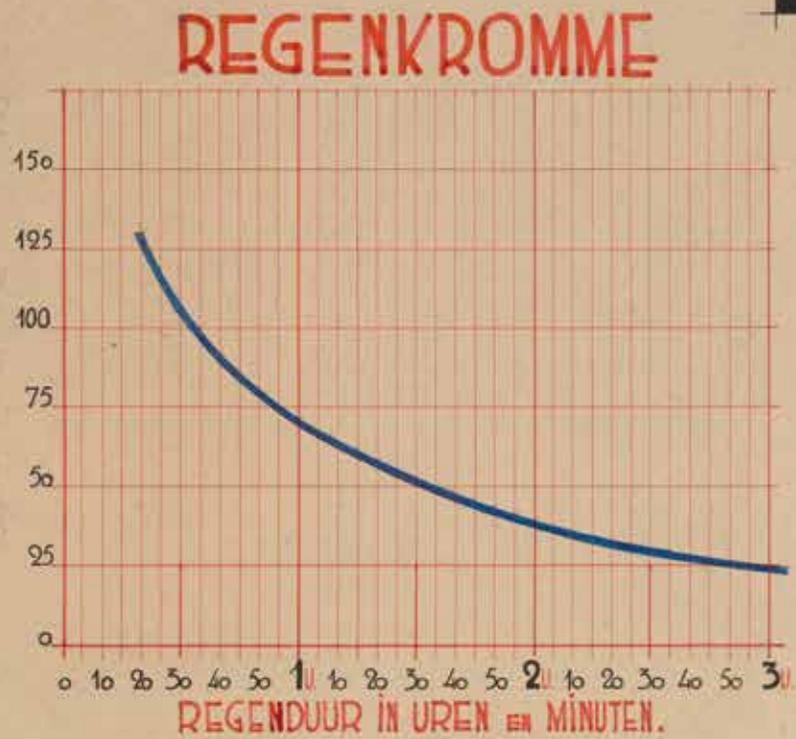


The dominant practice in map studies has been to consider maps as “sovereign”, as Christian Jacob put it, i.e., as individual images separated from the material context of their production, circulation, and consumption. Similarly, librarians, antiquarians, and scholars prized maps as ‘stand-alone’ objects, valuable for the geographic information they conveyed or the elegance of their presentation of far-off lands and peoples, often failing to catalogue maps and other images in books. At best, map scholars have recognized and studied the particular material form of “the atlas,” although the inherent complexity of this term continues to obscure more than it reveals. Yet maps occur within, and contribute to, the larger arguments of books of all kinds: histories, geographies, travel accounts, and novels included. The graphic element is often literally embedded within the text, not only engaging the reader but shaping how hand, mind, and eye work together in deciphering the author’s or publisher’s message.

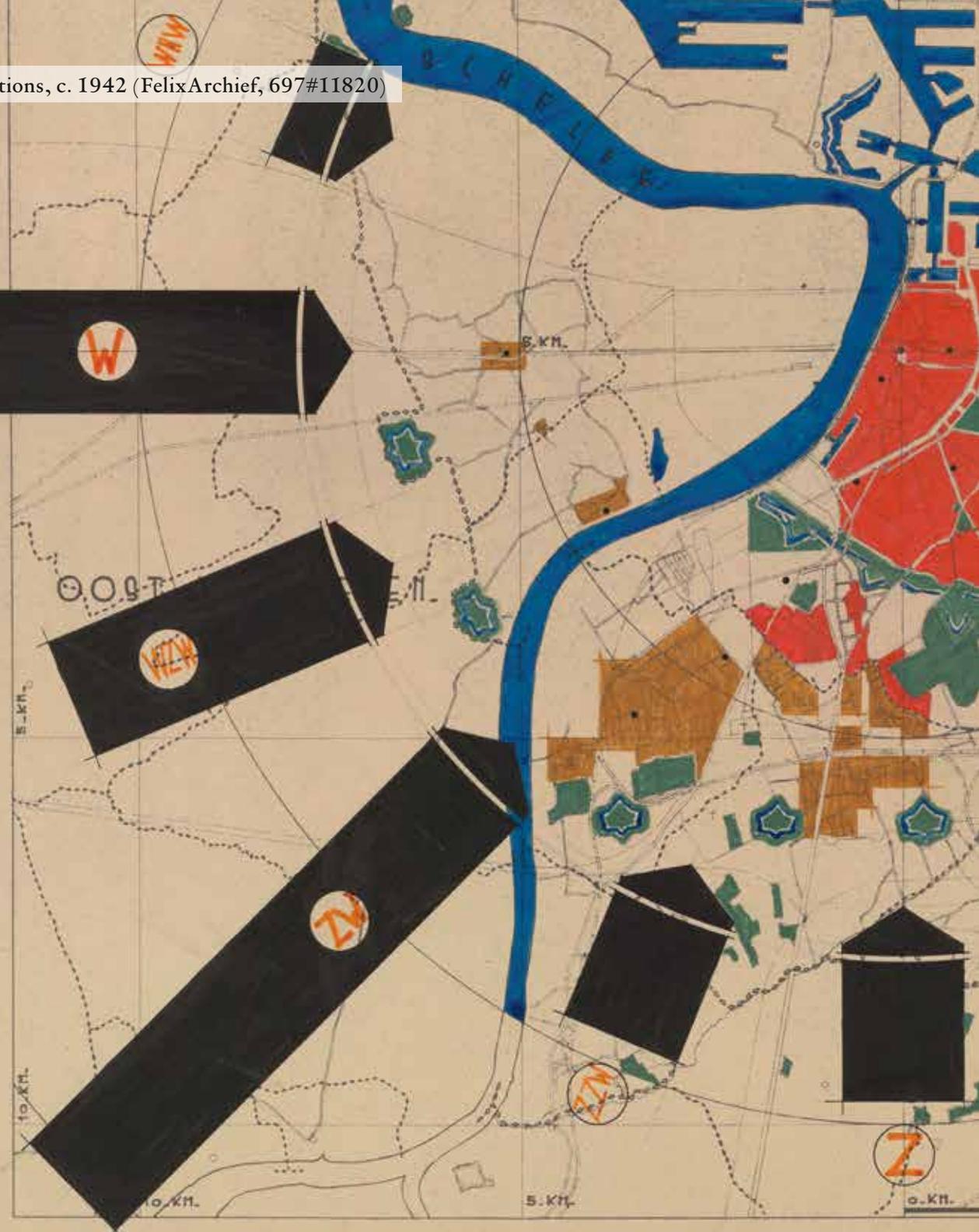
The proposed panel dethrones the sovereign map by asking what changes, theoretically and curatorially, when we think about maps as “bound images” and as a graphic part of the stories told by authors and printers in book form. In other words, the panel argues that the map as ‘stand-alone’ spectacle is only one way of engaging maps. Three scholars from three different continents will discuss maps as bound images, to open a discussion on three important themes. First, to consider academic trends that for many years largely neglected the material context, and the more recent energized consideration of the image-text relationship that incorporates many forms of reading and analysis; second, the work of maps in different non-fiction book genres, from atlases to bibles, histories, travel accounts and science and other manuals; and third, the practical challenge of working with bound maps in the library or archival setting, addressing questions of collection, preservation, consultation and exhibition.

THURSDAY 16 JULY

Thematic map of Antwerp, showing the prevailing wind directions, c. 1942 (FelixArchief, 697#11820)

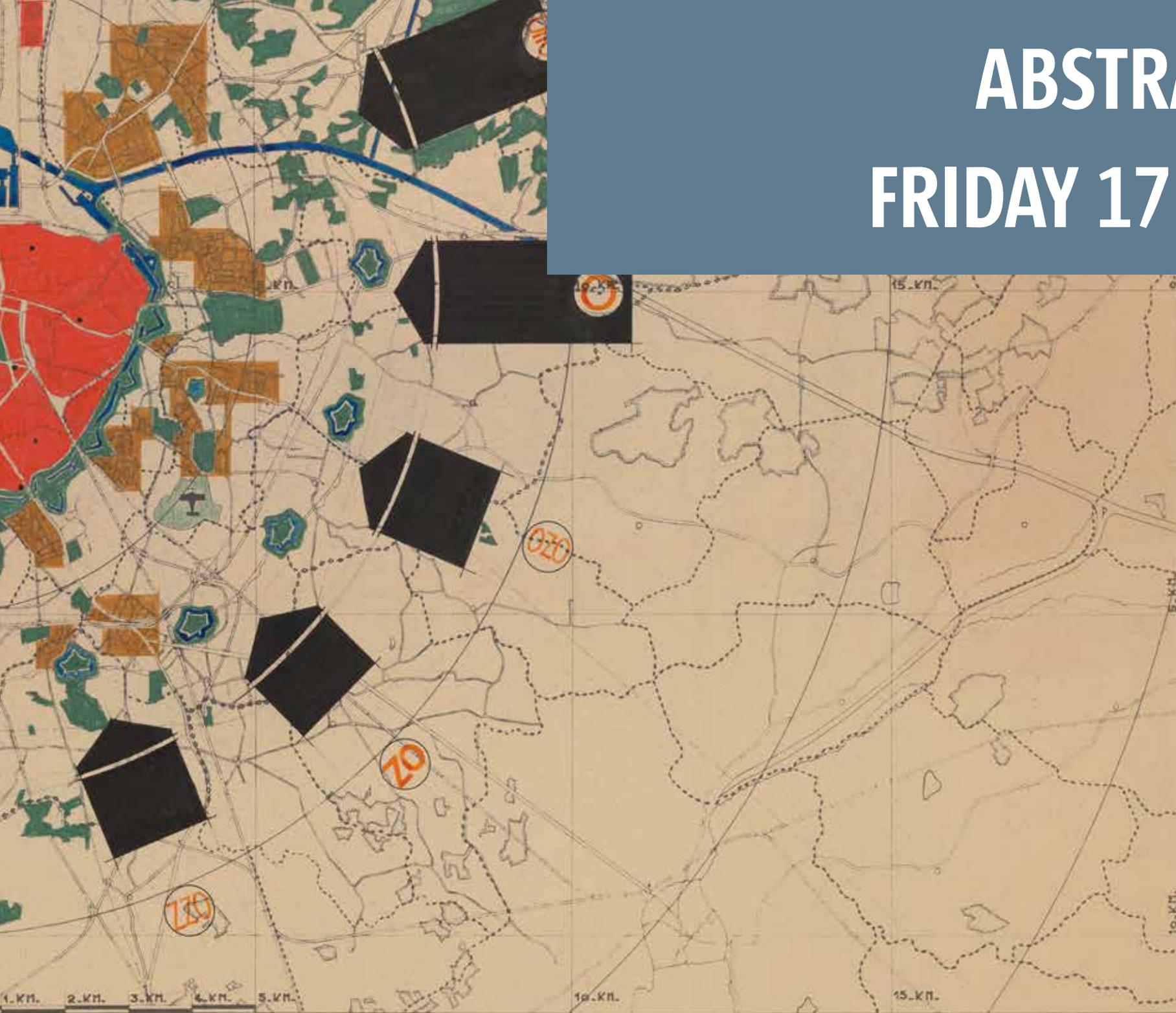


STUDIEBUREAU VOOR  
DE URBANISATIE VAN  
GROOT ANTWERPEN



# ABSTRACTS

## FRIDAY 17 JULY



## Session 19. Collecting maps

Chair: Martijn Storms (Leiden University Libraries, The Netherlands)

### GEORGE CARHART

- Trinity College
- Dublin, Ireland

FRIDAY 17 JULY



Education: PhD Historische Hilfswissenschaften, Universität Passau, Germany (2011); MA History, early modern European, Universität Passau (2005); BA History, Minor in German, University of Southern Maine, USA (1998)  
Work experience: Research Fellow, Trinity College Dublin (2014); Research Fellow, Technische Universität Dresden (2012-2014); Research Assistant and Doctoral Candidate, Universität Passau (2006-2011); Cartographic Associate Osher Map Library and Smith Center for Cartographic Education, University of Southern Maine (1998-2006)

### Maps and their place in the Enlightenment library: a consideration of the Fagel Library (1600-1802)



This paper will present a still extant Enlightenment library and what decision-making process the four generations of *Graffiers*, highly-placed civil servants in the States General of the Dutch Republic, may have used in their choice of cartographic material. Unlike many European historic and monumental libraries, with hundreds of thousands of volumes, the Fagel Library – with only some 20,000 volumes – was a working collection. They were not taking part in the ‘one-up-manship’ of the Enlightenment aristocracy’s largest library competition, but were populating a functional library. The Fagels purchased the items within their library as they were needed and not to show how much they could spend. It is in this context that we will examine the Library and its cartographic content.

Much work has been undertaken in the research and understanding of the use of cartographic material, both printed and manuscript, by the 17th- and 18th-century consumer. Such research has, often as not, examined individual cartographic publications in the context of specific limited genres or of historic events. Other researchers have examined historic events, and the decision making of those involved in them, in contexts of the

cartographic materials which were contemporaneously available. Such research has often placed the cornucopia of Renaissance and Enlightenment cartographic material on the table and speculated what may, or may not, have been used and the importance of the material to the user. With the Fagel Library we are not limited to speculating what they may have used in their decision-making process as the Library has remained intact, as an individual collection, since Trinity College Dublin purchased it in 1802. The Fagel Library contains a wide range of subject matter, from theological tracts and works on jurisprudence, to architectural and news pamphlets. It is particularly rich in cartographic and geographic materials, with 142 bound atlases, 2,880 single sheets contained in 25 portfolio boxes, and a further 10,000 or more cartographic images included in some 600 contemporary accounts of travels, books on geography, history and other geographical works.

With a selection of the cartographic materials we will consider the decision-making process behind their purchase, and in what way they may have been used in the execution of Fagel’s day-to-day administrative role in the States General of the Dutch Republic.

## TOM HARPER

- British Library
- London, UK



Tom Harper is curator of antiquarian mapping at the British Library, a post he has held since 2007. His research interests include map collections and educational wall maps of the 19th century. Tom is the compiler of section 6 of the chronicle for *Imago Mundi: the international journal for the history of cartography*. His publications include (with Peter Barber) *Magnificent Maps: Power, Propaganda and Art* (2010), and (with Tim Bryars) *A History of the 20th Century in 100 Maps* (2014). Tom is a member of the British Cartographic Society and ISHMap.

## Institutional collecting of early maps during the 19th century



The 19th century witnessed the creation and development of a number of map collections in national libraries as well as the foundation of geographical societies. This development both reflected and fuelled the rise of the study of geography in the age of European imperialism. Maps already existed within private and royal collections of books and manuscripts that formed the founding collections of some national libraries, and current mapping was added to them through a variety of methods including donations, purchases and deposits. Early maps were also collected through purchase and donation, their main value being to the study of the history of geographical discovery (Harley, 1987).

This paper will examine and compare the extent, nature and methods of antiquarian map collecting by map libraries during the 19th century. Using available inventories and accession records to shed light on collecting practices and activities; asking whether acquiring was a haphazard or selective process; and seeking to establish how the choice of acquired maps reflected contemporary tastes, trends and circumstances. The paper will also look at the pro-active role of map dealers in supplying and adding to map collections, and the status of duplicate copies of maps. By doing so, this paper will enable a better understanding of the formative years of national map libraries.

**SJOERD DE MEER**

- Maritiem Museum Rotterdam
- Rotterdam, The Netherlands



Sjoerd de Meer (1958) is (map) curator of the Maritiem Museum Rotterdam. He studied Medieval history at the University of Utrecht and art history at the University of Leiden. Until recently he was one of the editors of *Caert-Thresoor*. He has published about the cartography of the Dutch East India Company, the 'Atlas of the World' (the Rotterdam bound copy of the world map by Gerard Mercator from 1569) and has written several maritime historical related articles. His own research looks at the history of map collecting in the Netherlands in the first half of the 20th century.

## Collecting for the nation? Frederik Casparus Wieder and Willem Anton Engelbrecht



Around 1900 Dutch nationalism was prospering. Dutch history and especially the accomplishments overseas were looked upon with new interest. Following the example of the Hakluyt Society (founded in London, 1846), the Linschoten-Vereeniging was formed in 1908 with the aim to publish travel accounts from the Dutch past. In its wake, and in parallel, interest in Dutch historical cartography grew. A forerunner was the facsimile *Remarkable maps of the XVth, XVIth and XVIIth centuries reproduced in their original size*, published by the Frederik Muller & Co auction house in 1894-1897. The Royal Dutch Geographical Society (KNAG), founded in 1873, took an interest in 'old maps and globes' and started collecting around the end of that century. Cartographical collections of university libraries, such as those at Leiden, Utrecht and Amsterdam, got a boost and were actively extended. New cartographical collections were created by two Dutch maritime museums: in Amsterdam (founded in 1916), and in Rotterdam (founded in 1874). Private persons, also, were interested in historical cartography; not completely a new development, of course, but perhaps the ideas behind it were. The most important collector was the 'mercator sapiens', Dr Willem Anton Engelbrecht (1874-1965), a ship broker from Rotterdam. His collection was bought nearly 50 years ago by the Maritime Museum 'Prins Hendrik' (now: Maritime Museum Rotterdam).

An influential role in the history of collecting Dutch cartography at the beginning of the 20th century was filled by the well-known academic and librarian Dr Frederik Casparus Wieder (1874-1943). His most important publication was the facsimile series *Monumenta Cartographica* which he published in five parts between 1925 and 1933. Wieder was not only an academic. As professor †Cornelis Koeman already stressed, in his dissertation *Collections of maps and atlases in the Netherlands* (Leiden, 1961), Wieder was also a dealer in cartographic materials.

In this paper I will discuss the relation between the academic Wieder and the private collector whom he advised, Engelbrecht. Since 1916 he had also sold to Engelbrecht atlases, maps and globes. Was Engelbrecht his only client? Was Wieder in the business for profit? Or had Wieder acted out of nationalistic motives? And another intriguing question could be added: why did Engelbrecht start to collect in the field of historical cartography? Was he influenced in this decision by Wieder?

Not all the answers will be clear. But studying the relationship between Wieder and Engelbrecht gives some insight in the history of the collecting of cartography in the Netherlands in the first decades of the 20th century.

## DIANA LANGE

- Humboldt-Universität
- Berlin, Germany



Trained in Sinology and Central Asian Studies, I hold a PhD in Central Asian Studies from Humboldt University of Berlin. My research is located in Area Studies, and my primary research areas are Tibet and its neighbouring regions. My specialisation is in material and visual culture. In my current research project I concentrate on knowledge production and representation of knowledge on Tibet in visual culture. My research activity is based on the ethnographic and cartographic images of mid-19th century Tibet in the British Library's Wise Collection.

## Mapping Tibet in mid-19th century: The British Library's Wise Collection



The set of drawings in the British Library's Wise Collection are probably the most comprehensive set of visual representations of mid-19th-century Tibet and the Western Himalayan kingdoms of Ladakh and Zangskar. These images were drawn in the 1860s – when the mapping of British India was largely complete, but before or around the time when Tibet was mapped for the first time by Indian Pundits. Very little is known about the circumstances of the creation of the Wise Collection and most is based on deduction. There is no conclusive information about who commissioned these drawings, what purpose they served and how they came to Great Britain. All that can be said with confidence is that they were made by a Buddhist lama, who had contact with an Englishman who commissioned him to produce this “pictorial survey” of the Tibetan world.

The Wise Collection consists altogether of 55 drawings. There are six large picture maps on 27 sheets in total, and 28 accompanying drawings showing monastic rituals and different kinds of ceremonies. In my presentation I want to focus on the picture maps. These cover the areas of Lhasa, Central Tibet, Southern and Western Tibet, Ladakh and Zangskar. Placed side-by-side, the maps present a nearly continuous panorama from the Yarlung Valley in Central Tibet to Leh in Ladakh. Places are consecutively numbered, and explanatory notes referring to the numbers were written on separate sheets of paper. Full keys exist only for the

picture maps of Ladakh and Zangskar. The maps of Central Tibet are mainly labelled by captions in Tibetan while, on the maps of Western Tibet, English captions dominate. Lhasa and Southern Tibet are accompanied by neither captions nor explanatory texts.

Compared to maps created by Westerners the maps in the British Library's Wise Collection are not concerned with topographical accuracy, but provide a much wider range of visual information. Furthermore the picture maps transmit valuable ideas about the artist's perception and representation of the territory illustrated. I argue that the Wise Collection can be regarded as an ‘ethnographic atlas’ as well as a ‘compendium of knowledge,’ made by a local person for a foreigner. The main goals of my current research project *Visual Documentation of Regional Topography and Everyday Life in mid-19th Century Tibetan Cultural Areas: the British Library's Wise Collection* are (1) using the Wise Collection as a case study to examine the processes by which knowledge on Tibet was acquired, collected and represented, and (2) understanding the intentions and motivations behind these processes.

In my presentation I want to introduce the maps and their character – such as the illustration of their various attributes, their varying scale and orientation. Furthermore I want to discuss their significance and potential as a historical resource for the study of Tibet and for cartography in Tibet.

## Session 20. Cartographic forms and shapes

Chair: Mirela Altić, (Institut društvenih znanosti “Ivo Pilar”, Zagreb, Croatia)

ANDRÉA DORÉ

- Universidade Federal do Paraná
- Curitiba, Brazil

FRIDAY 17 JULY



Post-doc in the Department of Romance Languages and Literatures at Harvard University (2012-13); PhD in Social History (Universidade Federal Fluminense, 2002); MA International Relations (Universidade de Brasília, 1996); Diplôme d'Études Approfondies en Histoire et Civilisations (École des Hautes Études en Sciences Sociales, 1995). Since 2003 she is Professor of Early Modern History and Theory of History at Universidade Federal do Paraná, Curitiba. In the spring 2013, she was a fellow at John Carter Brown Library.

### Let's imagine a butterfly: animals, plants and anthropomorphism in geographical descriptions



Many historians have highlighted the central role played by description – the *ekphrasis*, as understood by the Greeks – in the historiography of early modern times.

The description is related with *enargeia*, which means vivacity and aims to put in front of the audience what is absent. Geographical descriptions (*ekphrasis tou topou*) had the same objective, as stressed by cosmographers when they propose a relationship between history and geography and the utility of geographical knowledge for religious reasons; to expand astronomical studies as the basis for policy decisions; or just for the pleasure of knowing about people and distant places. This paper explores the references in which authors express their awareness of the importance of ‘representarse a los ojos’ [to represent in front of the eyes] (Antonio Gonzales de Salas, 1644). It also presents some strategies adopted by cartographers, cosmographers, and authors of travel accounts to produce a visual image through literary descriptions. Animals, plants and parts of the human body were used by them to facilitate readers' comprehension of unknown geographies. Through this strategy the

eastern coast of Africa has been described as a butterfly (Diogo do Couto, 1611); South America is described as a heart or a pyramid, and the Amazon River as a huge human body (Simão de Vasconcellos, 1668). The analysis of literary descriptions allow us to establish a parallel between the images intended to produce geographical knowledge and those intended to associate geography with ideological meanings. In the first case there are vivid literary descriptions which are capable of producing a mental image and to help cartographers to translate this image into a map; in the second, cartographers attribute meanings to geographical information by adopting symbolic and allegorical images. Among a multitude of examples: two human bodies were used by Opicinus de Canistris in the mid-fourteenth century to represent Africa and Europe, as an expression of the theory that man is a microcosm; the ‘Leo Belgicus’ or Belgian lion was used to represent the Low Countries during the 16th and 17th centuries; and the figure of a woman was the Spanish Empire (Vicente de Memije, 1761).

## MARKUS HEINZ

- Staatsbibliothek zu Berlin – Preussischer Kulturbesitz
- Berlin, Germany



Dr. Markus Heinz studied History and History of Art in Salzburg and Vienna. PhD on the history of the Homann map publishing firm in Nuremberg. Since 2002 Deputy Director of the Map Department of the Berlin State Library and Head of the Commission on the History of Cartography of the German Cartographic Society. Since 2012 Member of the Board of Directors of Imago Mundi Ltd.

## German maps in pieces: a contribution to the early history of the jigsaw puzzle



It seems to be generally accepted (especially on the internet) that, around 1760 in London, John Spilsbury was the first person to paste maps on thin wooden boards and cut them along their borderlines and thus invent the dissected map or the jigsaw puzzle. While Jill Shefrin and others have shown slightly earlier examples, used for the education of the royal princes in Great Britain, Spilsbury remains credited with designing the first special maps for the game and making a business out of this product.

This paper will attempt to describe another view of the early history of the jigsaw puzzle. By exploring possible roots and related games elsewhere in Europe, I will present the first unmistakable description of a dissected map found in a book published thirty years earlier than Spilsbury's work. This discovery provides evidence that jigsaw puzzles as individually made games were probably made before the 1750s and very possibly outside of

Great Britain. I will present the traces of the dissected map in Germany from the 1720s to 1800, including the oldest surviving German puzzles made from maps by Tobias Conrad Lotter, dated after 1760. I will also provide some information on the producers of jigsaw puzzles in Leipzig, Nuremberg and Berlin, and details on the dissected map cabinets made, and commented on, by Jakob Friedrich Klemm in 1782.

The description of new map material, combined with additional information on the development of jigsaw puzzles in Germany, will be set in the context of map use and maps in education in the 18th century: this gives further insight into this important early contribution of cartography to the history of games and playing. Thus, this paper will bring to light the hitherto unpublished earliest source describing a jigsaw puzzle, the German map puzzles, previously unstudied, and an expanded understanding of the early development of the cartographic game in Europe.

## PETRA SVATEK

- Universität Wien
- Vienna, Austria



Petra Svatek, born 1976, studied history and geography at the University of Vienna (main emphasis on history of sciences and cartography). PhD: 2005. 2006-2009 research associate at the Department of History / University of Vienna (project 'Thematic Cartography and Spatial Research in Austria 1918-1945'). Since 2010 she is a scientific university assistant. Areas of research: history of thematic cartography 1500-1950, history of spatial research.

## Nature paintings and thematic cartography: early panoramic maps in Austria (1848-1884)



The Tyrolean graphic artist Heinrich Berann (1815-1899) is today viewed as the father of modern panoramic maps. However, the geographers Friedrich Simony (1813-1896) and Eduard Richter (1847-1905) offer two examples of Austrian scientists who had already taken up an early form of this kind of cartography in the second half of the 19th century. In the 1840s Simony realised that not all geographic references can be visualised by standard maps but, instead, require a schematic image to achieve this goal. For this reason he was the first Austrian geographer looking for alternative forms of representation, and thus ultimately chose panoramic maps for his purpose. But what sort of panoramic maps were actually produced by Simony and Richter? What methods did they employ to obtain the data necessary for this perspective? What artistic and scientific trends were identified and handled by the two geographers, and what was the scientific value of their panoramic maps? How did they score in comparison to Berann's panoramic maps?

While Simony almost exclusively drew panoramic maps of the Salzkammergut region, Richter focused on the Hohe Tauern massif, with a strong concentration on the numerous glaciers and morphological phenomena typical of mountain ranges. At the same time Simony also produced a panoramic depth map of Lake Hallstatt. In their work Simony and Richter were inspired, on the one hand, by the panoramas produced in Switzerland

since the late 18th century (e.g. by Louis Agassiz, Jean de Charpentier, Horace Bénédict de Saussure) and, on the other hand, by Biedermeier paintings, which were very popular at the time. As a result, the panoramic maps of these Austrian geographers seem much more natural than the previous work of their Swiss colleagues.

The data needed for the panoramic maps were obtained by Simony and Richter by means of terrain surveys. In the course of their surveys they conducted accurate measurements (triangulations, barometric altimetry, etc.) and calculated local features of the respective sites. This enabled them to create panoramic maps with a solid scientific basis. This was highly appreciated both by the public at large, due to their style of spatial design reflecting artistic conceptions of the time, and by scientists of various institutions. Specifically, Simony's and Richter's panoramic maps of glacier zones aimed at determining the size of various glaciers at a given moment and hence at pinpointing these glaciers' advance or retreat by comparing the data with values of previous or later years. Starting from the mid-19th century, this question, which involved the continuities and changes of natural phenomena within a certain time period, was a favourite topic of research especially among Austrian natural scientists. But Simony also inspired writers: one example is Adalbert Stifter (1805-1868), who attributed the scientific views of his long-standing friend Simony to the character of Heinrich Drendorf in his novel *Nachsommer* ('Indian Summer', 1857).

## PATRICK ELLIS

- University of California
- Berkeley CA, USA



Patrick Ellis is a PhD Candidate in Film & Media at the University of California at Berkeley. His research includes pre-cinematic representations of the aerial view in popular media culture. Convener of the panel 'Cartographic Spectacles: Film, Map, Methodology' for the 2015 Society for Cinema & Media Studies Conference, he has curated silent film series at the Pacific Film Archive, Cambridge University, and the Wolfsonian Museum.

## The Panstereorama: *plans-reliefs* as public spectacle (1760-1851)



“Now began that peculiar panoramic effect which is the distinguishing feature of the first portion of a view from a balloon [...]. The earth, as the aeronautic vessel glided over it, seemed positively to consist of a continuous series of scenes which were being drawn along underneath us, as if it were some diorama laid flat upon the ground.”

Harry Mayhew, 1862

Harry Mayhew's famous account, "A Balloon View of London," recording his initial journey in a gas balloon, makes reference to two contemporaneous media to aid in explaining the bewildering effects of the aerial view: the panorama and the diorama. These two pre-cinematic types of popular display – one a 360-degree painting rendered as though from an elevated view, the other a form of artificially illuminated illustration in relief – combined into what was then called a *panstereorama*.

The panstereorama (*pan*: all; *stereo*: solid; *orama*: view) was an adapted form of *plan-relief* as public spectacle. Models of Paris, London, and other metropolises toured within the same showman circuit as panorama canvases and dioramas. The miniature, model city – heretofore often, as David Buisseret has shown, a military artifact – was re-purposed as a mass media approximation of the aerial view. This occurred before tethered balloons provided genuine aerial views for a paying public.

This paper provides a survey of the panstereorama phenomenon, from Le Quoy's 1760 "model in relief" of Paris, through the box-office successes of late-Georgian London (including the adjacent, commemorative battle version, the *panstereomachia*), to the medium's ultimate adoption by the early World's Fairs, whence they ceased to be named 'panstereorama' and became a commonly curated part of these new civic events. In sum, an otherwise neglected story – located at the juncture of the history of cartography and the history of media – is retold.

## Session 21. Inspiration and imagination

Chair: Jordana Dym (Skidmore College, Saratoga Springs NY, USA)

### INGE PANNEELS

- Northumbria University
- Newcastle, UK

FRIDAY 17 JULY



Inge Panneels is a freelance artist and part-time academic at the University of Sunderland, with an interest in maps and mapping. Since October 2014, she is also an AHRC-funded PhD candidate at Northumbria University in Newcastle, on the subject of 'Beyond the Map: mapping in art'.

### Why do artists use maps?



This paper proposes to specifically examine the use of the historical maps by visual artists as a potent symbol for voicing opinion, making political statements or social commentary and, more broadly, how we might comprehend the significance of artist's engagement with maps and mapping. What is the significance of contemporary artists' engagements with maps?

Whilst the mapping instinct has been evidenced in archaeological maps since the rise of the agricultural settled lifestyle, map knowledge does not come to us naturally but through complex cultural understanding. The integration of maps and mapping techniques as a manifestation of post-modern art has been an expanding field where cartographic rules give artists assumptions to play with. The universal quest for understanding a sense of place is fundamental to our human nature: artists, using mapping techniques to create images, understood that scientific measurement was not the 'be all and end all' but that collating information about places – its people, its history, its memories, its culture

– was; all the intangible assets which interweave with the physical realities of a geographical location will add up to give it a sense of place.

Contemporary art's critical engagement with cartography extends well beyond the traditional aesthetic concerns that have long connected the two practices, uniting them today around "contested questions of culture, environment and politics". The reinterpretation of historical maps by contemporary artists will be examined through case studies of identified historical maps and their broader connotation and contexts as demonstrated through key exhibitions in the last decade.

The case studies discussed will demonstrate how artists can re-frame historical maps in a contemporary context in order to bring new dimensions to both historical and cultural debate and, more importantly, how artists are bringing about a new "mapping paradigm" (Watson) and what might be its relevance in a broader cultural context.

## CHARLOTTA FORSS

- Historiska Institutionen, Stockholms Universitet
- Stockholm, Sweden



She started her PhD in history at Stockholm University in 2012, and will graduate in 2016. Her thesis uses early modern cartographic material, scholarly works and travel narratives to study geopolitical world views in 17th-century Sweden. In 2010-11 she completed her MPhil in early modern history at Cambridge University. She holds a BA in History (2009) and a BA in Political Science (2010) from Uppsala University, Sweden. An abstract of her thesis topic was published in *Imago Mundi*, 66.1 (2014), 134-136.

## The Swedish Atlantis: Olof Rudbeck the Elder and early modern usages of cartography



This paper analyses Olof Rudbeck the Elder's use of cartography in his monumental treatise *Atlantica* (in Swedish *Atland eller Manheim*) [1]. The paper focuses on the maps in the accompanying atlas and discusses these in relation to contemporary early modern European cartography – both real and imaginary.

In 1679 the renowned Swedish scholar Olof Rudbeck the Elder published the first volume of his treatise *Atlantica*, a book that claimed that Sweden was the sunken continent of Atlantis. Rudbeck's work today has, for obvious reasons, lost its credibility as a scientific work, yet it continues to offer an insight into early modern ways of conceptualizing the world and its geography.

By making a connection between the ancient Atlantis and early modern Sweden, Olof Rudbeck could attribute a long list of heroic deeds and traits to his fatherland. The treatise was controversial already in its time, but it was also part of a longer tradition of scholarship emphasising the gothic rites of Nordic civilization. *Atlantica* should also be understood in the context of what is usually called Sweden's era of greatness (the 'Stormaktstiden'). Towards the end of the 17th century, when *Atlantica* was published, the growing Swedish state was eager to assert its power and historic importance. *Atlantica* was both a scholarly treatise, and a patriotic epic.

Maps were an integral part of Rudbeck's work. Not only was the text accompanied by an atlas of Rudbeck's

own making [2], but he also already in the opening lines made clear that the inspiration to *Atlantica* had come from working with cartography [3]. The cartographic material must thus be understood as an integral part of the composition and argument of *Atlantica*. Furthermore, while seeming far-fetched today, Rudbeck's view of the world had a potentially different resonance for his contemporaries. Contrasting *Atlantica* with other contemporary works of geography is therefore important. This is especially interesting when discussing the boundaries between what is real, and what is imagined, geography. By placing *Atlantica* in the context of early modern writings on cartography and geopolitics this paper can both enhance our understanding of Rudbeck's work, and shed light more generally on questions about European world-views in the early modern period.

[1] Olof Rudbeck, *Atlantica* (Uppsala, 1679–1702), 4 vols. The original was published with parallel Swedish and Latin text (*Atlantica* is the Latin title).

[2] Olof Rudbeck, *Atlantica Taflor eller Tabulae* (Uppsala, 1679).

[3] Rudbeck describes how he came to think about the link between Sweden and Classical Antiquity through maps in the foreword to *Atlantica*: Olof Rudbeck, 'Ärlige och Redelige Herr Vereli Synnerligen gode wänn' in *Atlantica*, vol. I, fol. Ir.

## CARLA LOIS

- Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET
- Buenos Aires, Argentina



Licenciada in Geography, PhD in History (University of Buenos Aires), Researcher at CONICET, Professor of Cartography at the Universidad Nacional de La Plata, and Co-Editor Volume Five in The History of Cartography Project. She heads a collective project on Geography and Visual Culture. She has authored several articles on the history of Latin American cartography and has, with H. Mendoza, edited *Historias de la cartografía en Iberoamérica* (UNAM, México, 2009). Her latest book is *Mapas para la nación. Episodios en la historia de la cartografía argentina* (2014).

## *Quinta pars, terra incognita* or imaginary place? Verisimilitude and mapping of the southern continent



This presentation is focused on the geographical entity called the *Quinta Pars* or *Magellanica*, a hypothetical southern continent that was reproduced in maps and science books beginning in the 16th century and continuing for more than two hundred years. It will examine the epistemological bases, the graphical strategies and the cultural needs that gave cartographical shape to this unknown geography. The southern continent was “unknown” not just because no one had ever been there, but also because it was explicitly described as “unknown”. These three points (it never existed, no one visited it, and it was depicted as unknown) offer privileged conditions to analyze how the unknown has been produced as a geographical category involved in many knowledge processes in the early modern era.

Traditional studies have attributed the long life of this hypothetical austral continent to the persistence of Classical knowledge about symmetry, balance, the antipodes, and other elements derived from Classical and Medieval cosmographical theories. No doubt those factors must have had a strong influence, but they do not constitute the whole explanation. More recently some scholars have demonstrated that geographical evidence from some voyages of exploration was taken as proof of the existence of the *Quinta Pars*. Once again, while this is true, the evidence from voyages of exploration does not completely explain the austral continent either. The emergence of the *Quinta Pars* is not explainable by its own nature or characteristics; nor is it an isolated fantasy.

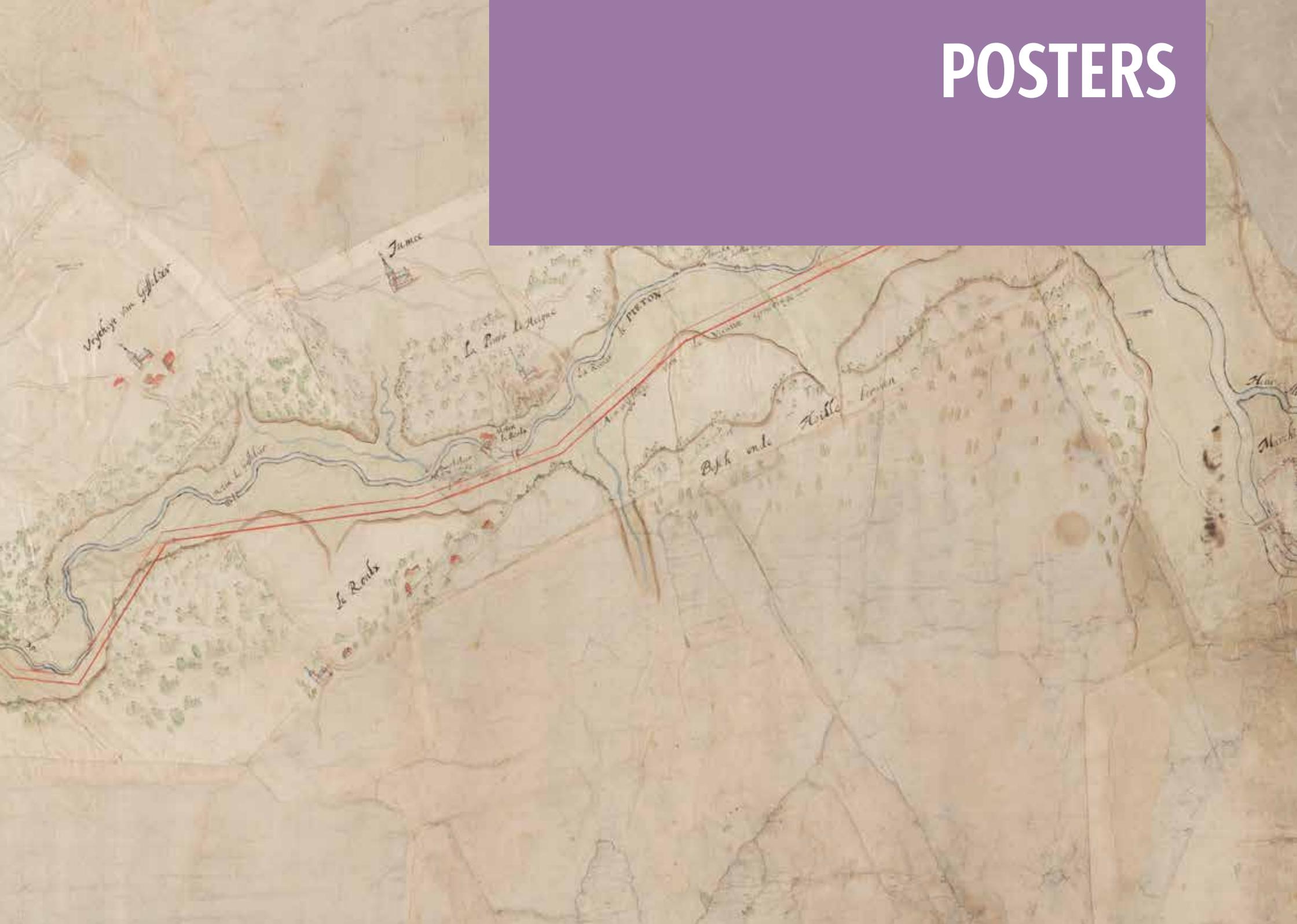
On the contrary, my argument here is that the geographical image of the *Quinta Pars* took shape within a larger epistemological process related to the need to understand the changing geography of the world, the need to create strategies to understand and ‘domesticate’ the unknown. Among many other Renaissance *terrae incognitae*, the austral continent offers a singular case by which to examine the creation of knowledge about unknown lands. Because no material demonstration could have explained its cartographic depiction (because the *Quinta Pars* simply did not exist), and also because most of the evidence for its existence was merely plausible conjectures, this case allows us to analyze the philosophical conceptions, the epistemological bases, the validating procedures, and the intellectual methods involved in imagining and representing unknown geographies. And, more important, its inexistence will allow us to analyze these factors while avoiding the temptation to compare this with “reality” and thus to try to measure errors or inaccuracies.

I will argue that the *Quinta Pars* required some conditions of verisimilitude to render it plausible, and that the condition was Europe’s experience in assimilating the existence of the New World. I will develop that point by a) analyzing conceptual keys in contemporary books of cosmography; and b) by comparing the representations of the Fourth Part (the New World) and the Fifth Part of the world on about a dozen manuscript and printed world maps, produced during the 16th century, that can bring us to think about intellectual strategies by which to configure the geographic unknown.





# POSTERS



## Theme 1. Military mapping

### MERVE SENEM ARKAN

- Eötvös Lorand University
- Budapest, Hungary



Merve Senem Arkan is a PhD student in the History of Cartography Department in Eötvös Lorand University, Budapest where she works under the supervision of Dr Zsolt Török. Her current research interest is in urban maps of Cyprus of the 16th to 19th centuries. She holds a Master's degree in Eastern Mediterranean Studies and graduated from Archaeology and Art History Major in Eastern Mediterranean University in Cyprus.

### Story of a city under siege (1570-1571): Stephano Gibellino's map of Famagusta



The most reliable and detailed map of 16th-century Famagusta was made by Stephano Gibellino during the siege of Cyprus. Cypriot urban maps first appeared during the siege by the Ottoman Empire in the 16th century. During this assault in 1570 the island was under the control of the Venetians. As the main port city of Cyprus, Famagusta became one of the main targets of the Ottoman army. Because of its strong fortifications the city was hard to conquer: the siege continued for a year before its capture and thus concluded the island's conquest in 1571. The city and its formidable battle it hosted were represented in Stephano Gibellino's map. While focusing on the Ottoman army's defence and

attack strategies outside the city, the map depicts and describes the siege events in detail. Even though its primary purpose was to give information about the siege, the representation of the city is also detailed: main public buildings, streets and squares give the reader much information. Unlike other maps from this period it was accepted to be even more accurate than those created in the following years.

Stephano Gibellino's map is not only significant for urban mapping of Cyprus but is also important in illuminating one of the turning points in the island's history. As historical evidence it connects the 16th-century Famagusta with that of the present.

## JEROEN BOS

- independent researcher
- Amsterdam, The Netherlands



Jeroen Bos (1978) is an information professional and independent historical researcher. His specialty involves the early modern colonial history, especially the so-called Dutch East Indies. He is co-author of vol. VI in the *Comprehensive Atlas of the Dutch United East India Company* series and published on several topics concerning the history of this long-distance trading company. Currently, Bos is employed by Naturalis Biodiversity Center (Leiden, The Netherlands) as collection manager of the Botanical library.

## Agent of empire: the dual role of colonial military engineer Carl Friedrich Reimer



At the end of the 18th century the overseas trade between Europe and Asia, traditionally executed by the European long-distance trading companies, was increasingly overshadowed by the imperial ambitions of the European home governments. The Dutch, represented in Asia by the Dutch East India Company (VOC, or: Verenigde Oost-Indische Compagnie), were struggling to uphold their position among their European competitors. In 1786 it was decided by the Dutch home government (the Stadtholder and States-General) that an independent Military Commission should be installed to survey, inspect and report on the Dutch settlements in Africa and Asia. This Commission toured through Africa and Asia between 1789 and 1792.

Carl Friedrich Reimer, a Prussian-born military engineer serving the VOC since 1767, was appointed to assist the commissioners as mainly responsible for the mapping production. As such, he served both the VOC as an employee and the home government as an agent of military intelligence. His production and personal papers gives us the opportunity to expose the changing role of the colonial military engineer at the dawn of a new political configuration.

Although many of Reimer's maps have been reproduced in the series of the *Comprehensive Atlas of the Dutch United East India Company* (2006-2010), an unknown map made by him was found recently in the National Archives of the Netherlands. It is a plan of the defences of the British Fort St George (Madras, India). He produced it while the Military Commission was visiting this British stronghold on explicit orders of the commissioners to do so. As such this plan can be considered corporate espionage.

At the Poster Session this 'Madras plan' will be highlighted as a case in point to elaborate on the dual role taken by Reimer in the background of the shifting political configuration. What role did colonial military engineers play until the middle of the 18th century? What was their role at the end of the century, when the Napoleonic Wars had radically changed the importance of military intelligence in the battlefield? How did they adapt to the new situation?

The poster will be supported by a selection of Reimer's finest maps and plans. For comparison, maps of other VOC military engineers can also be shown in detail.

**JOÃO GARCIA**

- Universidade do Porto
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PhD Human Geography, University of Porto (Portugal), 1996. Teacher at Department of Geography, Faculty of Arts, University of Porto. Member of Centre for History of Science and Technology, University of Lisbon. Research on History of Cartography, History of Geography and Historical Geography.

Co-authors: Enric Mendizàbal (Universitat Autònoma de Barcelona, Spain), Francesc Nadal (Universitat de Barcelona, Spain)

## The Roussillon campaign (1793-1795): Portuguese military cartography of Catalonia



During the French Revolution and after the death of Louis XVI (1754-1793) different countries declared war against France: first, England and Poland, then Portugal and Spain. Portuguese diplomacy tried an alliance, signed in 1793, with England and Spain. A Portuguese army of 6.000 soldiers went to Catalonia and fought at Roussillon during two years, with the Spaniards and Catalans, against the French army in the so-called 'Roussillon Campaign' (in Portugal) and 'Guerra Gran' (in Catalonia). The Iberian coalition was defeated and the peace treaty signed at Basel [Bâle] in June 1795. The consequences of this Portuguese participation in the war were tragic – not only for the military defeat but also for the three French invasions in 1807, 1809 and 1810.

During the campaign (1793-1795) Portuguese military engineers and cartographers wrote memoirs and prepared very detailed maps of areas in Catalonia. These

maps and plans were based on existing cartography, but the majority on fieldwork. Some of these documents still exist in a private collection, the Balsemão archive, in the Public and Municipal Library of Porto. Luís Pinto de Sousa Coutinho (1735-1804), 1st Viscount of Balsemão, was the Portuguese Secretary of War and Foreign Office at the time of the Roussillon Campaign and for this reason collected a lot of atlas, manuscript and printed maps and plans. As an important politician and diplomat (he was the Portuguese ambassador in London, 1774-1788), Balsemão is a good example of the connection between Cartography and Power.

The analysis of the Portuguese military maps of Catalonia dating from 1794-1796 will focus on their political and diplomatic context, their authors and the technical production methods. The relation between maps and contemporary literature, not only in Portugal but in Spain and France, is also considered.

## MARTIN DAVIS

- Canterbury Christ Church University
- Canterbury, Kent, UK



Since being awarded a first class honours degree in Geography by Canterbury Christ Church University, Martin has worked as an Instructor at the University specialising in Cartography, GIS and Political Geography. Martin is also a PhD student, studying the military mapping projects undertaken by the Soviet Union during the Cold War.

## Soviet military mapping of the UK and contemporary Ordnance Survey mapping: a comparative analysis



From the 1940s until the 1990s the Military Topographic Directorate of the Soviet Union produced thousands of large- and small-scale topographic maps, in addition to large-scale urban plans, around the world. The years immediately after the end of the Cold War saw many of these previously secret maps become available for the first time, although no systematic studies have since been published. This investigation compares a selection (Cambridge, Edinburgh and Chatham) of the ninety-one known Soviet plans of UK towns and cities with their contemporary Ordnance Survey products. Strong evidence is discovered that, in the Soviet products, much earlier descriptive sources were used in addition to more recent geospatial data derived from satellite imagery. Another important aspect of this

study examines the spatial accuracy of the plans: a high level of precision is revealed, with the sample possessing Root Mean Square Error (RMSE) values between 6.46 m and 11.14 m relative to current Ordnance Survey *MasterMap* data. Although Soviet mapping in general has seen very little investigation to date, such maps are much more than underexploited sources of topographic information: they offer considerable potential for informing future cartographic strategies, from standardisation initiatives to symbol design. In presenting new findings about the accuracy of these plans, as well as the source materials used in their production, this study therefore aims to encourage further investigation and to foster wider applications of this previously inaccessible topographic source.

## Theme 2. Maritime charts

EMMANUELLE VAGON

- Centre national de la recherche scientifique – CNRS
- Paris, France



Researcher in the French Centre of Scientific Research (CNRS), historian specializing in Medieval maps. She was one of the curators of the map exhibition in Paris, 'L'Âge d'Or des cartes marines' (2012), and editor of its catalogue. She is author of *Cartographie et représentations de l'Orient méditerranéen en Occident* (Turnhout: Brepols, 2013).

### Describing and illustrating maritime spaces: an illuminated portolan text at the court of François I



At the turn of the 15th and 16th centuries Europeans were widening their geographical interests to include new worlds. Competition between European nations and kingdoms to be the first to make new discoveries led to a greater production of, and a larger market for, maps and atlases, some of them luxurious, aimed at a wealthy and refined audience.

At that time the question of the education of princes in geography and nautical science became increasingly important, in the hope of drawing their attention to naval policy, to their own sea coasts and to maritime trade. This explains the presence of nautical documentation in the libraries of kings and princes, such as the library of François d'Angoulême, the future François I.

This poster will focus on a neglected item in the Bibliothèque nationale de France: a magnificent manuscript nautical book in French, dated to around 1500 (ms français 2794). It has never been studied at length and has not yet been published. This book is a description in portolan style, associated with highly decorative and brightly coloured maps of coasts and main islands, of the Mediterranean and the Black Seas' coastlines. It

has occasionally been described as a French version of Cristoforo Buondelmonti's *Liber Insularum Archipelagi*, although in fact the text is different. It includes a cosmographical introduction and an adaptation of the famous 13th-century portolan, the *Compasso da navigare*. Moreover, some parts of the text suggest that the book is incomplete and initially intended to cover also the Atlantic Ocean.

- I will draw attention to the historical context of the production of this book, made for the prince François (later: king François I), identify the sources and make a suggestion as to its authorship.
- The combination of a portolan text with maps is quite rare: I will comment on the extent to which the artist did (or did not) follow the text in composing his illustrations.
- Finally, I will compare the manuscript with other examples of nautical texts of the early Renaissance, in order to understand the means and aims of transmitting nautical knowledge to a wider audience on the eve of the European discoveries of the world.

## MARVIN FALK

- University of Alaska Fairbanks
- Fairbanks AL, USA



Marvin Falk PhD is a professor emeritus at the University of Alaska Fairbanks, where he has worked as a bibliographer, taught in its history and northern studies programmes, and has served as curator of the rare book and map collections. His publications include articles on historical cartography related to Alaska, bibliographies and a cartobibliography (Garland, Clio Press, Praeger). He edits the *Rasmuson Library Historical Translation Series* (University of Alaska Press) consisting of 17 volumes to date.

## The development of standards for the nautical charts of Russian hydrographers



Russian nautical charts of the North Pacific evolved for over 100 years to reach a high degree of standardized professional accuracy in an extreme environment.

These standards were largely developed by explorers themselves who later were able to expand their insights and methods to the national level. This is illustrated by four leading Russian hydrographers: Gavril Sarychev, Adam von Krusenstern, Mikhail Teben'kov and Aleksandr Kashevarov.

Sarychev spent eight years charting the region as a part of the Billings Expedition, 1785-1793. His charts, especially of the Aleutian Islands, are some of the most valuable produced during the Russian American era. He was appointed Russia's hydrographer-general in 1808 and eventually reached the rank of full admiral. His *Rules Pertaining to Marine Geodesy*, 1804, became the manual for all Russian hydrography.

Krusenstern commanded Russia's first circumnavigation, 1803-1806, and later became head of the Naval Cadet Corps. He was involved in many developments

in naval policy and published widely, including a detailed account of his voyage and several atlases of the Pacific with accompanying hydrographic notes.

Teben'kov explored as part of his duties while serving in the Russian American fleet, and later became Chief Manager of the colony, 1845-1850. He created the most complete atlas of the North Pacific during the Russian era, whose plates (engraved in Sitka) were transferred to St. Petersburg for publication in 1852, accompanied by a volume of hydrographic notes.

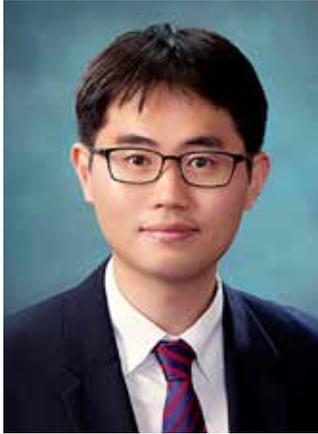
Kashevarov sailed extensively for the Russian American Company, led the 1838 hydrographic expedition along the north coast of Alaska, and was later sent to St. Petersburg in 1845 to draft new charts of the North Pacific.

A visual analysis of the charts produced by these cartographers along with their published comments clearly shows the development of a mature standard for hydrographic survey methodology and the creation of charts.

## Theme 3. Cartographic discoveries

### DAE-YOUNG JUNG

- Seoul National University
- Seoul, Republic of Korea



Assistant Administrator in Korean Studies Research Support Center at the Kyujanggak Institute for Korean Studies, Seoul National University. Education: 2012 PhD candidate. Paleography (Bibliography), Academy of Korean Studies, Seongnam, South Korea. Research field: Bibliography (especially old Korean & Chinese books), old maps, old town chronicles (gazettes)

### A study of the old Korean map 'Ch'ŏnhajegukto' in the Collège de France



In this article I examine Ch'ŏnhajegukto (天下諸國圖, tiānxiàzhūguó tú), the coloured manuscript map in the Old Korean Books Collection from the Collège de France Library. Firstly, I explore a route the map took from the Chosŏn (or Joseon) dynasty (1392-1910) to the Collège de France. The map was bought by Maurice Courant (1865-1935) during his administrative service in the late 19th century and went to France with the rest of his book collection. After Courant's death a part of his collection, including Ch'ŏnhajegukto, went to the Collège de France Library. Secondly, I introduce the structure and contents of the Ch'ŏnhajegukto. The significant feature of this map is inclusion of statistical data about economy, the army and population in 18th-century Chosŏn. It also contains a rare valuable map called

Imjinmokhoj'onggyesisomo (壬辰穆胡定界时所模, rén chén mùhúding jièshísuǒmú), which demonstrates the Border Monument on Mt. Paektu (白头山, bái tóu shān; 2,750 m). The Ch'ŏnhajegukto is very similar to Yŏjido (輿地圖, yú dì tú) the map from Kyujanggak (Kyujanggak Institute for Korean Studies in Seoul) collection. Thereby, in the third section I conduct comparative analysis of these two maps. Ch'ŏnhajegukto and Yŏjido are equal in the contents and the structure; however they have differences in the arrangement of maps and the name of the places. This analysis also reveals that these differences between two maps were the results of deliberate process of editing and provides concrete evidence of a relation between Ch'ŏnhajegukto and Yŏjido.

## ANTTI JAKOBSSON

- Maanmittauslaitos/Paikkatietokeskus
- Helsinki, Finland



Dr. Antti Jakobsson is a Chief Engineer at the National Land Survey of Finland and the chairman of the Cartographic Society of Finland. He worked as Programmes Manager at EuroGeographics during 2008-2012. He is currently the Technical Coordinator of the European Location Framework (ELF) project (2013-2016). For the history of cartography he has been writing papers on history of topographic mapping and has organized the 25th International Conference on the History of Cartography, 2013, in Helsinki.

Co-authors: Leena Miekkaavaara (Chartarum amici, Helsinki, Finland), Istvan Kecskemeti (National Archives, Helsinki, Finland)

## A rare printed map of 12 globe gores: one of the first maps containing the name 'America'



This study will examine a rare map found by A.E. Nordenskiöld in 1883 when he bought, in Rome, the 1525 edition of Ptolemy's *Geographia*. Pasted on the verso of the map of Switzerland (No. 45), it was already cut into its twelve gores. It is a separate print which was accidentally preserved from destruction. Nordenskiöld published an article of this map in the journal *Ymer* (1884) and in his famous *Facsimile atlas*. By then he had already identified three other copies of this map. One was owned by Franz Ritter von Hauslab, later owned by Prince Johann II of Liechtenstein and is now in Harvard College Library, bought from auction organized by Kraus 1951 (Catalogue 56, 1951, item 17); one is in the National Library of France; and one other sold by Rosenthal (catalogue, February 1898) which is now in John Carter Brown Library. The latter map is bound in to the book made by Peter Apian and printed 1534 (but this map is not normally included in other printed versions of this book). These maps are generally known as Ingolstadt/Nordenskiöld Globe Gores.

The authors have studied the Library's original which is mounted on black cloth, inside covers that contain a history of this map in Nordenkiöld's handwriting. Public interest in the first maps having the name America has increased as is shown also in their value. In Christies' auction of 2005 the price of the Waldseemüller globe gores from 1507 reached 1 million US dollars. The aims of the study are 1) to find out when the Nordenskiöld map was printed by studying the watermark

and paper; 2) to identify the possible author of the map which Nordenskiöld could not identify (but concluded that there has been a common original for his gores and Schöner's globe of 1515); 3) to compare the originals available (Helsinki, Paris, Cambridge MA and Providence RI); and 4) to try determining a more precise year of engraving.

All scholars agree that the map was printed in Ingolstadt, Germany. Regarding the year when this map was engraved there are different views. Nordenskiöld believed that it was between 1511 and 1515. HARRISSE (1951) though it was 1518 because of information about the Guaiacum wood was then available in Germany. Wieser, Engelmann and C. Schöner believed the author to be Peter Apian because Ingolstadt was mentioned and the use of similar texts (e.g. mentioning the year 1497). This would mean that the engraving was done after 1520; but, as Nordenskiöld notes, it would have been strange if Apian had not used information available in his 1520 map. Finsterwalder (1998) believes the maker was a printing shop of Apian during or after 1527.

We will present findings of the watermark and paper analysis; compare all known existing exemplars. There are some differences between the Paris and Helsinki/Cambridge MA exemplars in two places. Also we will compare maps of Waldseemüller 1507, Schöner 1515 and Apian's 1520 and 1530 maps.

## VERA DOROFEEVA-LICHTMANN

- Centre national de la recherche scientifique – CNRS
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PhD in History (1992), Moscow State University, Institute of Asian and African Studies. Professional Background: 2000 to present - Chargé de Recherche, UMR 8173 Chine-Corée-Japon, CNRS-EHESS; 1989-1999 Research Fellow, Institute of Oriental Studies, Russian Academy of Sciences; 1985-1989 Assistant Professor, Institute of Asian and African Studies, Moscow State University. Post-doctoral Fellowships: March-August 2014 Visiting Scholar, National Tsing Hua University, Taiwan; March-July 2011, 1996-1998 Alexander von Humboldt Fellowship, Germany; 1993-1995 Diderot Fellowship, France.

## A recently identified late 18th - early 19th centuries manuscript map of the Chinese Empire in Göttingen



The re-discovery, by Robert Batchelor in 2008, in the Bodleian Library (Oxford, UK) of the so-called Selden Map (c. 1619) became an outstanding event in the history of cartography. The Selden Map immediately gained the interest of a large scholarly public, due to its eye-catching artistic attributes and complex combination of several East and South-East Asian and Western cartographical traditions. The main 'effect' of the Selden Map, however, is its triggering of scholarly attention to overlooked maps of East Asia among library acquisitions.

The poster is concerned with the recent identification of a large Chinese manuscript map of the Qing empire. Owned by the Göttingen State and University Library for about two centuries, the map was catalogued in January 2014 [Cod.Ms.MAPP\_34]. Only now has it become an accessible item of its rich collection of early maps and manuscripts ([http://hans.sub.uni-goettingen.de/cgi-bin/hans/hans.pl?t\\_tunnel=idn&idn=hans:m6](http://hans.sub.uni-goettingen.de/cgi-bin/hans/hans.pl?t_tunnel=idn&idn=hans:m6)). The map can be dated approximately to the turn of the 18th and 19th centuries, and has a title *Da Qing wan-nian yitong jingwei yutu* 大清萬年一統經緯輿圖 (The Unified Latitude and Longitude General Map of the Ten-thousand-years Great Qing Empire). It is signed by Li Mingche 李明徹 (1751-1832) – a famous Taoist master and scientist, especially known for his studies in astronomy. The map bears a library stamp that confirms its acquisition in the late 18th – early 19th centuries.

Its possible provenance might be the generous donation to Göttingen University by Baron Georg von Asch (1729-1807), a member of a German family in service of the Russian Tsars. The Asch Collection (Sammlung Asch), indeed, contains several East Asian maps (<http://frontiers.loc.gov/intldl/mtfhtml/mfdigcol/lists/mtfgva-titlindex.html>).

The map's title and content do not completely match other extant maps. It evokes the Western system of parallels and meridians; indeed, it relies on Western prototypes, but still has many distinct features of Chinese cartography, being a fusion of the two cartographical traditions.

The map comprises the core Chinese territory, but puts the emphasis on the vast Western and Northern lands of the Qing empire. The centre corresponds to the region around the Yellow River's source highlighted – appropriately – by bright yellow colour. The focus on the Yellow River's source by graphical means is complemented by a long textual passage on its history in the lower left corner of the map. The core Chinese territory is divided into 17 provinces, showing a transitional division from the 15 (Ming) into the final set of 18 (Qing) provinces; this adjustment of the administrative system took shape from 1662 until 1667. The outdated administrative division in the map accentuates its historical dimension.

I shall provide some insights into this unique map, discussing these and some other of its characteristics.

## CATHERINE HOFMANN

- Bibliothèque nationale de France
- Paris, France



Catherine Hofmann, archivist paleographer, is curator at the Département des Cartes et des Plans of the BnF and secretary to the History commission of the Comité français de cartographie. She is the author of many articles on the history of cartography in the modern era. Her last publications : *Artistes de la carte, de la Renaissance au XXIe siècle* (Autrement, 2012), *L'âge d'or des cartes marines: quand l'Europe découvrait le monde* (BnF/Seuil; translated in English, 2013) and *Les globes de Louis XIV: étude artistique, historique et matérielle* (BnF).

Co-author: François Nawrocki (Bibliothèque nationale de France, Paris, France)

## Early and modern globes in French collections



The aim of this poster is to show the different aspects of a research project, launched at the Bibliothèque nationale de France (BnF) in February 2014, about the early and modern globes preserved in French collections, i.e.: on-line national inventory, preservation, digitization and 3D-modelling.

The Département des Cartes et Plans of the Bibliothèque nationale de France contains the largest collection of terrestrial and celestial globes in France. To the more than one hundred and fifty mounted globes (of which approximately a hundred date from before 1900) may be added an even greater number (approximately two hundred) in the form of printed sheets of gores. The BnF's collection is exceptional, both in size and for the scientific and aesthetic value of many major items: one of the oldest Arab celestial globes (11th century), 16th-century manuscript and engraved brass globes, a series of Dutch globes (Blaeu, Hondius, van Langren, Valk, &c.), the great globes of Coronelli presented to Louis XIV (1683), the sequence of 18th-century French globes (Delisle, Bion, Delure, Noller, Robert de Vaugondy, &c.).

The main aim of the BnF project (2014-2016) will be to compile a union catalogue of early globes held not only by the BnF, but also within all public collections in France; thanks to the building and Internet publication of a reference database. Preliminary work will partially be based on the inventory, compiled in 1970, of early and modern globes in French public collections: this

identified and localized 231 items dating from before 1851, of which 101 were in Paris. Published only in a summary, typewritten form the inventory was, however, a rich archival document with full bibliographic descriptions, remarks on the physical state of the globes, and photographs; it was deposited in the Département des Cartes et Plans. Forty years later the situation has changed considerably: new acquisitions, restorations, damage, changes of ownership and/or of location, losses and theft, have been regularly recorded. A new national survey is therefore justified, which will extend up to, at least, 1920. The reference database, that should open in 2017, with further updates and enrichments, will be structured in a new specific XML globe format based on the generic XML-TEI for manuscripts description.

Attention will also be given to the material conditions of the globes and, if a project for safeguarding the objects is established, preservation matters can be envisaged. Over the last twenty years many important globes from public collections have been restored in the BnF's workshop (whose expertise is known world-wide), that is dedicated to items of large dimensions.

At the same time, with the help of a Japanese company, the Bibliothèque nationale de France is undertaking a technologically innovative 3D-modelling of fifty-five of its early globes, together with the digitization of the 2D printed gores collection. This project will include the ambitious purpose of opening and widely disseminating this 3D-globes collection to the general public and the scientific community.

## Theme 4. Cartography across cultures

SARAH MOLINA

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University of North Carolina, Chapel Hill: BA, Art History, PPE Minor, May 2016, Phi Beta Kappa. Morehead-Cain Scholarship (2012-2016): 4-year, full-tuition scholarship to UNC-Chapel Hill that selects 3% of its applicants. Andrew W. Mellon Curatorial Fellowship at the Art Institute of Chicago (2014-2016): 2-year fellowship that integrates curatorial training, research, and mentorship. Bryan Social Innovation Fellowship (2013-2014): Awarded funding to implement an arts education initiative for students underexposed to the arts.

### Boundaries and frontiers: the Earthly and the Fantastic in al-Idrisi's Mediterranean



Scholars have long positioned al-Idrisi's cartographic masterpiece, *The Delight of Him Who Desires to Journey Through the Climates or The Book of Roger*, as an extreme example of disregarding geopolitical boundaries. In all the extant manuscripts of al-Idrisi's original lost work, lines cross, geographic markers converge, and no visual evidence of *badd*, the internal boundaries of the Islamic empire, seems to exist. In my poster I seek to connect this history of cartographic scholarship to the larger history of Medieval Sicily and the Mediterranean. I will explore how *The Book of Roger's* emphasis on fragmented regional maps and the particularized portrayal of port cities emphasizes a spirit of *convivencia* (typically applied to Al-Andalus) and transregional trade in Sicily under the rule of King Roger II. Rather than portray boundaries as fixed and static *The Book of Roger* illustrates a protean world of shifting cultural and political identity.

To construct my argument I will frame al-Idrisi's work as a convergence of the Euro-Christian and Arab-Islamic discourses of his time. Scholars have tended to ana-

lyze the discourses separately, but I will examine key avatars from both traditions. In the introduction to *The Book of Roger* al-Idrisi lays out his sources: for present purposes I will examine how he integrates the visual and theoretical traditions of Ibn Hawqal, al-Istakhri, Paulus Orosius, and Ptolemy. Using comparative visual analysis and a close reading of text, I will expose the matrix of Euro-Christian and Arab-Islamic discourses interwoven in al-Idrisi's *The Book of Roger*. My poster will draw images from two manuscripts at the Bodleian Library, two manuscripts at the Süleymaniye Kütüphanesi, and one manuscript at the Bibliothèque nationale de France.

Once I have established al-Idrisi's portrayal of earthly boundaries and frontiers, the rest of the poster will focus on his depiction of religious and mythological spaces. I will argue that he visually integrates the mythological and the earthly to create a new paradigm of expanded exploration made possible in King Roger II's court of *convivencia*. I will focus on al-Idrisi's portrayal of Gog and Magog as space that bridges religion, history, and the Medieval Mediterranean.

## EKATERINA SIMONOVA-GUDZENKO

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Doctor of Science, degree in Japanese History (2006). Head of Department of Japanese History and Culture, Moscow State University, Institute of Asian & African Studies. Among publications: 'Space in Shinto Shrines and Its Visual Representation from the Thirteenth through the 15th Centuries,' in *Interpretations of Japanese Culture*. International Research Center for Japanese Studies (Kyōto, 2009), 363-72. 'Ishikawa Ryūsen (1661-1720) – Japanese cartographer 17th-18th centuries', in *Istoriya i kultura traditsionnoi Yaponii*, 7 (2014), 215-34.

## Gyōki-type maps as the essential basis of visual representation of Japan



One could hardly find a book or article devoted to Japanese cartography in which authors do not mention Gyōki-type maps. Although Japanese specialists have been passionately investigating the subject from the end of the 19th century, this map type seems to be described insufficiently in the Western history of cartography. The aim of this present research is to show the influence of the Gyōki-type representation in the depiction of the Japanese archipelago in East Asian and European cartographies.

The first known Japanese visual representation of the islands is attributed to Gyōki Bosatsu (668-749) – a Korean monk who spread Buddhism around the country, constructed roads, bridges, canals and who is said to be the founder of mapping in Japan.

Gyōki-type maps have the following characteristics:

- round, or oval, form depicting provinces, closely attached to one another;
- name of the province, number of districts written in every oval;
- great roads of the country originating in the Yamashiro province (where Kyōto is situated);
- on printed maps of the 15th century or earlier, foreign neighbouring countries, real and imaginary, are placed near margins.

The 14th century gives the first written record of monk Gyōki as a founder of mapping in Japan (Tendai source Keiran shuyōshū) and the creation of one of the earliest extant Gyōki-style map – Shomyōji-map (1305).

The depiction of Japan as a little oval island with the name

Nihon is prevalent on Chinese maps beginning with the earliest extant maps of the Chinese Empire dating from the Song dynasty (960-1279). In the Ming period (1368-1644) when separate maps of Japan appeared, the insular Gyōki-style prototype could be easily identified in them.

The first representation of Japanese islands on Korean maps is found on the oldest of surviving Korean maps – Kangnido (1402, the earliest copy 1470). The outline is comparable to the Japanese maps of the time and the territorial division that was marked seemed to have been borrowed from Gyōki-type maps. In the earliest printed map of Japan made in 1471 by Sin Sukchu, secretary of the Korean embassy in Japan in 1443, the same Gyōkimap prototype is clearly visible. Japanese islands were represented in Sino-Korean atlases of the 17th-18th centuries in the same style.

The earliest European map on which the name Japan is stated seems to have been the 1459 Fra Mauro circular map showing the island of Zimpagu near the coast of China. Beginning with Fra Mauro map the representation of the archipelago seems to exert influence of East Asian cartography. On European globes and maps of the 15th and first part of the 16th centuries Japan appears to be one island, as it was represented on Chinese maps with the name Nihon. Maps made by Homem (1554, 1558), Velho (1561), Dourado (1568) and even the first separate map of Japan by Teixeira and Ortelius (1595) were to a great extent based on the Gyōki-style maps.

In conclusion, I will show the influence of European cartographic traditions on Japanese Gyōki-style maps in the 17th century.

## Theme 5. Mapping the city

### KETI LELO

- Università degli Studi Roma Tre
- Rome, Italy



POSTERS

Educated in town planning, GIS and Remote Sensing at Sapienza University of Rome, at the Faculty of Geo-Information Science and Earth Observation (ITC, Enschede) and at the Istituto Agronomico per l'Oltremare (IAO, Florence), Keti Lelo holds a technical-scientific position at Roma Tre University. She has consolidated experience in the training and education of professionals in the fields of information systems for cultural heritage, urban and territorial analysis. Her publications include more than 50 papers and the recent co-edition of the Atlas of Rome in the 18th century.

Co-author: Valerio Baiocchi (Sapienza Università di Roma, Rome, Italy)

### Metric accuracy of 18th- and 19th-century maps of Rome



This poster deals with the themes of urban surveying and the metric accuracy of the ichnographic representations of cities by using the case study of Rome's Census map (*Pianta del Censo*), 1866. This 1:4,000 scale map represents a generalization of the 1824 urban cadastral map on 1:1,000 scale (*Catasto urbano Pio-Gregoriano*), composed of more than 90 sheets.

The Census map was georeferenced with a network of ground control points (GCPs) obtained through a custom-made survey of GPS points. We compare the metric accuracy of this map with the results obtained by georeferencing the *Nuova Pianta di Roma* (published by G.B. Nolli in 1748), which is known to be the geodetic framework of the cadastral map and, consequently, of the Census map.

Similarly with the *Nuova Pianta*, we assess the real

accuracy of the Census map using two different control points (CPs) networks: the first network consisted of points from present-day 1:2,000 scale cartography (mainly corners of buildings) firmly recognizable in the historical cartography and distributed uniformly within the city's walls. The second consisted of presumed significant points, including obelisks, columns, towers and bell-towers, easily visible from most of the city and easily sighted at ground level.

In Nolli's map the average value of the residual errors, measured on the network of the presumed significant points of the city, is lower if compared to the network of randomly chosen points. This condition is not observed in the Census map, suggesting that the effects of the geodetic survey, obvious in Nolli's map, are unobservable in the former. This result confirms that successive re-drawing operations deteriorated and reduced the original accuracy level.

## Theme 6. Toponyms on early maps

### GILSUN OH

- independent researcher
- Seoul, Republic of Korea



Born 25 June 1948. Mechanical Engineer. Publications: Report of copying the 'Honilgangni yeokdae gukdo jido' [Honil kangni yōktae kukto chi to] and separate appendix, 'Reconstruction map of the the Honilgangni yeokdae gukdo jido (100 x 70 cm)', *The Old Map Quarterly*, no. 1 (Autumn 2014), 40-43; 'Redrawing of Kunyu Wanguo Quantu (Complete Geographical Map of all the Kingdoms of the World) by using computer'.

### Redrawing of the five most important maps in the Song dynasty



National and world maps were produced in the Song dynasty period of China through accumulated knowledge from trade with, and military conflicts against, Western nations since antiquity. The most well-known maps of Song dynasty period are 九域守令圖 (*Jiu Yu Shou Ling Tu*, Administrative Map of Nine Districts, 1080-1086), 禹跡圖 (Map of the Tracks of Yu the Great, 1080-1094), 古今華夷區域總要圖 Essential Map of Past and Present China and Barbarian Countries, 1098-1100), 華夷圖 (Map of China and Barbarian Countries, 1117-1125), and 地理圖 (Geographical Map, 1190-1191). Currently we can find these maps in the forms of engravings on stone tablets or copies made by stone rubbing or wood block printing on paper. How-

ever, the images of these maps are blurred and it is hard to recognize the place-names. In the present study the five maps were re-drawn using the Auto CAD and Illustrator computer programmes, and marked with both past and present place-names. High resolution pictures of the maps from their sources – such as those displayed in a museum or printed in a book – were used as a base image. The blurred Chinese letters of place-names were identified by reviewing other reference books and topographic maps. In the present study we can see how the geographical positions were correctly described or distorted on the original maps. The re-drawn maps in the present study provide clear images of the old maps and past, as well as present, place-names.

## Theme 7. Map decoration

### JIAJING ZHANG

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PhD, assistant professor, working at Institute for History of the Natural Sciences, Chinese Academy of Sciences. Research interest in History of cartography, History of science of modern China.



Hypsography is an approach that presents various forms of the landscapes on maps. Traditional Chinese hypsography is approached by the depiction of scenery which presents the undulation of the land by means of perspective drawing. This approach is vivid in image, easy to draw and to understand and powerful in illustration. However, it is not precise enough to judge the altitude of mountains. From modern times Western methods of illustrating relief – such as by the use of hachuring, hill-shading, contouring and tinting – begin to gradually appear in Chinese maps. These hypsographic methods are not only vivid but also higher in precision. They could even indicate the accurate altitude of the mountains on maps.

The contour method in the thesis refers to use of contour lines to present the undulation of the mountains. A contour line is a special form of the isoline; it is a line linking points of equal elevation. Contour lines first appeared in the late 18th century in Europe.

Modern times have witnessed an evolution in Chinese traditional cartography, by means of the flood of Western cartographical knowledge into, and application in, China. As an example we will take the contour method for map drawing.

### The spreading and application of the Western contour method in modern China

During the late Qing dynasty (1840-1911) Westernization groups introduced contour theory into China in their translated books. Thereafter, a handful of contour maps were published. The standard of drawing of contour maps in the late Qing dynasty was uneven: there were sub-standard erroneous isobath charts and contour maps, and standard contour maps drawn by the authorities.

During the period of the Republic of China (1911-1949) contour theories were gradually perfected, and there were lots of diversified contour maps, mainly intended for both military and civilian purposes. Also there were plenty of contour maps drawn by individuals. The popularization of contour maps during this period symbolized the transfer of traditional Chinese cartography to modern times.

The two major factors influencing the spreading and application of the contour method in China are social and technical. The social factor consists of urgent demands in military defence, in political rule, and in mineral exploration and railway construction. The technical factor includes the development of measuring technique, the application of new devices and the progress of printing technology.

## NATALIYA VINOGRADOVA

- Russian State Library
- Moscow, Russia



Natalia Vinogradova is a Map Librarian in the Map Department of the Russian State Library (Moscow). Main field of researches: toponymy, toponymic databases, history of cartography.

## Peoples of the Russian Empire: how they appear on old Russian maps



The poster is a first attempt to view artistic decoration of some maps dating from the second half of the 19th to the beginning of the 20th centuries and dedicated to the ethnicities of the Russian Empire. These maps held in the Russian State Library are of great interest in terms of design, execution and typography. They vividly demonstrate peoples populating the vast territory of Russia, their appearance, costumes, trades and objects of their material culture.

The second half of the 19th century in Russia was a period of rapid industrial growth. At that time intellectuals became increasingly interested in the national culture and its manifestations: the ways of life and trades of ethnic groups in Russia. It is rather indicative that most maps cited in the poster were created by school teachers or in seminaries. Very often, unselfish enthusiastic teachers, especially in the provinces were engaged in the collection and accumulation of ethnographic data, some of which they managed to represent on maps. In most cases we only know the names of these devotees

due to their maps. Intended mainly for scholars and ordinary people who were not highly educated, the ethnographic maps did not lay any claims to be deeply scientific and exhaustively represent the subject. Their charm lies in their ingenuous representation of data, brilliance, careful treatment of folk culture and in their intention to awake users' interest in the ethnic, as well as geographical, diversity of their motherland.

The maps show representatives of ethnicities, including minor ones, in their typical costumes. People are depicted together with some object to denote their traditional trades. Even being generalized, their symbols are easily recognized. Sometimes, images of ethnic groups or trade attributes make up very picturesque map borders. On some maps, ways of life and trades of nationalities are portrayed as genre scenes; at times, rather dramatic ones – bear hunting, attack of wolves, dangerous sailing on northern seas. Due to the use of the chromolithography technique and dynamic images, narrative effect is achieved and the maps look really fascinating.

**LIUDMILA ZINCHUK**

- Russian State Library
- Moscow, Russia



Head of the Map Division of the Russian State Library. Her scientific interests are history of cartography, and cartobibliography.

## Artistic design of Russian printed maps of the 18th century



The artistic design of Russian printed maps of the 18th – early 19th centuries is one of the least investigated aspects in the history of Russian cartography. An attempt to study this issue was made in the Russian State Library by analyzing the maps found in the process of compiling the Union Catalogue of Russian printed maps of that period.

The main elements of design which have become a subject of study were cartouches and artistic miniatures, supplementing the cartographic images. Cartouches arouse the greatest interest for study. In the course of investigation, cartouches were arranged by purpose, performance style and character of image. Those which were identified by their purposes: framing the title, scale, legend and explanation. The following styles of performance were revealed: Classical, Romantic, Baroque. The most important aspect of the review was the character of the cartouche image: decorative, objects and scenic.

The simplest decorative cartouches are most frequently encountered: they are made in the form of plants, animals or geometric designs. Object cartouches contain images of one or more objects (things) or images symbolically related to cartography (geography) on the whole, or reflect the content of the map. Scenic

cartouches with artistic details integrated into a single composition are rarely found. Images of either kind are dedicated to cartography or geography as in the case of object cartouches, or they immediately define a mapped territory. These cartouches are usually accompanied by portraits of famous or noble persons and are a constituent part of an entire cartographic image. A map often includes several cartouches in addition to one or more artistic miniatures to complement the cartographic image.

Some trends in the use of artistic design elements were found that depended on the scale or on the mapped territory. 'Special' (local maps in 18th-century Russian terminology), 'particular' (large regional maps) and 'general' (maps of Russia's entire territory) maps contain different sets of decorative elements.

Symbolism of artistic miniatures and object cartouches is allegoric in character and contains a layer of information that could not be expressed by contemporary cartographic means.

An attempt was made to decipher semantics of cartouches of Russian printed maps of the 18th – early 19th centuries in course of this investigation. The poster presents some of the results.

## Theme 8. Mapping new geographical knowledge

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- Quito, Ecuador



Professor and Coordinator of History, San Francisco de Quito University, Quito, Ecuador. Conferences: 2014 Tulane University, 'La búsqueda de un pasaje interoceánico: Expediciones desde el Pacífico, siglos XVI-XVIII'. Publications: '¡Peligro en la Mar del Sur! Drake y la creación de la Armada', *Derroteros de la Mar del Sur*, No 20-21 (2012-2013) [published 2014], 35-50; *Enigmas, geografía, expediciones y cartografía de las Américas* (Quito: Universidad San Francisco de Quito, 2013). Honours: Richard E. Greenleaf Fellow at the Latin American Library at Tulane University (2014).

### Francis Drake and the cartography of the New World



Following the expedition of Fernando Magallanes (1519), between 1577 and 1580 Francis Drake completed one of the most famous and memorable circumnavigations. Drake's expedition challenged the Spanish defences in the Pacific and gave access to the 'Spanish Lake' for the adventurers who, in subsequent centuries, attempted to emulate his voyage. The results of this expedition were of great significance for modern imperialism. Cartography, too, was influenced by this event; Drake was probably carrying aboard the 'Pelican' (his flagship re-named 'Golden Hind' in the Pacific) Ortelius' famous atlas *Theatrum orbis terrarum* of 1570. The map entitled *A new and accurat map of the world* by John Speed was published in London c. 1626, inspired by Drake's voyage. As well as a map drawn by the Italian artist Baptista Boazio published between 1588 and 1589 that shows the daring route taken by Drake on his circumnavigation; both maps emphasize the news of an interoceanic route in the Southern Hemisphere of the New World. This poster will focus on how, after

Francis Drake's famous voyage, America was becoming part of the vision for 'Orbis Terrarum', which was being made at the end of the 16th century. As well as analyzing the two mentioned maps, the paper will also focus on the impact that Drake's voyage would have had on the making of maps by the famous cartographers Gerard Mercator and Abraham Ortelius, specifically in relation to two miniature maps: Gerard Mercator's version, published in 1592 and titled *Americae*, and another rare miniature map by Abraham Ortelius titled *Americae sive novi orbis nova descriptio*; this map comes from a little-known miniature atlas, but the date of publication is unknown. Through the analysis of these maps drawn after Drake's triumphant return, this address attempts to gain a more in-depth understanding of the importance of this historic voyage, not only for cartographic knowledge of the time, but also for the interests of the flourishing empires, which were incentivized by the expeditions of the Pacific that, from then on, allowed "navigation of a wide theatre of both hemispheres." (Archivo Museo Naval de Madrid, MS0314, fol 2)

## Theme 9. Aspects of European cartography

DÁNIEL SEGYEVI

- Eötvös Loránd University
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Dániel Segyevy studies Geography MSc at the Eötvös Loránd University, Budapest. His areas of interest are ethnical geography and the history of geography, mainly the ethnical mapping of Carpathian Basin in the 19th - 20th centuries, especially after World War I. He made his professional practice connected to this theme in the HAS Centre for Social Sciences Institute for Minority Studies (Budapest) and in the Leibniz Institute for Regional Geography (Leipzig).

### Map twins: the 1:200,000 ethnographical maps of Hungary (1918) in the shadow of Trianon



I would like to introduce the recently found, largest and most detailed ethnographical maps, produced by a most ambitious cartographic project in Hungary in preparation for the negotiations at the Paris Peace Conference after World War I.

The map presented here is the 'Ethnographical' map of Hungary, published on 1:200,000 scale under the leadership of Zsigmond Bátky and Károly Kogutowicz in the autumn of 1918. Scholars of different disciplines have participated in this project. The thematic map was hand-coloured onto a printed base map; 23 copies only were made in 2 months. This map used the so-called dot method, and, based on the Census of 1910, represented the mother-tongue of the population of the contemporary Kingdom of Hungary. Ferenc Fodor assumed that this was the largest 'ethnographical' map of the world at that time. The editors went back in their methodology to the influential German geographer, Alfred Hettner: in particular to his paper and his population-statistical map. Hettner's method was made known to the international scientific community because of the work of Sten de Geer by his map, 'Befolkningens fördelning i Sverige; beskrivning till karta i skalan 1:500 000'.

The project was the initiative of the Hungarian Geographical Society, was financed by the Industrial and Trade Ministry, and was completed with the assistance of the Hungarian Central Statistical Office. For methodological discussions the Hungarian Central Statistical Office (HCSO) prepared another 'ethnographical' map series on the same base; but this was reproduced only in 6 copies. These ethnographical maps are actually 'twin maps': the two differ only in that the Bátky-Kogutowicz map represents the rural population, so we can see the settlement structure; while the HCSO map shows all the population is located in the settlement centre in order to make an easier calculation of the population figures.

The circumstances of this project were roughly known by the contemporaries and also repeated in modern specialist literature, but most of the maps have been found during my archival researches, so it only now became possible to analyse them. These maps have an extensive family tree: many later direct, or indirect; homemade, or international, successors: their history I will summarize, too.

## LUCYNA SZANIAWSKA

- Biblioteka Narodowa
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Graduated from Warsaw University Department of Geography and Regional Studies in 1976, she then completed postgraduate African Studies with thesis 'Map as Source of Documented Knowledge of Africa in the Days of Renaissance'. From 1975 to 2013 she was with the Department of Cartography at the National Library of Poland, 2001 to 2013 as head of its Scientific Description Unit. She has published 9 books (monographs or catalogues) and over 95 articles and notes on the history of cartography.

## Maps and atlases of Joachim Lelewel (1786-1861) accompanying his historical studies



In the field of historical cartography Lelewel was not a forerunner, but he successfully transferred to Polish ground the idea of publishing historical studies (texts together with maps), which complemented their cognitive and didactic value. His maps played a supportive role for historical treaties and in the history of science – geography and geographical discoveries. Among the historical maps he created there were those that illustrated socio-political transformations that took place over the centuries, which were described in the texts; whereas the maps attached to the studies in the history of geography presented knowledge of the Ancient, Medieval and Renaissance writers, graphically reconstructing the notions of the world known to them – the Ecumene.

Lelewel's maps illustrating texts on geographical discoveries conducted from the late Middle Ages through the Renaissance until the 17th century are, in principle, more or less simplified copies of those produced in earlier periods, e.g. in *Géographie du moyen âge: atlas composé de [...] planches gravées par l'auteur ...* (Brussels, 1849-57). Because of limited accessibility to ancient originals (particularly on Polish territories), they became a suitable educational source. The first to be published was a treatise *Historyka tudzież o łatwym i pożytecznym nauczaniu historyi* (Wilno [Vilnius], 1815): here Lelewel explained his ideas relating to the methods of teaching history, telling of a necessity to combine history with other fields, i.e. geography, chronology and ethnography. That is why all his historiographic works included maps as an important element in the transfer of historical knowledge.

## Theme 10. Showing status

### ALEXANDER KENT

- Canterbury Christ Church University
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Vice-President, British Cartographic Society; Vice-Chair, Map Design Commission, ICA; 2010-present: Senior Lecturer in Geography and GIS, Canterbury Christ Church University; 2008-2010: Head of Cartography, University of Southampton; 2004-2007: PhD, University of Kent; 1999-present: Cartographic Editor, *Atlas of the Social and Intellectual History of Islam*, Oxford Centre for Islamic Studies; 1998-1999: MPhil, University of Cambridge (Queens College); 1995-1998: BSc (Hons) Oxford Brookes University.



The changing pattern of land ownership, following the Dissolution of the Monasteries under Henry VIII in the late 1530s, created new demands for mapping in England, as individuals and institutions sought more expedient ways of recording and managing their new or expanded estates. By the end of the 16th century a new breed of individual map-maker, in the form of an enterprising local surveyor – with at least some faith in scientific observation and measurement – had long been established, and the profession flourished and developed until well into the 19th century. The introduction of the Tithe Commutation Act of 1836 brought the coordinated large-scale mapping of rural lands and their ownership, while the introduction of the County Series by the Ordnance Survey from 1841 further removed the need for the local surveyor's services.

It is well documented that estate maps were intended to fulfil a dual purpose: to record the ownership of land and to celebrate the status of the landowner. Decoration played a key role in the fulfilment of both, embellishing

an otherwise dry account while symbolising the patron's wealth. The often flamboyant ornamentation of certain elements, such as the map's border, cartouche, scale bar, and, where applicable, the patron's coat-of-arms, has tended to characterise the aesthetic of manuscript estate maps and has also secured their enduring appeal. Yet the scope for decoration also provided an opportunity for local surveyors to showcase their craftsmanship and establish their own cartographic style.

This paper investigates the changing function and appearance of decoration in English estate maps throughout the 17th and 18th centuries, focusing on those produced by successive generations of two families of established surveyors (Boycote and Hill) who practised in Canterbury, then the largest city in Kent. Their combined output, over 60 surviving estate maps produced in the same city over a period of one hundred years, offers a particularly useful basis for examining the evolution of decoration within the professional sphere of map-making, and over the background of a dramatically changing social and political landscape.

## LUIS URTEAGA

- Universitat de Barcelona
- Barcelona, Spain



Luis Urteaga is Professor of Human Geography at the University of Barcelona. Specialist in historical geography, he has published several papers on the history of environmental ideas and the historical geography of industrialization. Since 1990 he has worked in the field of the history of cartography, having devoted a special attention to cadastral maps in Spain, and the history of colonial and military maps. He is a member of The History of Cartography Study Group and was awarded the Imago Mundi Prize in 2013.

Co-author: Concepción Camarero-Bullón (Universidad Autónoma de Madrid, Spain)

## The last topographical survey of the royal site of Aranjuez (1864-1868)



In the spring of 1864 a team of surveyors from the General Statistics Board of Spain (*Junta General de Estadística*), led by José del Acebo Cancelada, began field work needed to produce a reliable mapping of the Royal Site of Aranjuez (Spain). The survey was part of a more ambitious project, which aimed at an inventory and demarcation of the Spanish Royal Heritage. Shortly after the surveyors completed their work most of the land of the Royal Site of Aranjuez was privatized during the revolution of 1868. From an original possession which exceeded 18,000 hectares, the State retained only 913, less than 5% of the total. The maps of the General Statistics Board, preserved in the archive of the National Geographic Institute (Madrid), and mostly unpublished, are an irreplaceable historical source for the study of the possessions of the Crown in Aranjuez just before the sale.

The last survey was also the most ambitious ever carried out. The preserved cartographic documentation exceeds 1,700 manuscripts maps, including 1,153 sheets of the irrigated lands on scale 1:2,000, and already 200 sheets of the town and gardens at a scale of 1:500. A remarkable aspect of the work done in Aranjuez was a detailed survey of the Tajo and Jarama rivers on scale 1:2,000, which is composed of 84 manuscript maps. From this rich set of documents only one composite map, drawn by Pedro Peñas Romero in 1868, has been published. Our research, which is based basically on primary sources, reports on this cartography, describes the survey system, and identifies the protagonists of these works.

## PAOLA SERENO

- Università di Torino
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Paola Sereno is professor of Geography at the University of Torino. Research fields: history of cartography and geographical knowledge, landscape studies, historical geography. Editor of a geographical series, she is the author of many essays and projects of cartographic exhibitions; collaborates with some cultural institutions for editing cartographic sources. Recent works are devoted to military cartography, *cabrei* (estate maps), cartographers' and geographers' biographies, medical thematic cartography and cartographic collecting.

Co-authors: Maria Luisa Sturani & Paola Pressenda (both Università di Torino, Turin, Italy)

## The *Theatrum Sabaudiae* as a part of a representation system celebrating the sovereign's power



The *Theatrum Sabaudiae* is one of the most important *monumenta* of Savoy's cartography, even though it is a rather unique offspring in a map tradition that generally prefers manuscript, rather than printed, maps aimed at a wide circulation. This map collection in 2 folio volumes was first published in Amsterdam in 1682 after a long and difficult elaboration. It was composed of 145 plates showing Savoy's portraits and genealogy, maps of Savoy and Piedmont, monuments, buildings, and town views and plans, with accompanying Latin descriptions. It is certainly the most famous work through which was exalted the power of Savoy's dynasty that, during the 17th century, was evolving towards an absolutist form. Even if the purpose has already been emphasized by the studies written for the *Theatrum*'s critical edition, the role that it assumed as a part of a wider celebratory apparatus has not yet been investigated: an apparatus in which different forms of representation were combined and used by Savoy's court to assert its importance on the international stage.

This celebration of the sovereign's power was pursued by different means adopted, and progressively improved, throughout the 17th century. This was not in a disjointed way but as consecutive steps of a coherent project designed by the court in order to legitimize and support Savoy's dignity, both towards their internal subjects and outwards towards other European courts.

The different means of representation and contexts involved in this project – maps and geographical de-

scriptions, court masques, scenic design for public ceremonies, illustrated codices of court ballets, pictorial or sculptural decoration of the sovereign's palaces (all often showing landscapes and cartographic images) – have until now been separately considered by different disciplinary perspectives: history, art history, history of maps and geography. So a study considering them together, and not in isolation, could throw new light on each of them, producing an advance beyond previous approaches. For instance, this re-interpretation of the *Theatrum Sabaudiae* as a part of a more complex set of forms of representation will allow us to re-assemble and appreciate, as a single figure, the different roles that some authors of the collection were simultaneously playing. G.T. Borgonio, for example, one of the most renowned Savoyard map-makers, was in the meantime court calligrapher and illustrator of the ballet's codices. Moreover, the integrated analysis of the different sources shows a dense network of thematic and iconographic connections among the different devices used in Savoy's rhetorical project. Particularly important, as it gives a central role to maps and geographical descriptions in this system, is the recurrent reference to territory, often linked with the mythical memory of Savoy's genealogy. It is exactly through the listing, describing and 'staging' of the territories that compose the state's geographical body – the ballets and ceremonies, pictures and sculptures for Savoy's palaces, the maps, images and texts of the *Theatrum* – that the absolutistic power of the House of Savoy through its "composite monarchy" is legitimized and celebrated.





Manuscript map in logbook of 'De Arent', ship of the Ostend Company, 1724 (FelixArchief, GIC#5688)



## The World in a Mirror

### World maps from the Middle Ages to the present day

#### The World in a Mirror

24 April – 16 August 2015  
MAS | Museum aan de Stroom  
Hanzestedenplaats 1  
2000 Antwerp  
Phone +32 3 338 44 44  
mas@stad.antwerpen.be  
www.mas.be

Open from Tuesday to Sunday,  
times variable

Price: €10 / €8

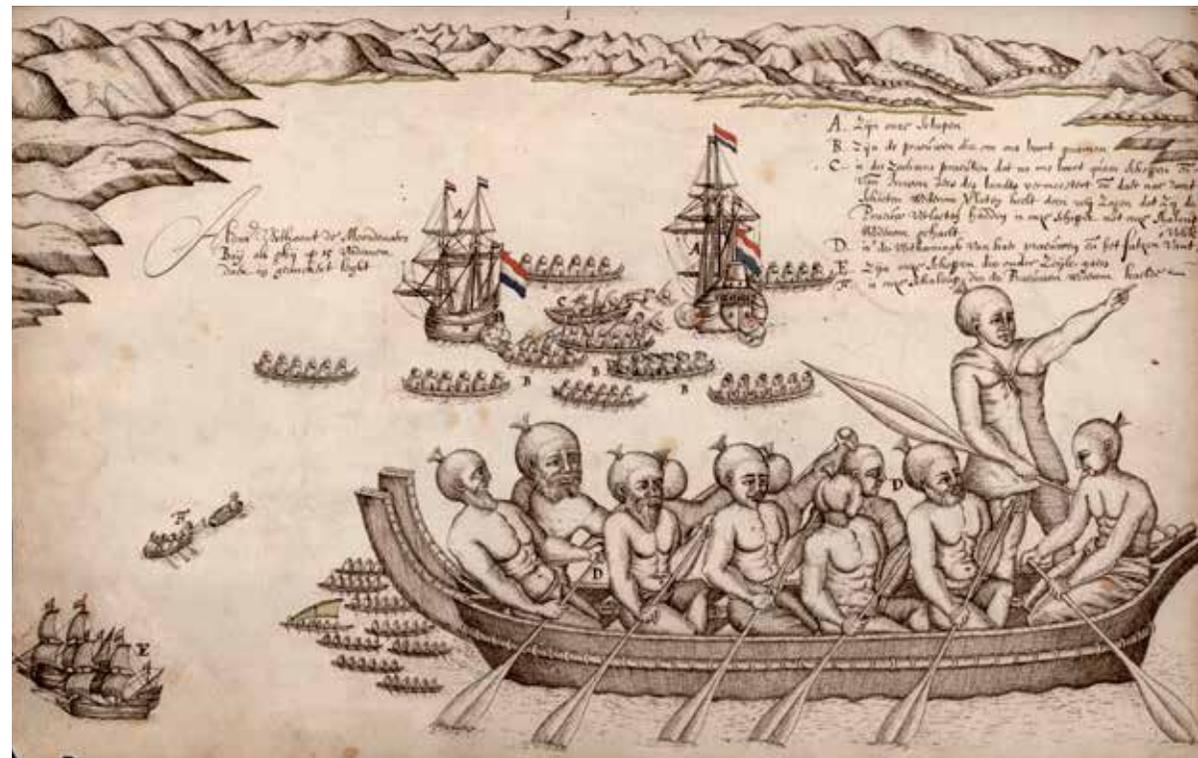
Guided tours: to be reserved at least three  
weeks in advance. Cost of the guide: €75 + €5  
administration fee.

The Earth's surface area is 510 million km<sup>2</sup>. For centuries, humans all around the world have tried to make Earth's massive size comprehensible in a smaller format, namely in maps of the world.

Maps of the world, from past to present, show us what we know about the world. World maps are reflections of a spirit of the times. In the Christian Middle Ages, Jerusalem was the centre of the world maps. The unknown parts of the world were populated with monsters and fairy-tale figures. Explorations later expanded horizons.

Eastern and Western knowledge came together. Globes were created. Now, thanks to Google's satellite maps, it seems like we know practically everything about the world. But is that true?

'The World in a Mirror' depicts the history of the Western view of the world using unique maps and globes. Each century saw more and more of the world being mapped out, and the way in which that world was presented different in each century too. A few contemporary artists add their own reflections of the world to this story.



# Museum Plantin-Moretus

## Drawing the City

In the 16th century Antwerp developed into an international commercial capital. The city's appearance changed very quickly. Enormous population growth led to the rapid development of the city centre. One crucial change to the urban space was the construction of the Spanish fortifications from 1542. At the same time the city was extended northwards in order to develop a new district and port area (the Nieuwstad or 'New Town'). In 1567 a citadel was added to the fortifications, reconfiguring the cityscape once again. Prestigious public and religious buildings were also constructed during the Golden Age.

Using maps and city plans, the exhibition follows the main driving forces behind the constructions and contributions to the city's development. It considers the underlying functions and intended purposes of the maps: to glorify the city and draw attention to its special qualities.

A map's orientation can also reinforce the message the map-maker wishes to convey. Two extraordinary city maps are compared: Antwerp by Virgilius Bononiensis (1565) and the oldest known manuscript city map (late 16th century). A computer module assesses the accuracy of the two maps, and investigates to what extent they correspond to the current situation.

The exhibition additionally features historical prints depicting Antwerp during dramatic events such as the destruction of religious images known as the Beeldenstorm (1566) and the Spanish Fury (1576). Artists also provide a detailed picture of the city in peaceful scenes, such as Joyous Entries and ice scenes.

This exhibition is a joint venture with FelixArchief.



### Drawing the City

24 April – 19 July 2015

Museum Plantin-Moretus

Vrijdagmarkt 22

2000 Antwerp

Phone +32 3 221 14 50

[museum.plantin.moretus@stad.antwerpen.be](mailto:museum.plantin.moretus@stad.antwerpen.be)

[www.museumplantinmoretus.be](http://www.museumplantinmoretus.be)

From Tuesday to Sunday, from 10 am to 5 pm

Price: €8 / €6 / €0

Guided tours for groups can be booked via Antwerp Tourism & Convention. Cost of the guide: €75 + €5 administration fee



United Nations  
Educational, Scientific and  
Cultural Organization



Museum Plantin-Moretus/Prentenkabinet  
Memory of the World  
Inscribed on the Register in 2001  
Inscribed on the List of World Heritage in 2005

Virgilius Bononiensis, *Urbs Antverpia*,  
1565 (Museum Plantin-Moretus /  
Prentenkabinet, MPM.V.VI.01.002)

## Abraham Ortelius under the spell of Classical Antiquity

### Abraham Ortelius under the spell of Classical Antiquity

24 April – 16 August 2015  
Rockoxhuis  
Keizerstraat 12  
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Phone +32 3 224 95 61  
inforockoxhuis@kbc.be  
www.rockoxhuis.be

Open from Tuesday to Sunday,  
from 10 am to 5 pm

Price: €8 / €6 / €0

Ortelius is generally recognized as having created the first modern atlas, the *Theatrum orbis terrarum* (Theatre of the world), published in Antwerp in 1570. He is also believed to be the first person to have questioned early historical maps, proposing instead that continents had been joined together before drifting apart to their current position. Ortelius also had a passionate interest in the history of Classical Antiquity and Biblical history.

In his first edition of the *Theatrum* he already refers to place names in antiquity, and this subsequently results in a separate publication in 1587, the *Thesaurus geographicus*. And again in his *Parergon*, a collection of his historical maps that he had previously published in various editions of the *Theatrum*, he portrays ancient history, sacred

and secular, and shows the extent of the Roman Empire in Europe.

The exhibition will include a range of these historical maps together with some printed works showing Ortelius' reconstructions. Visitors will be able to follow how Ortelius collected his knowledge and then visualised it in map book form.

The Rockox House and the Antwerp Royal Museum of Fine Arts (KMSKA) are organising a series of small-scale exhibitions as part of *The Golden Cabinet* initiative. This Ortelius exhibition is a co-production with the Museum Plantin-Moretus.



Abraham Ortelius, *Tempe*, Antwerpen, 1612  
(Museum Plantin-Moretus)

# Hendrik Conscience Heritage Library

## The Seven Seas

From the 15th century onwards explorers sailed the Seven Seas in search of new lands. These explorers mapped out their discoveries. Abraham Ortelius was the first to publish a compilation of maps in a single book, an invention that his contemporary and competitor Mercator would call an 'atlas'. The Hendrik Conscience Heritage Library presents the story of these heroic sailors using navigation books, sea charts, maritime atlases and the exceptional globes by Blaeu.

The objects on display appeal to the imagination: the seemingly endless oceans were filled with ships and sea monsters. Wind roses and course lines form intriguing networks, and phantom islands appear and then disappear again.

'The Seven Seas' is an exhibition that fills your mind with dreams of distant lands.



*Le Neptune françois, ou Atlas nouveau des cartes marines*, Paris (Amsterdam), 1693 (Erfgoedbibliotheek Hendrik Conscience)

### The Seven Seas

17 June – 13 September 2015  
Hendrik Conscience Heritage Library  
Hendrik Conscienceplein 4  
2000 Antwerp  
Phone +32 3 338 87 10  
consciencebibliotheek@stad.antwerpen.be  
www.consciencebibliotheek.be

Open from Tuesday to Sunday,  
from 1 pm to 5 pm

Price: €5 / €3 / free

Guided tours for groups can be booked via  
Antwerp Tourism & Convention. Cost of the  
guide: €75 + €5 administration fee.

## Mini exhibition: Pearls of surveying

### Pearls of surveying

2 June – 2 October 2015  
FelixArchief  
Oudeleeuwenrui 29  
2000 Antwerp  
Phone +32 3 338 94 11  
stadsarchief@stad.antwerpen.be  
www.felixarchief.be

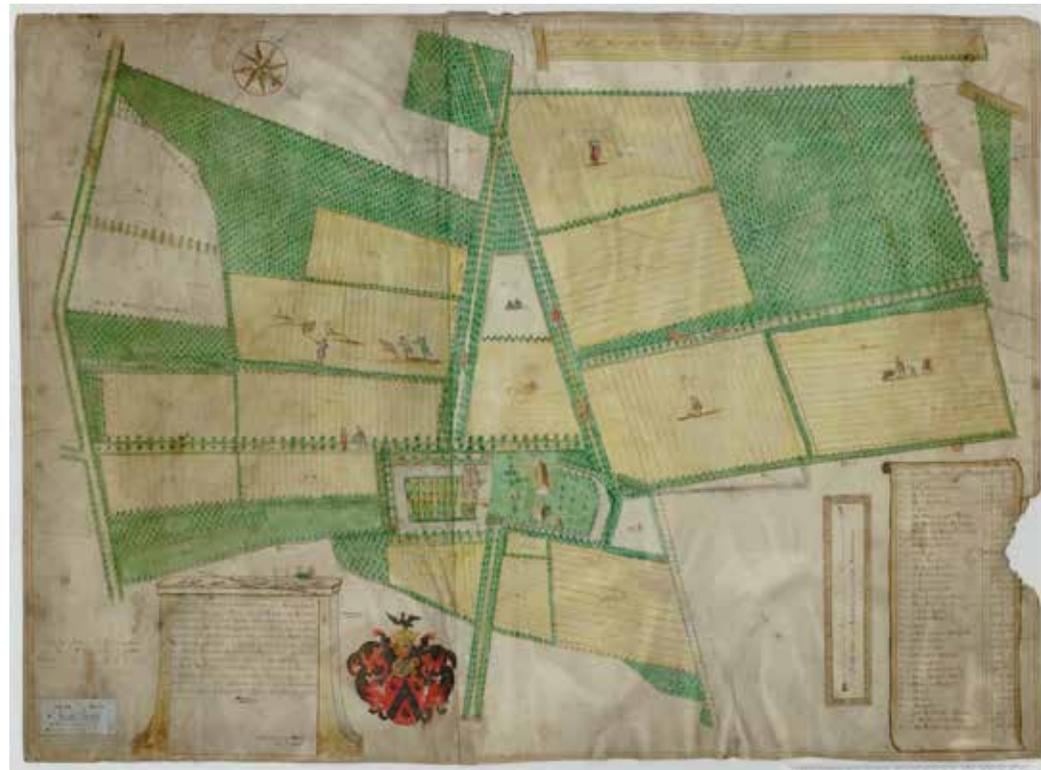
Open from Tuesday to Friday,  
from 8.30 am to 4.30 pm

Admission free

Antwerp's city archives, FelixArchief, are hosting the mini exhibition Pearls of surveying (*Pareltjes van landmetkunde*). From 2 June onwards visitors can take a closer look at some of the magnificent, manuscript topographic survey maps which are preserved in the city archives and the public social welfare centre (OCMW).

Before the land registry was established in the early 19th century local surveyors were tasked with property mapping. Their land measurements were often incorporated into magnificent maps as wealthy landowners could afford a more artistic rendition of them.

FelixArchief has put together a mini exhibition featuring several of these surveying pearls. Besides a selection of visually attractive maps, visitors can also take a closer look at the maps created by the town administration for its own daily use. These often very rudimentary maps have proven very valuable for historical research because of the context in which they were created and preserved. The exhibition will also feature the collection of map books in the archives of the public social welfare centre (OCMW).



# Antwerp University Library & FelixArchief

## Online exhibition: Geographical Initiatives in Antwerp

The first ever International Geographical Congress was organised in Antwerp in 1871. Although it was a local initiative, it was a model for later conferences in terms of organization, structure and choice of themes.

Following this successful event the organisers founded the Royal Geographical Society of Antwerp (KAGA – Koninklijk Aardrijkskundig Genootschap van Antwerpen).

From 1876 until the 1970s the Royal Geographical Society of Antwerp invited explorers, geographers and other scientists to give lectures and presentations on their discovery and view of the world. Some famous names from its history are Adrien de Gerlache, Roald Amundsen, Marshall Lyautey, Ernest Shackleton and Paul Otlet.

Over time, however, the KAGA's activities and organisation dwindled, causing in the mid-90s the Antwerp University Library to adopt KAGA library, which consisted of a collection of journals, maps, atlases and books, including some valuable old prints. Finally, when the Society ceased its regular activities some years ago, the University Library also obtained its archives, which were recorded in a specially developed archival module of the library's catalogue system.

This online exhibition (in English) combines the archival collections of FelixArchief and Antwerp University Library to tell the complete story of the first International Geographical Congress and KAGA.

### Geographical Initiatives in Antwerp

Online from 2 June 2015

<http://kaga.anet.be>



The reception of the participants of the International Geographical Congress at the Antwerp City Hall, in the Golden Book of the City, vol.1, fol. 42 (FelixArchief, 818#79)



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**B**ELGICA quae hodie dicitur, antea septem Regna, nunc unum Imperium constituit. In Belgica sunt septem Regna, nempe Brabantia, Flandria, Hainaut, Namur, Limburg, Luxemburg, & Ardenne. Haec Regna sub Imperio Romano fuerunt, & postea sub Francorum Imperio. Belgica in septem Regna dividitur, nempe Brabantia, Flandria, Hainaut, Namur, Limburg, Luxemburg, & Ardenne. Haec Regna sub Imperio Romano fuerunt, & postea sub Francorum Imperio. Belgica in septem Regna dividitur, nempe Brabantia, Flandria, Hainaut, Namur, Limburg, Luxemburg, & Ardenne. Haec Regna sub Imperio Romano fuerunt, & postea sub Francorum Imperio.



Wall map of the Seventeen Provinces of the Netherlands by Willem Jansz. & Joan I Blaeu, after 1638 (FelixArchief, 12#3874)

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DESCRIPTION DV PAYS-BAS.

Le Pays des Pays-Bas est une contrée qui s'étend sur une grande partie de l'Europe occidentale, et qui est bornée au nord par la mer du Nord, au sud par la France, à l'est par l'Allemagne, et à l'ouest par l'océan Atlantique. Elle est divisée en plusieurs provinces, dont les principales sont la Flandre, le Brabant, le Hainaut, le Limbourg, le Namur, et le Luxembourg. Ces provinces ont été réunies sous le règne de Philippe le Bon, duc de Bourgogne, qui les a données en mariage à Marguerite de France, fille de Louis XI, roi de France. Depuis ce mariage, les Pays-Bas ont été gouvernés par les rois de France, puis par les rois d'Espagne, et enfin par les rois des Pays-Bas.



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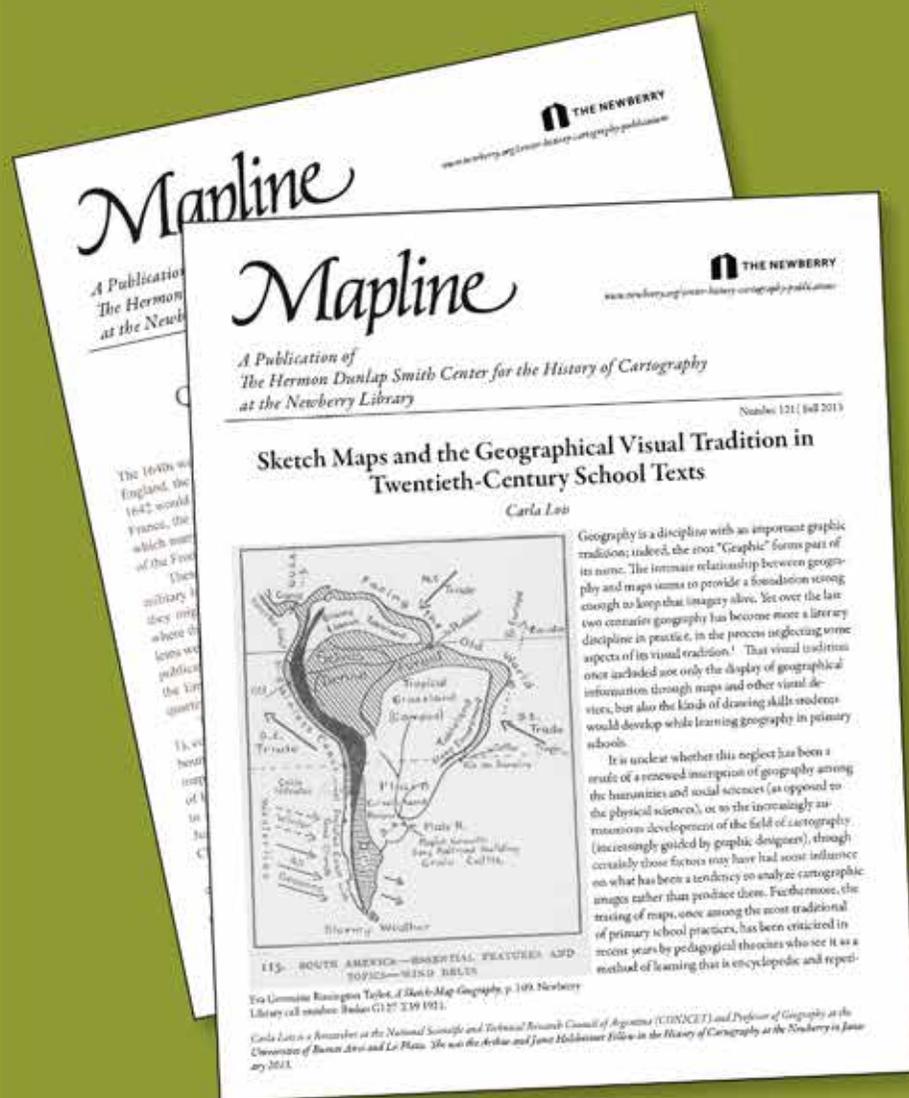
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## *The Kenneth Nebenzahl, Jr., Lectures in the History of Cartography*

In October 2016 the Hermon Dunlap Smith Center for the History of Cartography will commemorate the fiftieth anniversary of the Kenneth Nebenzahl, Jr., Lectures in the History of Cartography with a series of lectures revisiting the original topic, from 1966, on map collecting and map study.

  
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We are a non-profit organisation, founded under Belgian law in 1998, with members in more than 20 countries.

For practical reasons, the Circle has adopted English as its working language. Members are, however, free to express themselves in any language they wish.

## WHAT IS OUR AIM?

We provide an **informal and convivial forum** for all those interested in maps, atlases, town views, topographical views, etc., be they collectors, academics, antiquarians, librarians, students, ...

## WHAT DO WE DO?

We organise 3 events every year: an excursion, a map evening and an international conference.

We publish an illustrated magazine, *Maps in History*, 3 times per year.

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Membership fee of the Map Circle: € 30.  
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Email to the Membership Secretary:  
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Further information will be available at  
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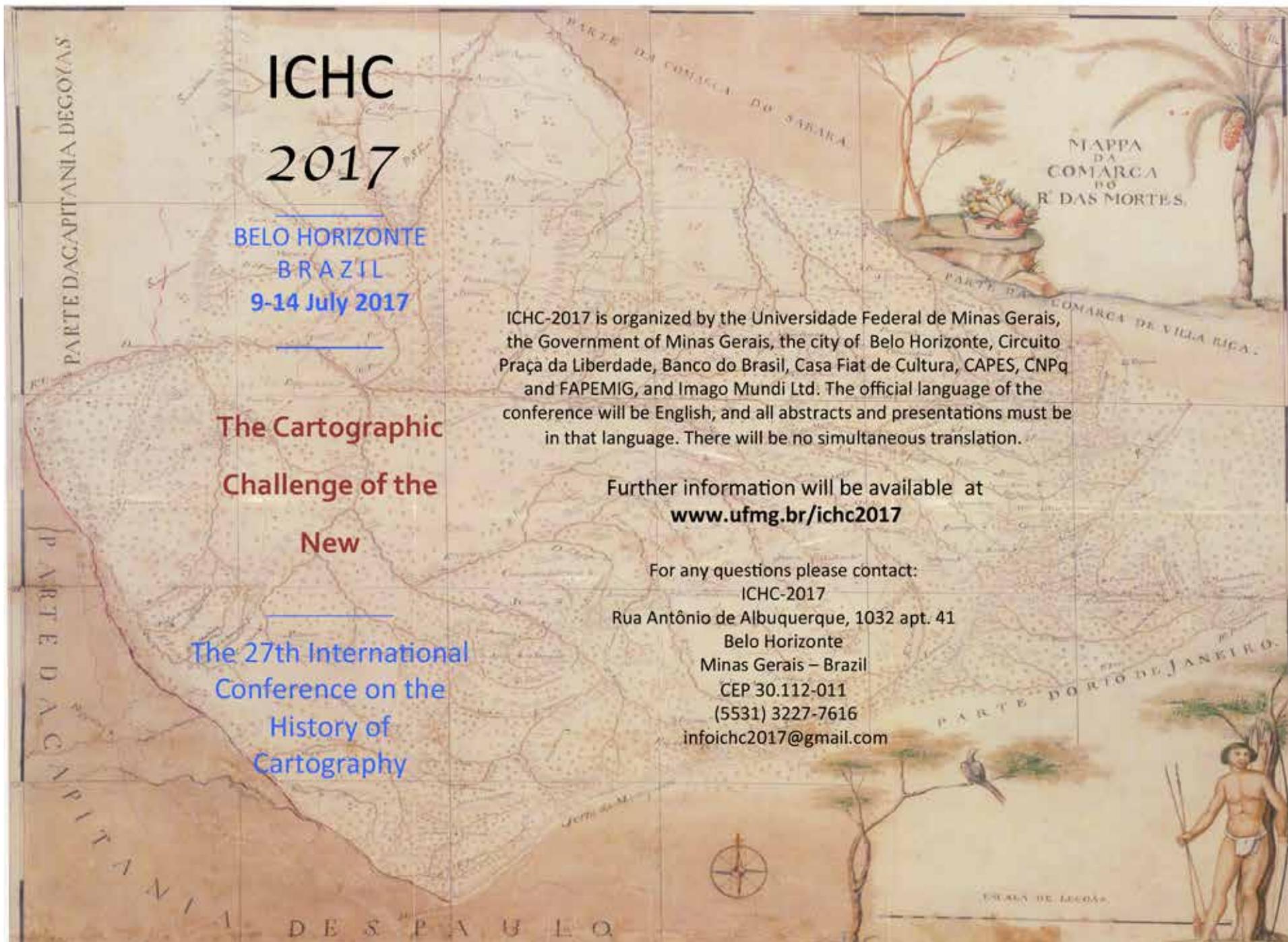




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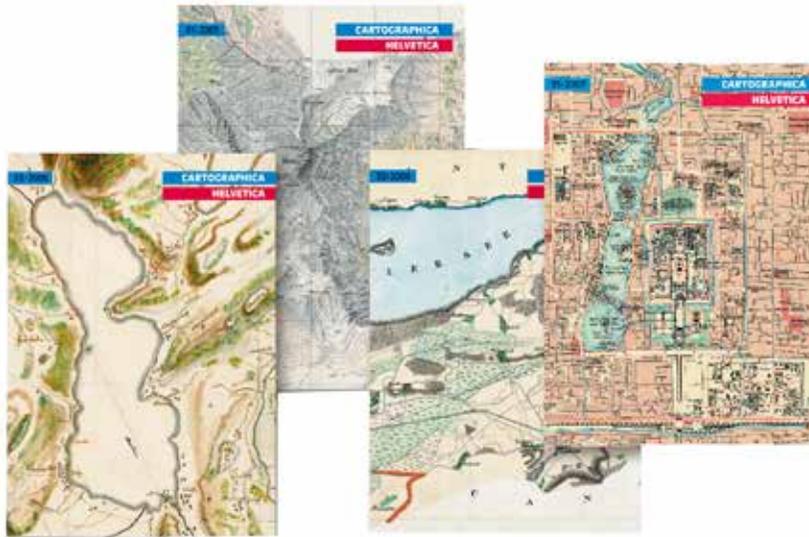
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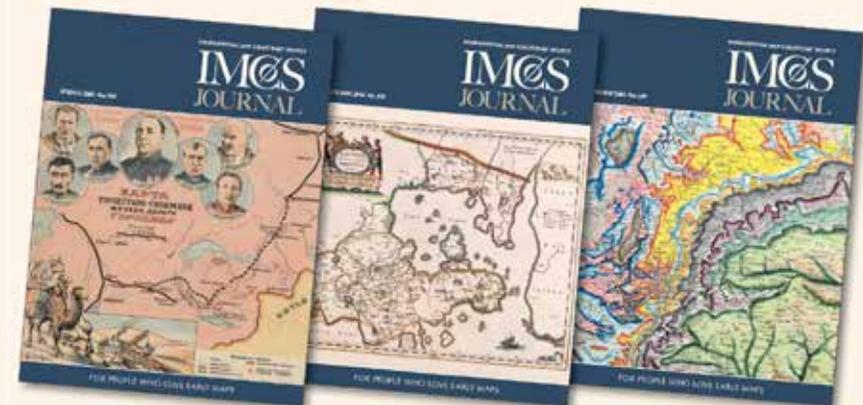
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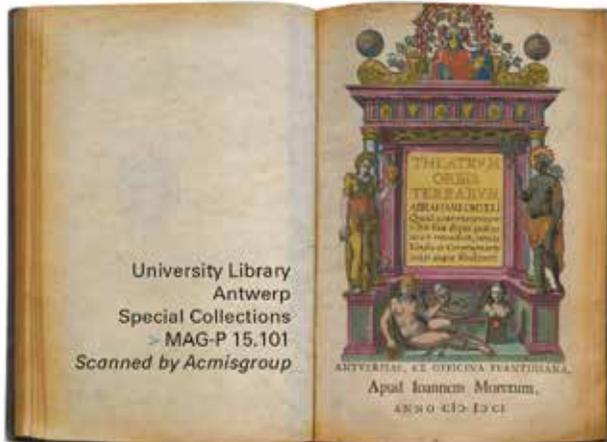
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Katelijne Geerts, Iris Kockelbergh, Piet Lombaerde

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Dirk Imhof (Museum Plantin-Moretus), Hildegard Vandevelde

**Antwerp University Library & FelixArchief –  
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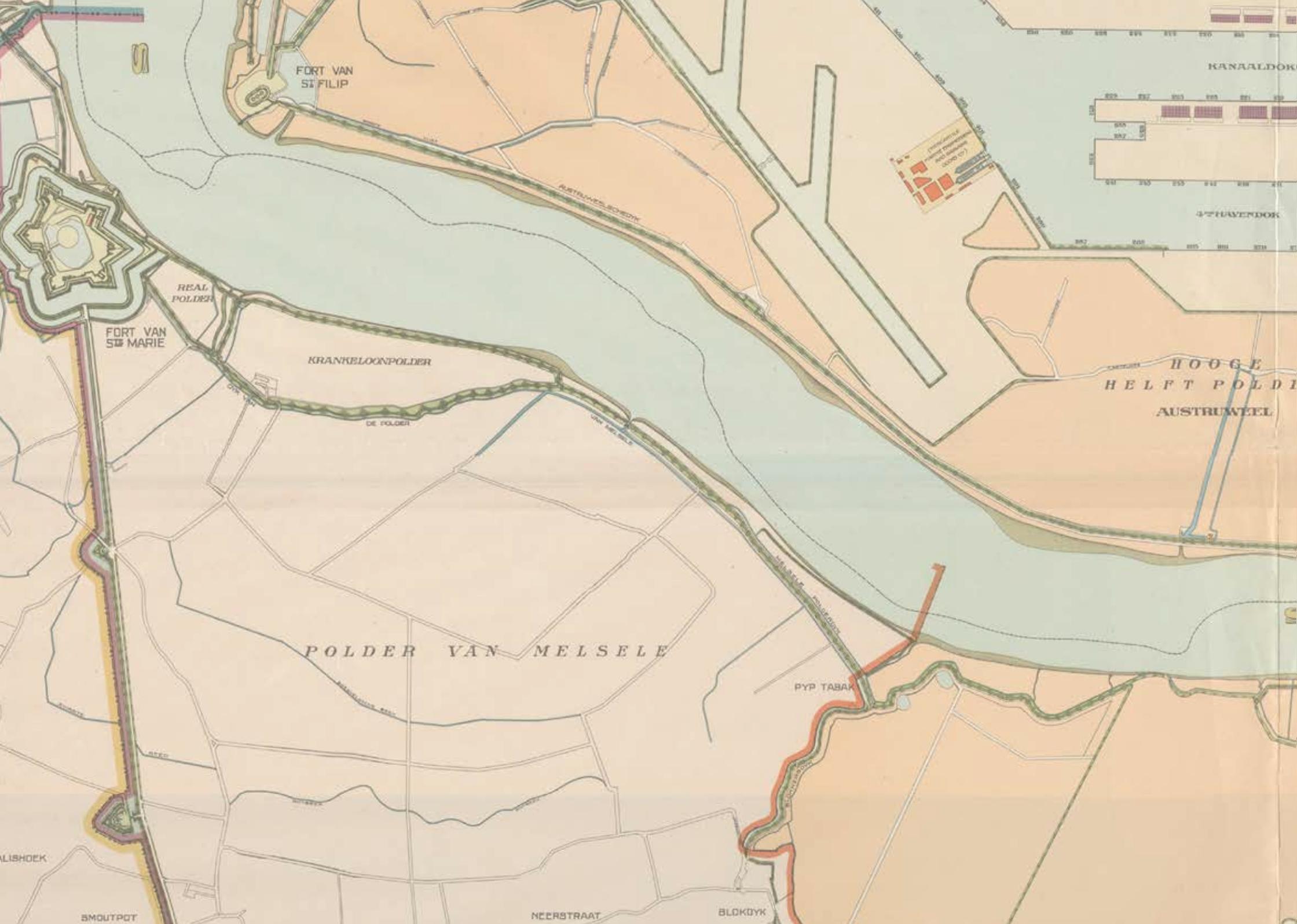
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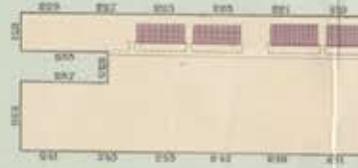
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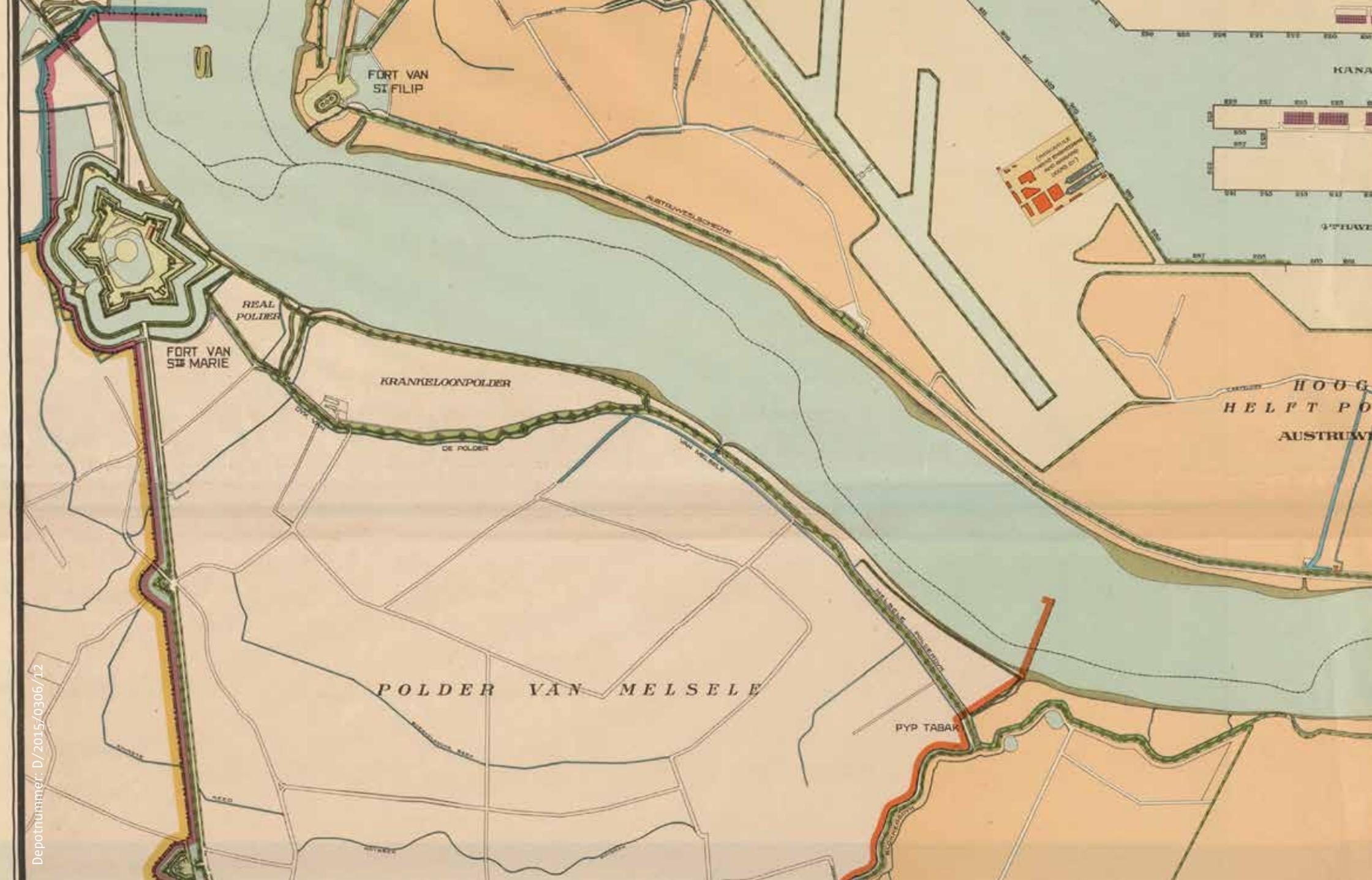
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