

COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION

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Architecture A4332
Tuesday 1:00pm-3:00pm
600 Avery Hall
Shelf 401
Oversize shelf 400

European Urban Cartography 16th-19th Centuries

This course presents a critical period in the history of Western urban cartography. The sixteenth through the nineteenth century witnessed expansion and mechanization of cities and their maps evolving from the Age of Discovery and the invention of the printing press to the Industrial Revolution.

Maps are not objective vehicles of data. They are tools combining planning, documenting, and governing while also being artistic and symbolic form in their own right. They are also works using different techniques made by graphic artists and craftsmen on paper and other media. The class will focus on a few major European cities and colonial cities and it will work with facsimiles and original maps in New York collections. Throughout the course, students are encouraged to criticize digital presentations of historic maps and make parallels with contemporary methods of cartography such as Google Earth and GIS.

The format is part lecture, part reading discussion and map analysis. The first half of the semester will cover the different techniques of cartography and the major cartographers of the period across countries. Most of the assigned readings are in the first half of the course. There are also assigned maps either online or in facsimiles in Avery Library. The second half of the course will be on case study cities and their most famous maps (Rome, Paris, London, New York). Please come to class having done the assigned reading and reviewed the maps ahead of time. Also review the general history of each city (in surveys such as Girouard or Benevolo). I will bring facsimiles of maps to class and we will analyze them together. Participation is encouraged and welcome at all times. We will have a session in the Avery Classics to look at original maps and consider the physical aspect of originals as essential for their study. Other class trips may include a walking tour of lower Manhattan comparing its current state to its depictions in early Dutch and English maps, or a visit to the "New York at its Core" exhibit in the Museum of the City of New York. Students will present original map analyses in the final sessions which they will write up in their papers.

Assignments:

10%: Attendance and preparedness.

20% Feb 6: Outline and bibliography of Paper

30%: 5pm Feb 14-15 (due at 5pm): take home Mid-term.

40% (presentation and paper) Presentation of illustrations date TBD, May 4: Paper: 12 pages of writing not including bibliography and illustrations. No extensions possible because of graduation.

Course Schedule

(Readings, unless noted, are on Courseworks/Canvas under "Files". Facsimile maps are on the oversized shelf 400 in Avery and books are on the seminar shelf 401. Powerpoints will be added to Courseworks after each class)

1: January 16: Introduction. Urban cartography 1600-1900

Readings:

J.B. Harley, "Maps, Knowledge and Power", in *The New Nature of Maps: Essays in the History of Cartography*, The Johns Hopkins University press, Baltimore and London, 2001, (1st ed. 1988), ch. 2 pp. 52-81

Svetlana Alpers, "The Mapping Impulse in Dutch Art," in *The Art of Describing: Dutch Art in the Seventeenth Century*, Chicago, University of Chicago Press, 2007, ch. 4, pp. 119-168

2: January 23: A survey of European urban cartography

Reading:

James Elliot, *The City in Maps: Urban Mapping to 1900*, The British Library, 1987.

Catherine Delano-Smith, "Mapping Towns," in *English Maps: A History*, University of Toronto Press, Toronto and Buffalo, 1999, ch. 6, pp. 179-214

3: Jan 30: Bird's Eye and Planimetric Formats

Readings:

1. A. Pinto, "Origins and Development of the Ichnographic City Plan," *Journal of the Society of Architectural Historians*, Vol. 35, No. 1 (Mar., 1976), pp. 35-50

Jeurgen Schulz, "Jacopo de'Barbari's view of Venice: map making, city views and moralized geography before the year 1500," *Art Bulletin*, 60, 1978, 427-73

Examples:

Leonardo Bufalini, *Pianta di Roma*, 1551 (facsimile Avery AA1115 B863 -- oversize shelf 400)

Jacopo de'Barbari, *La pianta prospettica di Venezia del 1500 disegnata da Jacopo de'Barbari*, Cassa di risparmio di Venezia, 1963 (Facsimile from British Museum copy, Avery AA1116 V5 B23 FF -- oversize reserve shelf 400)

4: Feb 6 Beyond paper: Panoramas, City Models and Google Earth

Paper outline and bibliography due. Schedule your presentation. Optional sign up for individual meetings

Readings:

Victoria Sanger, "The French Collection of Plans-Reliefs as Political Instrument. Exhibition Review: La France en Relief" *Journal of Architecture*.

Gustavo Velho Diogo, "Google Earth, Surveillance and the Power of Digital Cartography," Institute of Network Cultures, Oct. 7, 2016

<http://networkcultures.org/longform/2016/10/07/google-earth-surveillance-and-the-power-of-digital-cartography/>

Bernard Comment, *The Panorama*, London, Reaktion, 1999 (French edition 1993). Avery N7635 C7362 (Reserve shelf 401). Introduction and ch. 14 "Panoramas and Panopticism." Please look at the original book on the reserve shelf because of the illustrations.

Ethan Robey, "John Vanderlyn's View of Versailles: Spectacle, landscape, and the visual demands of panorama painting," in *Early Popular Culture*, vol. 12, n. 1 1-21, 2014, Routledge.

Example:

John Vanderlyn, *Panoramic View of the Palace and Gardens of Versailles*, 1818-1819, 12 x 165 ft., oil on canvas, on view at the Met Fifth Avenue, American Wing, gallery 735.

Feb 9: Ways of Knowing Cities, Wood Auditorium, GSAPP, 9:30-6:30 conference -- attendance for part of this conference is highly recommended

5: Feb13 : Rome

Readings:

Alberti, *Descriptio urbis Romae*, ca. 1433 (ed. Mario Carpo, Francesco Furlan, trans. Peter Hicks, Butler DG805.A42413 2007). Online edition LeoS. Olschiki Ed, Peter Hicks translation by Société Internationale Leon Battista Alberti, *Descriptio urbis Romae*, 2005, pp. 125-139.
<http://www.torrossa.it.ezproxy.cul.columbia.edu/resources/an/2493791>

Femke Speelberg, "Antonio Tempesta's *View of Rome*: Portraying the Baroque Splendor of the Eternal City," <http://www.metmuseum.org/about-the-museum/now-at-the-met/features/2012/view-of-rome>

Sarah Mcphee, "Rome 1676: Falda's View" in Mario Bevilacqua and Marcello Fagiolo, ed., *Piante di Roma dal rinascimento ai catasti*, Rome, Artemide, c2012

see website: envisioningbaroquerome.org

Pier Vittoria Aureli, "Instauratio Urbis: Piranesi's *Campo Marzio* vs. Nolli's Nuova Pianta di Roma" in *The Possibility of an Absolute Architecture*, Cambridge, MA, MIT Press, 2011, ch. 3 pp. 85-140.

Examples:

Leonardo Bufalini, *Pianta di Roma*, 1551 (facsimile Avery AA1115 B863 -- oversize reserve shelf 400)

Antonio Tempesta, *Plan of the City of Rome*, 1593, Metropolitan Museum of Art, 1983.1027 (1-12).

- Facsimile: *Roma al Tempo di Clemente VIII, La Pianta di Roma di Antonio Tempesta del 1593 Riprodotta da una Copia Vaticana del 1606*, Citta del Vaticano, Biblioteca Apostolica Vaticana, 1932. Reserve Shelf 400a

Giovanni Battista Falda, *Pianta di Roma*: disegnata e incisa da Giov. Battista Falda nel 1676, Rome, M. Danesi 1960? Reserve shelf 400a

1992. Spagnesi et. al., *La Pianta di Roma al Tempo di Sisto V*, Multigrafica Editrice, Rome, 1992. Avery AA 9203 R663 P57F , reserve shelf 400

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Giovanni Battista Piranesi, *Campus Martius antique urbis*, 1762 (Avery Classics AE659 P662 v. 10F). Avery- facsimiles oversize reserve shelf 400

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Giambattista Nolli, *Pianta grande di Roma*, 1748 (Electa Napoli, c. 1998, facsimile, Avery AA1120 N72). -- on view in Avery Stacks, 200 level behind Classics facing Carrel 811.

- University of Oregon, Nolli Website, <http://nolli.uoregon.edu/preface.html>

Take-home mid-term exam -- online from Wednesday Feb 14 5pm and due Thurs, Feb. 15 5pm

1. Midterm- an open book exam covering material through Feb. 20.
2. Ten short definitions from a longer list you will be given in advance of terms and concepts
3. short questions covering readings
4. free writing exercise on one of the above maps.

6: Feb. 20: Maps as works on paper

Attention: class will take place in the Avery Classics. Teresa Harris will present the exhibition *Panoramas* currently on view in Avery Classics through April 4

Readings:

David Woodward, *Maps as Prints in the Italian Renaissance. Makers, Distributors & Consumers*, The British Library, 1995, pp. 20 – 74.

Sponberg Pedley, Mary. *The Commerce of Cartography*. Chicago: University of Chicago, Press, 2005. pp. 1-13, 24-25, 180-185, 198-204

Reference work: Susan Lambert, *Prints Art and Techniques*, V&A Publications, 2001. On reserve shelf.

6: Feb 27: Trip to the Museum of the City of New York. New York at Its Core and Future City lab, permanent exhibition, and tour by curator Kubi Ackerman.

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Reading:

Paul E. Cohen, *Manhattan in Maps: 1527-1995*, 2006 -- Reserve shelf . Easily available for purchase.

Thomas Schlereth, *Past Cityscapes: The Uses of Cartography in Urban History*, Issue 1, Newberry Library, 1980

7: March 6: No class (Kinne travel)

March 13: No class (Spring break)

8: March 20: Paris

Reading:

Catherine Bousquet-Bressolier, "Matthäus Merian's 1615 Map of Paris: Its Structure, Decoration and Message," in *Imago Mundi*, Vol. 58, no. 1, 2006, pp. 48-69

Antoine Picon, Nineteenth-Century Urban Cartography and the Scientific Ideal: The Case of Paris, *Osiris*, 2nd Series, Vol. 18, Science and the City. (2003), pp. 135-149

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examples:

Georg Braun and Franz Hogenberg, Paris, in *Civitates orbis terrarum*, 1572, map I-7

Civitates orbis terrarum = *Cities of the world : 363 engravings revolutionize the view of the world : complete edition of the colour plates of 1572-1617 / Georg Braun and Franz Hogenberg ; edited by Stephan Füssel ; based on the copy in the Historisches Köln* : Taschen, c2008. (facsimile: Avery AA9000 B7311 F)

<http://www.oldmapsofparis.com>

Jacques Gomboust, *Le Paris du XVIIe siècle. Plan monumentale de la ville de Paris dédié et présenté au roy Louis XIV* (1653), (facsimile: Avery AA9198 P2 G58 F) -- reserve shelf 400

<http://www.geographicus.com/P/AntiqueMap/Paris-gomboust-1900>

Turgot, Louis Bretez, *Plan de Paris, commencé l'année 1734*. Paris? 1739 (Avery Classics AA1045 and Avery in facsimile AA1045 B7511 FF-- Reserve Shelf 400)

http://cartocassini.free.fr/planville/paris/turgot/turgot_11.htm

1871. Meunier, P. Rouillier, *Paris en mai 1871. Plan indiquant les opérations de l'armée contre l'insurrection*, Paris, 1872

<http://gallica.bnf.fr/ark:/12148/btv1b53085566g.r=plan%20indiquant%20les%20operations%20de%20l%27armée%20contre%20l%27insurrection>

Jacques Bertillon, *Album de Statistique Graphique de la ville de Paris, année 1889*, Paris, ca. 1891

<http://gallica.bnf.fr/ark:/12148/btv1b52505495j.r=Jacques%20bertillon%20atlas%20de%20statistique>

9: March 27 London

examples:

Ralph Agas, Civitatas Londinum, Fac-Simile from the original in the possession of the Corporation of the City of London, London, Adams and Francis, 1874. Reserve Shelf 400

- *The A to Z of Elizabethan London*, London Topographical Society, Publication No. 122, 1979 -- Reserve shelf

William Morgan and John Ogilby, *A large and accurate map of the City of London : Ichnographically describing all the streets, lanes, alleys, courts, yards, churches, halls and houses / actually surveyed and delineated by John Ogilby ; introductory notes by Ralph Hyde*. Lympe Castle: Harry Margary for Guildhall Library London, 1976.

- Published by Harry Margary, Lympe Castle, Kent, Guildhall Library, London, 1976. facsimile: Avery 11965 0g39F. Reserve shelf

John Rocque, *A Plan of the Cities of London and Westminster and Borough of Southwark, with the Contiguous Buildings, from and actual Survey taken by John Rocque, Land-Surveyor and Engraved by John Pine*, 1746 -- Reserve shelf 400

- Hyde, Ralph. *The A to Z of Georgian London*. London: London Typographical Society, 1982. -- Reserve Shelf
- *Locating London's Past*, British Society for Eighteenth Century Studies, 2011 (Trans-historical map comparison including Rocque. <http://www.locatinglondon.org/static/MolaArchaeology.html>)

Map by John Snow - Published by C.F. Cheffins, Lith, Southhampton Buildings, London, England, 1854 in Snow, John. *On the Mode of Communication of Cholera*, 2nd Ed, John Churchill, New Burlington Street, London, England, 1855.

Charles Booth assisted by Jesse Argyle, *Life and Labour of the People in London*, London and New York, Macmillan and Co., 1902, 8 vols.

- Charles Booth Online Archive through the London School of Economics and Political Science and the Senate House Library. http://booth.lse.ac.uk/cgi-bin/do.pl?sub=view_booth_and_barth&m.l=4&m.d.l=3&m.p.x=9495&m.p.y=8378&m.p.w=500&m.p.h=309&m.p.l=4&m.t.w=128&m.t.h=80&b.v.x=287&b.v.y=189&b.p.x=16310&b.p.y=11731&b.p.w=500&b.p.h=309&b.p.l=5&b.p.p.l=6

April 3: Student presentations

April 10: Student presentations

April 17: Student presentations

May 4: Deadline final paper. No extensions. 12 pages not including bibliography illustrations.

Additional Recommended Bibliography

General Cartography

Surveys

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Jeremy Black, *Metropolis. Mapping the City*, Bloomsbury, London, 2015.

David Buisseret, *The Mapmakers' Quest: Depicting New Worlds in Renaissance Europe*, Oxford University Press, 2003. Butler GA781.B85 2003

Catherine Delano-Smith and Roger J.P. Kain, *English Maps: A History*, University of Toronto Press, 1999, Avery AA9185 D37

Cesare De Seta, *Ritratti di città. Dal Rinascimento al secolo XVIII*, Giulio Einaudi, ed., Turin, 2011.

Ruth Eaton, *Ideal Cities. Utopianism and the (Un) Built Environment*, Thames and Hudson, 2001.

James Elliot, *The City in Maps: urban mapping to 1900*, The British Library, 1987.

J.B. Harley and David Woodward, eds., "Cartography in the European Renaissance," *The History of Cartography*, University of Chicago Press, 2007, vol. I-III on line on Clio. (Through the Renaissance). Vol I-III online at <http://www.press.uchicago.edu.ezproxy.cul.columbia.edu/books/HOC/index.html>

Vol. IV 19th C - Vol. V forthcoming. Vol. VI, *Cartography in the 20th Century*, print format only.

Katharine A. Harmon, *You are Here: Personal geographies and other maps of the imagination*, New York, Rizzoli, 1994 Avery AA520 R4721

"Maps. Resources" in *World History Sources*, A project of the Center for History and New Media, George Mason University, with support from the National Endowment for the Humanities and the Gladys Krieble Delmas Foundation © 2003-2005 center for history & new media

<http://chnm.gmu.edu/worldhistorysources/unpacking/maponline.php>

University of Portsmouth, UK, Klokan Technologies GmbH, Switzerland, Old Maps online
<http://www.oldmapsonline.org/>

online version of the exhibition "In thy map securely saile": *Maps, Atlases, Charts and Globes from the Lawrence H. Slaughter Collection at the NYPL*, 1998

<http://web-static.nypl.org/exhibitions/mapexhib/index.html>

Michael Gonchar, "Lesson Plan/ Analyzing Maps to Better Understand Global Current Events and History," The Learning Network, in *New York Times*, January 13, 2016
http://mobile.nytimes.com/blogs/learning/2016/01/13/lesson-plan-analyzing-maps-to-better-understand-global-current-events-and-history/?em_pos=small&emc=edit_In_20160114&nl=learning-network&nl_art=1&nid=9261753&ref=headline&te=1&referrer=

Map Collections

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Georg Braun and Franz Hogenberg, *Civitates orbis terrarum Paris, 1572*. = *Cities of the world : 363 engravings revolutionize the view of the world : complete edition of the colour plates of 1572-1617 / Georg*

Braun and Franz Hogenberg ; edited by Stephan Füssel ; based on the copy in the Historisches Köln : Taschen, c2008. (facsimile: Avery AA9000 B7311 F) Original NYPL, Map Division room 117 Schwartzman Building KB+ 1576 (book I - part 1), KB+ 1581 (Book I - part 3)

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Specialty topics

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Ralph Hyde, *Gilded Scenes and Shining Prospects. Panoramic Views of British Towns 1575-1900.* Yale Center For British Art, New Haven, Ct. 1985.

Erkki Huhtamo, *Illusions in Motion, Media Archaeology of the Moving Panorama and Related Spectacles,* MIT Press, Cambridge, Mass. and London, 2013.

Martha Pollak, *Military architecture, cartography & the representation of the early modern European city: a checklist of treatises in fortification in the Newberry Library,* Chicago, The Library, 1991. Avery AA 490

Orbis terrarum: ways of world-making: [Museum Plantin-Moretus and surroundings, 22.06-24.09.2000: a project organized by Antwerpen Open and Museum Plantin-Moretus], Ghent: Ludion; Antwerpen: Antwerpen Open, Museum Plantin-Moretus, 2000. Cf. "Orbis" pp. 264-279

Victoria Sanger, "J'ai du bon tabac et tu n'en auras pas: Plans en Reliefs, Power, and Elitism in Ancien Régime France," Jean-Marc Besse, ed., *Opérations cartographiques,* Actes Sud, 2016. Mss. English translation on Canvas.

Print analysis

William M. Ivins, *How prints look : photographs with commentary /* William M.

Rev. and expanded ed. / revised by Marjorie B. Cohn, Boston : Beacon Press,

c1987. Avery NE850 Iv531

David Woodward, *Maps as Prints in the Italian Renaissance. Makers, Distributors & Consumers,* The British Library, 1995. Butler GA221.W66 1996g

Renaissance

Hilary Ballon and David Friedman, "Portraying the City in Early Modern Europe: Measurement, Representation and Planning," in David Woodward ed., *The History of Cartography*. vol 3: *Cartography in the European Renaissance*, part I, Chicago and London, the University of Chicago Press, 2007, pp. 680-704

Mario Carpo, *The Alphabet and the Algorithm*, MIT Press, 2011. On Alberti. Available online through Clio

The Renaissance from Brunelleschi to Michelangelo: the Representation of Architecture, New York, Rizzoli, 1994. Avery AA520 R4721

Urban History

Leonardo Benevolo, *The history of the City*, Geoffrey Culverwell, trans., Scholar Press, London, 1980. Avery AA 9090 B4321. Reserve shelf 270

Mark Girouard, *Cities & People, A Social and Architectural History*, Yale University Press, 1985.

Paris

Cesare Birignani, *The Police and the City: Paris 160-1750*, Ph.D History Urban Planning, GSAPP, 2013.

François de Dainville, *Le Langage des Géographes. Termes. Signes. Couleurs des Cartes Anciennes 1500-1800*, Paris, Picard, 1964.-- French map keys

François Loyer *Paris nineteenth century : architecture and urbanism* /translated by Charles Lynn Clark, 1st American ed., New York : Abbeville Press, c1988. -- ON RESERVE SHELF

Sebastien Mercier, *Panorama of Paris: Selections from Tableau de Paris*, University Park, Pa., Pennsylvania State University Press, 1999.

Donald J. Olsen, *The City as a Work of Art: London, Paris, Vienna* ([Links to an external site.](#))[Links to an external site.](#) New Haven: Yale University Press, 1986.

Nicholas Papayanis, *Planning Paris Before Haussmann*, 2004

David Pinkney, *Napoleon III and the Rebuilding of Paris* ([Links to an external site.](#))[Links to an external site.](#) Princeton, N. J. : Princeton University Press, 1958. (includes good general history of Paris in the Middle Ages)

Atlas Vasserot (1810-1836), Le cadastre de Paris par ilot,

http://canadp-archivesenligne.paris.fr/documents_figures/_plans_parcellaires/docfig_pp_1_recherche.php

Series of original and reconstructed historical maps of Paris

<http://paris-atlas-historique.fr/index.html>

Ecouter le Paris du XVIIIe siècle, Paris, CNRS, 2016

<https://lejournal.cnrs.fr/articles/ecoutez-le-paris-du-xviiiie-siecle>

Sound Atlas of Paris in the 18th C based on historical documents and maps

Rome

Stanley Allen and G. B. Piranesi. "Piranesi's 'Campo Marzio': An Experimental Design." *Assemblage*, no. 10, 1989, pp. 71–109., www.jstor.org/stable/3171144.

Atlas of Rome. The Form of the City on a 1:1000 Scale, Photomap and Line Map, Aerofoto Consult/Automap Compagnia Generale Ripresearee, Marsilio, Venice, 1991

Joseph Connors, *Piranesi and the Campus Martius: the Missing Corso: topography and architecture in the eighteenth-century*. Rome, Milan, Jaca book, 2011. Avery LC GA 895 R7 C66 2011. Reserve Shelf 408

Dorothy Metzger Habel, "When All of Rome Was Under Construction": The Building Process in Baroque Rome, Penn State University Press, 2013

Ann C. Huppert, "Mapping Ancient Rome in Bufalini's Plan and in Sixteenth-Century Drawings", *Memoirs of the American Academy in Rome*, Vol. 53 (2008), 81, JSTOR (25609505)

Jessica Maier, "Mapping Past and Present: Leonardo Bufalini's Plan of Rome" *Imago Mundi*, Vol. 59, No. 1 (2007), 1. JSTOR (40234065)

David R. Marshall, ed., *The Site of Rome. Studies in the Art and Topography of Rome 1400-1750*, Melbourne Art Journal 13, L'Erma di Bretschneider, 2014. (Avery-LC DG 812.S58 2014g)

Gabriele Mastrigli, "The Cage of Imagination: Notes On 'Roma Interrotta.'" *Log*, no. 32, 2014, pp. 140–147., www.jstor.org/stable/43631056.

Piero Maria Lugli, *Urbanistica di Roma. Trenta planimetrie per trenta secoli di storia*, Bardi, Roma, 1998
Avery AA 9203 R663 L96.

Jessica Maier, "LEONARDO BUFALINI AND THE FIRST PRINTED MAP OF ROME, 'THE MOST BEAUTIFUL OF ALL THINGS.'" *Memoirs of the American Academy in Rome*, 56/57, 2011, pp. 243–270., www.jstor.org/stable/24616443.

-contains an excellent bibliography on Bufalini

Mirabilia Urbis Romae/The Marvels of Rome, anon., Francis Morgan Nichols, ed., Ithaca Press, 1986 (1st ed., Ellis and Elvey, London and Spithover, Rome, 1889) -- Avery AA 1115 M671

Barbara Tellini Santoni, Alberto Manodori, dir., *Roma disegno e immagine della città eterna: le piante di Roma dal II secolo d. Cr. ai giorni nostri*, Rome, Edizione di Luca, 1994, AA1115 R6616 FF

-excellent collection of map reprints of Rome

Nicholas Temple, *Renovatio Urbis: Architecture, urbanism and ceremony in the Rome of Julius II*, Routledge, London and New York, 2011. Avery NA 9204.R7 T46 2011.

London

Geraldine Edith Mitton, *Maps of Old London*, London, G. and C. Black, 1908 (E-book)

<http://www.gutenberg.org/files/40274/40274-h/40274-h.htm>

A collection of Early maps of London 1553-1667, Harry Margary, Lympe Castle Kent, in association with Guildhall Library, London, 1981 -- Reserve shelf

Hyde, R. *The A to Z of Restoration London (the city of London, 1676)*. London: London Typographical Society, 1992. Avery AA965 Aa 232 -- Reserve shelf

Sheila O'Connell, *London 1753*, The British Museum Press, London, 2003.

New York

Hilary Ballon, ed., *The Greatest Grid. The Master Plan of Manhattan 1811-2011*, Museum of the City of New York, Columbia U. Press, 2012.

Eric Sanderson, *Manhatta: A Natural History of New York City*, Abrams, New York, 2013

I.N. Phelps Stokes, *The Iconography of Manhattan Island 1498-1909*, New York, Robert H. Dodd, 1915

Atlases of New York City, Lionel Pincus and Princess Firyal Map Division, New York Public Library, digital collections,

<http://digitalcollections.nypl.org/collections/atlasses-of-new-york-city#/?tab=about>

Periodicals

JSTOR

Imago Mundi , Berlin, 1935-present

-periodical specializing in cartography. Available online through JSTOR and Taylor and Francis

European Science Foundation, *Mapping Europe's Historic Boundaries and Borders: An Exploratory Workshop*

<http://www.geog.port.ac.uk/hist-bound/>

Mapping resources

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<https://mapwarper.net>

Map Warper: Allows layering up and rectifying of historical maps onto modern maps.

Columbia Center for Spatial Research, <http://c4sr.columbia.edu>

Tutorials, publications and information about 19th-21C mapping and data

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Film

Tim's Vermeer, 2013 documentary by Teller about Vermeer's scientific approach to painting

A Day on the Grand Canal with the Emperor of China -- David Hockney film about Chinese landscape and cartography. <http://vimeo.com/103808381>