

ARCH VISUALIZATION SINCE 1900

Architectural Visualization since 1900

Reinhold Martin

A4326 (or A4024, Part I)

Tues 9am-11am

Wood Auditorium, Avery Hall

Spring 2013

As a rule, architects do not build. They draw, write, annotate, diagram, model, map, sketch, photograph, animate, and otherwise visualize objects, spaces, and territories; they make visual and verbal presentations; they compile visual and written analyses and reports; and they issue visual and written instructions.

This lecture course traces these activities across the twentieth century by introducing key episodes in the history of architectural visualization in a variety of geographic and cultural contexts. The approach is thematic and follows a loose chronology built around concepts, problems, and practices associated with international modernism and its aftermath. In and through these, we will observe architectural knowledge being constructed, drawings and buildings interacting, and ideas, techniques, and imagery circulating.

Each lecture considers a specific set of cultural techniques within the history and theory of modern and contemporary architecture, the history of technology, and theories and practices of visualization. A limited number of drawings, models, photographs, films, and other visual artifacts will be analyzed in depth. Some readings situate these examples historically, while others offer conceptual orientation. Though formally a history and theory lecture, the course brings together concerns shared among different aspects of the GSAPP architecture curriculum, including visual studies, the technology sequence, and the design studios.

A further goal of the course is to introduce students to the material infrastructures and interfaces through which architectural discourse and techniques move across a variety of national, cultural, and geographic boundaries, both historically and in the present. The history of architectural visualization in the twentieth century is also a history of globalization. Problems and effects of visual translation, standardization, reproduction, transformation, site, and circulation will therefore be emphasized.

Material covered includes diagrams, travel sketches, orthographic projection, axonometry, perspective, representations of movement, construction drawings, urban cartography, architectural and aerial photography, rendering, and stages of digitalization, from the period around 1900 to the present.

Course Requirements

Students are required to attend all classes, complete the required readings, and complete the class assignments.

FOR THOSE ENROLLED IN A4024 (Architectural Drawing & Representation II):

Students are expected to complete ONLY Required Readings. Additional materials listed as Further Reading and as Further Reference are suggested for those wishing to read more deeply in a given subject.

There will be four short exams at roughly three-week intervals. In each exam, students will answer two out

of three questions, at a maximum 300 words per answer.

FOR THOSE ENROLLED IN A4326 (Architectural Visualization since 1900):

Students are expected to complete Required Readings AND Further Readings. Additional materials listed as Further Reference are suggested for those wishing to read more deeply in a given subject, or those writing research papers.

There will be two assignments during the semester, the preliminary mid-term paper and the final research paper.

Prior to the mid-term paper, students will be asked to select a research subject from the syllabus. The mid-term paper will consist of a 5-page (maximum) analysis of the subject appended with sample illustrations and a working bibliography. This mid-term will then be expanded into a 15-page (maximum) final research paper, plus illustrations. All papers should be 12-point double-spaced and follow bibliographic, footnoting, and other guidelines outlined in the Chicago Manual of Style (available as an E-Books through CLIO).

Required readings are available on Courseworks or through e-journals on different online databases as indicated (JSTOR, MUSE, WILEY ONLINE, etc.). Further readings are listed as reference for those students interested in studying particular subjects in greater depth, and for those writing about these subjects for their research papers. Most books are available on reserve in Avery Library. E-Books are listed as such and may be accessed through CLIO. E-journals may be accessed through the "Databases" search on the Columbia University Libraries website at:

<http://library.columbia.edu/>

One required book, Erwin Panofsky, Perspective as Symbolic Form [1927], available for purchase in Bookculture (West 112th St. between Broadway and Amsterdam Ave.).

Grading

Grades for the class will be determined as follows:

FOR THOSE ENROLLED IN A4024 (Architectural Drawing & Representation II)

This portion of the class will constitute 50% of your total grade, as follows:

Average of four exams 40%

Attendance (9-1) 10%

FOR THOSE ENROLLED IN A4326 (Architectural Visualization since 1900)

Mid-term assignment 15%

Attendance 20%

Final paper 65%

Students should adhere to standard guidelines regarding academic honesty, such as those described in the GSAS Statement on Academic Honesty, available at:

<http://www.columbia.edu/cu/gsas/rules/chapter-9/pages/honesty/index.html>

Required Text:

Erwin Panofsky, Perspective as Symbolic Form [1927] trans. Christopher S. Wood (New York: Zone Books, 1991)

[MUST BE READ BY WEEK 5]

Schedule and Readings

Week 1 Points of Departure

22 January 2013

Required Reading

Robin Evans, "Architectural Projection," in Eve Blau and Edward Kaufman, eds. Architecture and Its Image: Works from the Canadian Centre for Architecture (Montréal: Canadian Centre for Architecture, 1989), 18-35.

Marshall McLuhan, Understanding Media: The Extensions of Man (New York: McGraw-Hill, 1964), Chap. 1, "The Medium Is the Message," 7-21, and Chap. 2, "Media Hot and Cold," 22-32.

Further Reading

Friedrich A. Kittler, Gramophone, Film, Typewriter [1986], trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999), Preface, xxxix-xli.

Bruno Latour, "Drawing Things Together," in Michael Lynch and Steve Woolgar, eds., Representation in Scientific Practice (Cambridge: MIT Press, 1990), 19-68.

Further Reference

Catalogue of the Andrew Alpern Collection of Drawing Instruments at the Avery Architectural and Fine Arts Library Columbia University in the City of New York (New York: Trustees of Columbia University in the City of New York, 2010)

James S. Ackerman, Origins, Imitation, Conventions: Representation in the Visual Arts (Cambridge: MIT Press, 2002), Chap. 2, "The Origins of Architectural Drawing in the Middle Ages and Renaissance," 27-65. EBOOK

Mario Carpo, The Alphabet and the Algorithm (Cambridge: MIT Press, 2011), Part 1, "Variable, Identical, Differential," 1-48; Part 2, "The Rise," 50-79.

Mario Carpo and Frédérique Lemerle eds., Perspective, Projections, and Design: Technologies of Architectural Representation (New York: Routledge, 2007), selections.

Hubert Damisch, The Origin of Perspective, trans. John Goodman (Cambridge: MIT Press, 1994), Chap. 2,

"Perspective, a Thing of the Past?" 22-40.

Robin Evans, "Translations from Drawing to Building," in Evans, Translations from Drawing to Building (Cambridge: MIT Press, 1997), 153-193.

Jacques Guillerme and Hélène Vérin, "The Archaeology of Section," trans. Stephen Sartarelli, Perspecta 25 (1989): 226-257. JSTOR

Ian Hacking, Representing and Intervening: Introductory Topics in the Philosophy of Natural Science (New York: Cambridge University Press, 1983), "Reals and Representations," 130-146.

Friedrich A. Kittler, Optical Media: Berlin Lectures 1999, trans. Anthony Enns (Malden, MA: Polity Press, 2010), Chap. 3, "Optical Media," 118-224.

Friedrich A. Kittler, "Perspective and the Book," trans. Sarah Ogger, Grey Room 5 (Fall 2001): 38-53. JSTOR

Friedrich A. Kittler, "On the Relation of Art and Techne," lecture, European Graduate School, <http://www.egs.edu/faculty/friedrich-kittler/videos/the-relation-of-art-and-techne/>

Werner Oechslin, "Architecture, Perspective, and the Helpful Gesture of Geometry," Daidalos 11 (March 1984): 38-54.

Alberto Pérez-Gómez and Louise Pelletier, Architectural Representation and the Perspective Hinge (Cambridge: MIT Press, 1997)

Werner Szambien, "Architectural Drawings at the Ecole Polytechnique in Paris at the Beginning of the Nineteenth Century Daidalos 11 (March 1984): 55-64.

Week 2 Delineation: Partis, Diagrams, and Travel Sketches

29 January 2013

Required Reading

Richard A. Moore, "Academic 'Dessin' Theory in France after the Reorganization of 1863," Journal of the Society of Architectural Historians 36, n. 3 (October 1977): 145-174. JSTOR

Hyungmin Pai, The Portfolio and the Diagram: Architecture, Discourse, and Modernity in America (Cambridge: MIT Press, 2002), Chap. 2, "The Portfolio and the Academic Discipline," 40-73.

Further Reading

Mark A. Hewitt, "Beaux Arts Representation and the Golden Age of American Draftsmanship." Classicist 3 (1996): 27-34.

Annie Jacques, "The Programmes of the Architectural Section of the École des Beaux Arts, 1819-1914," in Robin Middleton, ed. The Beaux-Arts and Nineteenth-Century French Architecture (London: Thames & Hudson, 1982), 58-65.

Further Reference

Zeynep Çelik, "Le Corbusier, Orientalism, Colonialism," Assemblage 17 (April 1992): 58-77. JSTOR

Le Corbusier, Journey to the East, ed. Ivan Žaknić, trans. Ivan Žaknić with Nicole Pertuiset (Cambridge: MIT Press, 1987)

Banister Fletcher, A History of Architecture on the Comparative Method for Students, Craftsmen & Amateur [1896], 4th rev. ed. (London: B.T. Batsford, 1901) EBOOK

Julien Guadet, Éléments et théorie de l'architecture: cours professé à l'École nationale et spéciale des beaux-arts, 4 v. (Paris: Librairie de la construction moderne, 1901-1904) EBOOK

Neil Levine, "The Competition for the Grand Prix in 1824," in Robin Middleton, ed. The Beaux-Arts and Nineteenth-Century French Architecture (London: Thames & Hudson, 1982), 66-123.

Patricia A. Morton, "Disorienting Le Corbusier: Charles-Edouard Jeanneret's 1911 Voyage d'Orient," in Tyler Stovall and Georges van den Abbeele, eds. French Civilization and Its Discontents: Nationalism, Colonialism, Race (Lanham: Lexington Books, 2003).

Gülsüm Baydar Nalbantoğlu, "Toward Postcolonial Openings: Rereading Sir Banister Fletcher's 'History of Architecture,'" Assemblage 35 (April 1998): 6-17. JSTOR

Kevin Nute, Frank Lloyd Wright and Japan: The Role of Traditional Japanese Art and Architecture in the Work of Frank Lloyd Wright (New York: Routledge, 2000)

Li Shiqiao, "Writing a Modern Chinese Architectural History: Liang Sicheng and Liang Qichao," Journal of Architectural Education 56, n. 1 (September 2002): 35-45.

<http://onlinelibrary.wiley.com/doi/10.1162/104648802321019155/pdf>

Liang Sicheng (Liang Ssu-ch'eng), A Pictorial History of Chinese Architecture: A Study of the Development of Its Structural System and the Evolution of Its Types ed. Wilma Fairbank (Cambridge, MIT Press, 1984)

David van Zanten, "Architectural Composition at the École des Beaux-Arts from Charles Percier to Charles Garnier," in Arthur Drexler ed., The Architecture of the École des Beaux-Arts (New York : Museum of Modern Art, 1977), 111-323.

Week 3 The World Picture: Numbers and Standards

5 February 2013

Exam #1 issued (for A4024)

Required Reading

John Bender and Michael Marrinan, The Culture of Diagram (Stanford: Stanford University Press, 2010), Chap. 5, "Numbers," 152-197.

Robin Evans, The Projective Cast: Architecture and Its Three Geometries (Cambridge: MIT Press, 1995), Chap. 7 "Comic Lines," 272-319.

Further Reading

Peter Galison, "Aufbau/Bauhaus: Logical Positivism and Architectural Modernism," Critical Inquiry 16, No. 4

(Summer 1990): 709-752. JSTOR

Nader Vossoughian, Otto Neurath: The Language of the Global Polis (Rotterdam: NAI Publishers, 2011), Chap. 3, "Globalism," 88-141.

Further Reference

Don Graf, Data Sheets: Thousands of Simplified Facts about Building Materials and Construction (New York: Reinhold, 1944)

Ernst Neufert, Bau-Entwurfslehre (Berlin: Bauwelt Verlag, 1936)

Planning: The Architect's Handbook (London: Architecture and Building News, 1936)

Kenchiku Shiryō Shioshu (Architectural Design Data Collection) (Tokyo: Japan Society of Architecture, 1941)

Hyunmin Pai, The Portfolio and the Diagram: Architecture, Discourse, and Modernity in America (Cambridge: MIT Press, 2002), Chap. 8, "New Genres and New Formations," 198-235. (on Architectural Graphics Standards)

Brian Rotman, "The Technology of Mathematical Persuasion," in Timothy Lenoir, ed. Inscribing Science: Scientific Texts and the Materiality of Communication (Stanford: Stanford University Press, 1998), 55-69.

Week 4 Object-Experience: Axonometry versus Photography

12 February 2013

Exam #1 due (for A4024)

Required Reading

Yve-Alain Bois, "Metamorphosis of Axonometry." Daidalos 1 (September 1981): 41-58.

Robin Evans, The Projective Cast: Architecture and Its Three Geometries (Cambridge: MIT Press, 1995), Chap. 9 "Rumors at the Extremities," 336-349.

Claire Zimmerman, "Photographic Modern Architecture: Inside the 'New Deep,'" Journal of Architecture 9, n. 3 (Autumn 2004): 331-354. TAYLOR & FRANCIS ONLINE

Further Reading

Bruno Reichlin, "Reflections: Interrelations between Concept, Representation, and Built Architecture," Daidalos 1 (September 1981): 60-73.

Peter J. Booker, A History of Engineering Drawing (London: Northgate Publishing, 1982), Chap. 17, "Axonometric Projection," 198-212.

Further Reference

James S. Ackerman, Origins, Imitation, Conventions: Representation in the Visual Arts (Cambridge: MIT Press, 2002), Chap. 4, "On the Origins of Architectural Photography," 95-124. EBOOK

Walter Benjamin, "Little History of Photography" [1931], trans. Edmund Jephcott and Kingsley Shorter, in Benjamin, The Work of Art in the Age of Its Technical Reproducibility and Other Writings on Media, ed. Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin (Cambridge: Harvard University Press, 2008), 274-198.

Auguste Choisy, Histoire de l'architecture (Paris: E. Rouveyre, 1899) EBOOK

Beatriz Colomina, Privacy and Publicity: Modern Architecture as Mass Media (Cambridge: MIT Press, 1994)

Sergei M. Eisenstein, "Montage and Architecture," with introduction by Yve-Alain Bois, Assemblage 10 (December 1989): 110-131 (read Bois intro, 110-115) JSTOR

Richard A. Etlin, "Le Corbusier, Choisy, and French Hellenism: the Search for a New Architecture," Art Bulletin 69, n.2 (1987): 264-278.

Thierry Mandoul, "From Rationality to Utopia: Auguste Choisy and Axonometric Projection," in Mario Carpo and Frédérique Lemerle eds., Perspective, Projections, and Design: Technologies of Architectural Representation (New York: Routledge, 2007).

Robin Middleton, "Auguste Choisy, Historian: 1841-1909." International Architect. 1.5 (1981): 37-40.

Bernhard Schneider, "Perspective Refers to the Viewer, Axonometry Refers to the Object," Daidalos. 1 (1981): 81-95.

Massimo Scolari, "Elements for a History of Axonometry." Architectural Design. 55, nos. 5-6 (1985): 73-78.

Massimo Scolari, Oblique Drawing: A History of Anti-Perpspective (Cambridge, MA: MIT Press, 2012).

Week 5 Dynamism: Time and Movement, Machines and Organisms

19 February 2013

Required Reading

Hyungmin Pai, The Portfolio and the Diagram: Architecture, Discourse, and Modernity in America (Cambridge: MIT Press, 2002), Chap. 7, "Scientific Management and the Discourse of the Diagram," 40-73.

Anson Rabinbach, The Human Motor: Energy, Fatigue, and the Origins of Modernity (Berkeley: University of California Press, 1990), Chap. 4, "Time and Motion: Etienne-Jules Marey and the Mechanics of the Body," 84-119.

Further Reading

Walter Benjamin "The Work of Art in the Age of Its Technological Reproducibility" [1936], trans Edmund Jephcott and Harry Zohn, in Benjamin, Selected Writings 1935-1938, ed. Michael W. Jennings, Howard Eiland, and Gary Smith (Cambridge: Harvard University Press, 2002), 101-133.

Bernhard Siegert, "Eupalinos, or The Master Shipwright: The Threshold between Land and Sea as a Design Tool," Configurations 18 (2010): 421-439. MUSE (online)

Further Reference

Rudolf Arnheim, Art and Visual Perception: A Psychology of the Creative Eye, [rev. ed., orig. 1954]

(Berkeley: University of California Press, 1976), Chap. 8, "Movement," 372-409; Chap. 9, "Dynamics," 410-443.

Marta Braun, Picturing Time: The Work of Étienne-Jules Marey (1830-1904) (Chicago: University of Chicago Press, 1992)

Jimena Canales, A Tenth of a Second: A History (Chicago: University of Chicago Press, 2009), Introduction, 1-19. EBOOK

François Dagognet, Étienne-Jules Marey: A Passion for the Trace, trans. Robert Galeta and Jeanine Herman (New York: Zone Books, 1992)

Sigfried Gideon, Mechanization Takes Command: A Contribution to Anonymous History (New York: Oxford University Press, 1948)

Linda Dalrymple Henderson, "The Image and Imagination of the Fourth Dimension in Twentieth-Century Art and Culture," Configurations 17, n. 1-2 (Winter 2009): 131-160. MUSE (online)

Gyorgy Kepes, Language of Vision (Chicago: Paul Theobald, 1944) EBOOK

Stephen Kern, The Culture of Time and Space 1880-1918 (Cambridge: Harvard University Press, 1983), Chap. 6., "The Nature of Space," 131-180.

El Lissitzky, "A. and Pangeometry" [1925], in Lissitzky, Russia: An Architecture for World Revolution, trans. Eric Dluhosch (Cambridge: MIT Press, 1970), 142-149.

Detlef Mertins, "Architectures of Becoming: Mies van der Rohe and the Avant-Garde," in Terence Riley and Barry Bergdoll, eds., Mies in Berlin (New York: Museum of Modern Art, 2001), 106-133.

László Moholy-Nagy, "Production, Reproduction," in Moholy-Nagy, Painting Photography Film [1925], trans. Janet Seligman (Cambridge: MIT Press, 1969), 30-31.

László Moholy-Nagy, The New Vision: From Material to Architecture [1928], trans. Daphne M. Hoffman (New York: Brewer, Warren & Putnam, 1932)

László Moholy-Nagy, Vision in Motion (Chicago: Paul Theobald, 1947)

Frederic J. Schwartz, Blind Spots: Critical Theory and the History of Art in Twentieth Century Germany (New Haven: Yale University Press, 2005), Chap. 2 "Walter Benjamin and the Avant-Garde," 37-102.

Week 6 Plan as Generator?

26 February 2013

Exam #2 issued (for A4024)

Required Reading

Le Corbusier, Towards an Architecture [1923], trans. John Goodman (Los Angeles: Getty Research Institute, 2007), "Three Reminders to Architects, III Plan," 115-130, and "Regulating Lines," 131-144.

Werner Oechslin, "Raumplan versus Plan Libre," Daidalos 42 (15 December 1991): 76-83.

Further Reading

Henry Plummer, "The Horizon Reveries of Frank Lloyd Wright," Daidalos 21 (15 December 1991): 110-121.

Bruno Reichlin, "The Pros and Cons of the Horizontal Window: The Perret-Le Corbusier Controversy," Daidalos 13 (15 September 1984): 64-78.

Wolf Tegethoff, "On the Development of the Conception of Space in the Works of Mies van der Rohe," Daidalos 13 (15 September 1984): 114-123.

Further Reference

H. Allen Brooks, "Frank Lloyd Wright and the Wasmuth Drawings," Art Bulletin 48, No. 2 (1966): 193-202.

Arthur Drexler, The Drawings of Frank Lloyd Wright (New York: Horizon Press, 1962)

Arthur Drexler, ed., The Mies van der Rohe Archive, Vols. 1-20 (New York: Garland, 1986-1992)

Bruce Brooks Pfeiffer, Frank Lloyd Wright Drawings: Masterworks from the Frank Lloyd Wright Archives (New York: Abrams, 1990)

Max Risselada, ed., Raumplan versus Plan Libre: Adolf Loos / Le Corbusier (Delft: Delft University Press, 1987)

Week 7 Abstraction 1: Grids

5 March 2013

Exam #2 due (for A4024)

Required Reading

Clement Greenberg, "Abstract, Representational, and so forth" [1954] in Greenberg, Art and Culture: Critical Essays (New York: Beacon Press, 1961), 133-138.

Rosalind E. Krauss, The Originality of the Avant-Garde and Other Modernist Myths (Cambridge: MIT Press, 1985), "Grids," 8-22.

Rosalind E. Krauss, "The Grid, the /Cloud/, and the Detail," in Detlef Mertins ed. The Presence of Mies (New York: Princeton Architectural Press, 1996), 133-148.

Further Reading

Yve-Alain Bois, Painting as Model (Cambridge: MIT Press, 1990), Part II, Sect 1, "The De Stijl Idea," 101-122.

K. Michael Hays, "Odysseus and the Oarsmen, or, Mies's Abstraction Once Again," in Detlef Mertins ed. The Presence of Mies (New York: Princeton Architectural Press, 1996), 235-249.

Further Reference

Peter Collins, "The Origins of Graph Paper as an Influence on Architectural Design," Journal of the Society of Architectural Historians 21, No. 4 (December 1962): 159-162.

Le Corbusier, Le poème de l'angle droit (Paris: Fondation Le Corbusier, 1989)

John Elderfield, "Grids," Artforum 10 (May 1972): 52-59.

Rosalind E. Krauss, The Optical Unconscious (Cambridge: MIT Press, 1993), Chap. 1, 1-30.

Mark Linder, Nothing Less than Literal: Architecture after Minimalism (Cambridge: MIT Press, 2004)

Mid-term papers due (for A4326)

8 March (by 5pm, PDF by Dropbox)

Week 8 Pattern Seeing: Systems

12 March 2013

Required Reading

John Harwood, The Interface: IBM and the Transformation of Corporate Design 1945-1976 (Minneapolis: University of Minnesota Press, 2011), Chap. 2, "The Architecture of the Computer," 59-99.

Reinhold Martin, The Organizational Complex: Architecture, Media, and Corporate Space (Cambridge: MIT Press, 2003), Chap. 2, "Pattern Seeing," 42-79.

Further Reading

Antoine Picon, Digital Culture in Architecture: An Introduction for the Design Professions (Basel: Birkhäuser, 2010), Chap. 1 "People, Computers, and Architecture: An Historical Overview," 15-57.

Further Reference

Larry Busbea, Topologies: The Urban Utopia in France, 1960-1970 (Cambridge: MIT Press, 2007), Chap. 1, "Spatial Culture in France, 1960-1970," 9-31.

Eric DeBruyn, "Topological Pathways of Post-Minimalism," Grey Room 25 (Fall 2006): 32-63.

Sean Keller, "Fenland Tech: Architectural Science in Postwar Cambridge," Grey Room 23 (Spring 2006): 40-65. JSTOR

Georgy Kepes, The New Landscape in Art and Science (Chicago: Paul Theobald, 1956)

Georgy Kepes, Module, Proportion, Symmetry, Rhythm (New York: George Braziller, 1966)

Georgy Kepes, Sign, Image, Symbol (New York: George Braziller, 1966)

Georgy Kepes, Education of Vision (New York: George Braziller, 1965)

Gyorgy Kepes, The Nature of Art and Motion (New York: George Braziller, 1965)

Gyorgy Kepes, Structure in Art and Science (New York: George Braziller, 1965)

Gyorgy Kepes, The Man-Made Object (New York: George Braziller, 1966)

Gyorgy Kepes, Arts of the Environment (New York: George Braziller, 1972)

Friedrich Kittler, Optical Media: Berlin Lectures 1999, trans. Anthony Enns (Malden, MA: Polity Press, 2010), Chap. 3, "Optical Media," 118-224; Chap. 4, "Computers," 225-230.

Claus Pias, "'Hollerith Feathered Crystal:' Art, Science and Computing in the Era of Cybernetics," trans. Peter Krapp, Grey Room 29 (Winter 2008): 110-133. JSTOR

Lancelot Law Whyte, Aspects of Form: A Symposium on Form in Nature and Art (London: Lund Humphries, 1951)

Spring Break (no class)

19 March 2013

Week 9 From Above, From Below: Power and Control

29 March 2013

Required Reading

Paul Edwards, The Closed World: Computers and the Politics of Discourse in Cold War America (Cambridge: MIT Press, 1996), Chap. 4, "From Operations Research to the Electronic Battlefield," 113-145. EBOOK

Laura Kurgan, Close Up at a Distance: Mapping, Technology, and Politics (New York: Zone Books, 2013), "Introduction," 9-38.

Tom McDonough ed., The Situationists and the City (New York: Verso, 2009), Chap. 6, "The Critique of Urban Planning," 139-167.

Further Reading

Ernst Gombrich, "Mirror and Map: Theories of Pictorial Representation," Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences 270, n. 903 (13 March 1975): 119-149. JSTOR

Anthony Vidler, "Photourbanism: Planning the City from Above and from Below," in Vidler, The Scenes of the Street and Other Essays (New York: Monacelli Press, 2011), 317-328.

Further Reference

Beatriz Colomina, "Enclosed by Images: The Eameses Multimedia Architecture," Grey Room 2 (Winter 2001): 5-29. JSTOR

Vittoria Di Palma, "Zoom: Google Earth and Global Intimacy," in Di Palma, Diana Periton, and Marina Lathouri, eds., Intimate Metropolis: Urban Subjects in the Modern City (New York: Routledge, 2009), 239-

270.

David Gissen, "Drawing Air: The Visual Culture of Bio-political Imaging," in Marco Frascari, Jonathan Hale, and Bradley Starkey, eds., From Models to Drawings: Imagination and Representation in Architecture (London: Routledge, 2007), 155-167.

Tanis Hinchcliffe, "Aerial Photography and the Postwar Urban Planner in London." London Journal. 35.3 (2010): 277-288.

John Macarthur, "Landscape and Prospect from the Picturesque to Aerial Photography," In Steven Jacobs and Frank Maes eds., Beyond the Picturesque (Ghent: Stedelijk Museum voor Actuele Kunst, 2009), 209-219.

John Macarthur, The Picturesque: Architecture, Disgust and Other Irregularities (New York: Routledge, 2007)

Eyal Weizman, Hollow Land: Israel's Architecture of Occupation (New York: Verso, 2007), Chap. 7, "Urban Warfare: Walking through Walls," 185-220.

Catherine de Zegher and Mark Wigley, eds. The Activist Drawing: Retracing Situationist Architectures from Constant's New Babylon to Beyond (Cambridge: MIT Press, 2001)

Week 10 Risk: The International Division of Labor

2 April 2013

Exam #3 issued (for A4024)

Required Reading

Andrew Saint, Architect and Engineer: A Study in Sibling Rivalry (New Haven: Yale University Press, 2007), Chap. 5, "Reconciliation," 364-429.

Felicity D. Scott, Architecture or Techno-utopia: Politics after Modernism (Cambridge: MIT Press, 2007) Chap. 8, "Shouting Apocalypse," 208-245.

Further Reading

Ulrich Beck, Risk Society: Towards a New Modernity, trans. Mark Ritter (London: Sage, 1992), esp. Chap. 1, "On the Logic of Wealth Distribution and Risk Distribution," 19-50. EBOOK

Further Reference

Peter J. Booker, A History of Engineering Drawing (London: Northgate Publishing, 1982)

Reinhold Martin, Utopia's Ghost: Architecture and Postmodernism, Again (Minneapolis: University of Minnesota Press, 2010), Chap. 3, "Language: Environment c. 1973," 49-67.

David E. Nye, "Energy in the Thought of R. Buckminster Fuller," in Hsiao-Yun Cho and Roberto G. Trujillo eds., New Views on R. Buckminster Fuller (Stanford: Stanford University Press, 2009), 86-98.

Felicity D. Scott, "Fluid Geographies: Politics and the Revolution by Design," in Hsiao-Yun Cho and Roberto

G. Trujillo eds., New Views on R. Buckminster Fuller (Stanford: Stanford University Press, 2009), 160-175.

Eyal Weizman, The Least of All Possible Evils: Humanitarian Violence from Arendt to Gaza (London: Verso, 2012), Chap. 3, "The Best of All Possible Walls," 65-98.

Week 11 Black and White and Color: Form/Figure/Context

9 April 2013

Exam #3 due (for A4024)

Required Reading

Klaus Herdeg, The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy (Cambridge: MIT Press, 1983), Preface, vi-vii; and Chap. 3, "Teaching: A Critique of the Gropius Method," 78-97.

Colin Rowe and Robert Slutzky, "Transparency: Literal and Phenomenal," in Rowe, The Mathematics of the Ideal Villa and Other Essays (Cambridge: MIT Press, 1976), 159-183.

Further Reading

Colin Rowe, "The Mathematics of the Ideal Villa" [orig. 1947], in Rowe, The Mathematics of the Ideal Villa and Other Essays (Cambridge: MIT Press, 1976), 1-27.

Robert Venturi, Complexity and Contradiction in Architecture (New York: Museum of Modern Art, 1966), Preface, 18-21; Chap. 3, "Ambiguity," 27-30; Chap. 4, "Contradictory Levels: The Phenomenon of 'Both-And' in Architecture," 30-38; Chap. 5, "Contradictory Levels Continued: The Double-Functioning Element," 38-45.

Further Reference

Christopher Alexander, Notes on the Synthesis of Form (Cambridge: Harvard University Press, 1964)

Robin Evans, "Not To Be Used for Wrapping Purposes," AA Files 10 (Autumn 1985): 68-78; also in Evans, Translations from Drawing to Building (Cambridge: MIT Press, 1997).

K. Michael Hays, Architecture's Desire: Reading the Late Avant-Garde (Cambridge: MIT Press, 2010), "Repetition," 51-88.

Klaus Herdeg, Formal Structure in Indian Architecture (New York : Rizzoli, 1990)

Klaus Herdeg, Formal Structure in Islamic Architecture of Iran and Turkistan

(New York : Rizzoli, 1990)

Heinrich Klotz ed., Postmodern Visions: Drawings, Paintings, and Models by Contemporary Architects [1984] (New York: Abbeville Press, 1985)

Kevin Lynch, Image of the City (Cambridge: MIT Press, 1960)

Aldo Rossi, The Architecture of the City [1966], trans. Diane Ghirardo and Joan Ockman (Cambridge: MIT

Press, 1982)

Colin Rowe and Fred Koetter, Collage City (Cambridge: MIT Press, 1978)

Aron Vinegar, I Am a Monument: On Learning from Las Vegas (Cambridge, MA: MIT Press, 2008)

Global Architecture (Tokyo: A.D.A. Edita, 1970-1999), various issues.

Mimar: Architecture in Development (Singapore: Concept Media, 1981-1992), various issues.

Week 12 Digitality

16 April 2013

Exam #4 issued (for A4024)

Required Reading

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Timothy Lenoir, "All but War Is Simulation: The Military Entertainment Complex," Configurations 8, n. 3 (Fall 2000): 238-335. MUSE (online)

Further Reading

Antoine Picon, Digital Culture in Architecture: An Introduction for the Design Professions (Basel: Birkhäuser, 2010), Chap. 2, "Experiments in Form and Performance," 59-113.

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Further Reference

Stan Allen, Points and Lines: Diagrams and Projects for the City (New York: Princeton Architectural Press, 1999)

Bernard Cache, Earth Moves: The Furnishing of Territories, trans. Anne Boyman (Cambridge: MIT Press, 1995)

Mario Carpo, The Alphabet and the Algorithm (Cambridge: MIT Press, 2011), Part 3, "The Fall," 80-120, "Epilogue: Split Agency," 121-128.

Peter Eisenman, Diagram Diaries (New York: Universe, 1999)

Vilém Flusser, "On the Crisis of Our Models" [n.d.], trans. Erik Eisel, in Flusser, Writings, ed. Andreas Ströhl (Minneapolis: University of Minnesota Press, 2006), 75-84. EBOOK

Alexander Galloway, Protocol: How Control Exists after Decentralization (Cambridge: MIT Press, 2004), esp. Chap. 1, "Physical Media." EBOOK

Thomas Keenan and Eyal Weizman, Mengele's Skull: The Advent of Forensic Aesthetics (Berlin: Sternberg Press, 2012)

Friedrich A. Kittler, "There Is No Software," in Kittler, Literature, Media, Information Systems: Essays, trans. John Johnston (Amsterdam: OPA, 1997), 147-155.

Timothy Lenoir, "Flow, Process, Fold: Intersections in Bioinformatics and Contemporary Architecture," in Antoine Picon and Alessandra Ponte, eds., Science, Metaphor, and Architecture (New York: Princeton Architectural Press, 2003), 314-353.

Reinhold Martin, Utopia's Ghost: Architecture and Postmodernism, Again (Minneapolis: University of Minnesota Press, 2010), Chap. 6, "Subjects: Mass Customization," 123-145.

Samuel Weber, "Target of Opportunity: Networks, Netwar, and Narratives," Grey Room 15 (Spring 2004): 6-27. JSTOR

Week 13 Abstraction 2: Global Pictures

23 April 2013

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Horst Bredekamp, "Frank Gehry and the Art of Drawing," in Mark Rappolt and Robert Violette eds. Gehry Draws (Cambridge: MIT Press, 2004), 11-28.

Vilém Flusser, Into the Universe of Technical Images, trans. Nancy Ann Roth (Minneapolis: University of Minnesota Press, 2011), "To Abstract," "To Imagine," "To Make Concrete," "To Touch," "To Envision," 5-39.

Further Reading

Antoine Picon, Digital Culture in Architecture: An Introduction for the Design Professions (Basel: Birkhäuser, 2010), Chap. 3, "From Tectonic to Ornament: Toward a Different Materiality," 115-169; Chap. 4, "The City in the Digital Sprawl," 171-207, Conclusion, "Material Continuity and the Design Practice," 209-216.

Further Reference

Mark Burry ed., Scripting Cultures: Architectural Design and Programming (London: Wiley, 2011)

Peggy Deamer and Phillip G. Bernstein, eds. Building (in) the Future: Recasting Labor in Architecture (New York: Princeton Architectural Press, 2010)

Albert Ferré and Tomokoko Sakamoto eds., From Control to Design : Parametric/Algorithmic Architecture (Barcelona : Actar, 2008)

George Legendre ed., Mathematics of Space (London: Wiley, 2011)

Scott Marble, Digital Workflows in Architecture (Basel: Birkhäuser, 2012)

Achim Menges and Sean Ahlquist eds., Computational Design Thinking (London: Wiley, 2011)

Jacques Rancière. The Future of the Image, trans. Gregory Elliott (London: Verso, 2007)

Patrik Schumacher, The Autopoiesis of Architecture: A New Framework for Architecture, Vol. 1 (Chichester: John Wiley & Sons, 2011) EBOOK

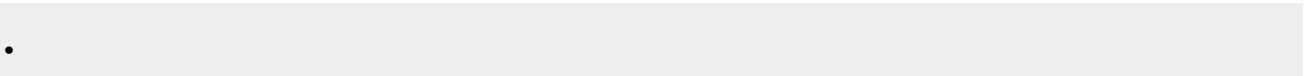
Albena Yaneva, Made by the Office for Metropolitan Architecture: An Ethnography of Design (Rotterdam: 010, 2009)

Exam #4 due (for A4024)

9 May (by 5pm, PDF by Dropbox)

Final papers due (for A4326)

10 May (by 5pm, PDF by Dropbox)



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