

## *ARCH A6801* - **Structural Daring and the Sublime in Pre-modern Architecture**

Many works of pre-modern architecture are daring, poised at the very edge of structural stability. Others are well-supported, but strive to give an illusion of precariousness or even of levitation. This seminar invites students to explore the sublime effects of precarious architecture through visual and literary representations, as well as simulation models that examine the dynamic behavior of ancient and medieval monuments. Discussion topics will include: the *a priori* and culturally specific aspects of daring architecture; the ancient and medieval sense of the sublime and aesthetics; environmental psychology; and strategies for reading architectural forms. Students will present two or three readings during the semester, participate in class discussions, and write a short midterm essay and a final research paper.

**Important Note:** This seminar is limited to 18 students. If more than this express interest following the first class meeting, students will be asked to submit a statement of interest (due Friday, Sept. 9th) to help determine who will remain in the seminar.

Time: Wednesdays, 11:00-1:00 PM  
Room: 300 Avery Hall  
Instructor: Rory O'Neill  
*r032@columbia.edu*

*Sep 7:* 1. **An Introduction to Structural Daring and to the Sublime**

*Sep 14:* 2. **Heavy Architecture I: Ancient Works**

MacDonald, W.L. 1976. *The Pantheon: design, meaning, and progeny* (Cambridge, Mass).

Mark, R., A.S. Cakmak and Princeton University 1992. *Hagia Sophia from the age of Justinian to the present* (Cambridge; New York, NY, USA).

Ousterhout, R.G. 1999. *Master Builders of Byzantium* (Princeton, N.J.).

*Sep 21:* 3. **Heavy Architecture II: Medieval Works**

Erlande-Brandenburg, A. 1995. *Cathedrals and Castles: Building in the Middle Ages* (New York).

Bony, J. 1983. *French Gothic Architecture of the 12th and 13th Centuries* (Berkeley).

Frankl, P. and P. Crossley 2000. *Gothic Architecture* (New Haven).

Wilson, C. 1990. *The Gothic Cathedral: The Architecture of the Great Church, 1130-1530* (New York)

Sep 28 4. **Height, Light and Levitation**  
(First student presentations)

Branner, R. 1961. "The Formation of the Burgundian Gothic Style," *Burgundian Gothic architecture*. (London), 38-54.

Binski, P. 2010. "Reflections on the 'Wonderful Height and Size; of Great Gothic Churches and the Medieval Sublime,'" in Jaeger, C.S. (ed.), *Magnificence and the Sublime in Medieval Aesthetics: Art, Architecture, Literature, Music* (New York) 129-56.

Otto G. von Simson 1952. "The Gothic Cathedral: Design and Meaning," *Journal of the Society of Architectural Historians* 11, 6-16.

Vartanian, O. et al. 2015. "Architectural design and the brain: Effects of ceiling height and perceived enclosure on beauty judgments and approach-avoidance decisions," *Journal of Environmental Psychology* 41, 10-18.

Oct 5 5. **Gothic Structure**

Gilman, R. 1920. "The Theory of Gothic Architecture and the Effect of Shellfire at Rheims and Soissons," *American Journal of Archaeology* 24, 37-72.

Heyman, J. 1972. "'Gothic' Construction in Ancient Greece," *Journal of the Society of Architectural Historians* 31, 3-9.

Tallon, A. J. (*in press.*) "Structure in Gothic," *The Cambridge History of Religious Architecture* (Cambridge).

Mark, R. and D.P. Billington 1989. "Structural Imperative and the Origin of New Form," *Technology and Culture* 30, 300-29.

Mainstone, R.J. 1997. "Structural Analysis, Structural Insights, and Historical Interpretation," *Journal of the Society of Architectural Historians* 56, 316-40.

Oct 12 6. **Patrons and Desires**

Procopius, Vol. 7: *On Buildings* (London; Cambridge, Mass, 1940), Book 1, Ch 1

Suger, E. Panofsky 1979. *Abbot Suger on the Abbey Church of St.-Denis and its art treasures* (Princeton, N.J.).

Woodman, F. 1981. *The Architectural History Of Canterbury Cathedral* (London; Boston).

Murray, S. 1989. "The Cathedral of Bishop Miles of Nanteuil: An Ambitious High Gothic Synthesis" in *Beauvais Cathedral: Architecture of Transcendence* (Princeton, N.J.), 77-83.

Ousterhout, R. 2004. "The French Connection: Construction of Vaults and Cultural Identity in Crusader Architecture," *France and the Holy Land: Frankish Culture at the End of the Crusades* (Baltimore).

Oct 19 7. **Midterm Paper Presentations**

Present your ideas for the midterm essay (in 5 minutes or less). Please bring several images for your discussion. The essay itself is due on Wednesday, October 26th and should be no more than 3 double-spaced pages. In the essay choose one or more pre-modern works of art and/or architecture (and possibly a modern work for comparative analysis) and discuss your observations on structural daring in the use of components such as slender supports, spans, and overhangs). You should also consider sublime responses generated from the work/s related to vertigo, levitation, precariousness and gigantism.

Oct 26 8. **Space and Place: Phenomenology of Architecture**

Tuan, Y. 1977. *Space and place: The Perspective of Experience* (Minneapolis). Intro, Ch. 1-4 (3-51), 8 (101-118).

Bachelard, G. 1997. "Poetics of Space (extract)," in Leach, N. (ed.), *Rethinking Architecture: A Reader in Cultural Theory* (New York) 86-94.

Heidegger, M. 1997. "Building, Dwelling, Thinking ...Poetically Man Dwells ...The Origin of the Work of Art ...Art and Space," in Leach, N. (ed.), *Rethinking Architecture: A Reader in Cultural Theory* (New York) 95-119.

Foucault, Michel. "Of Other Spaces, Utopias and Heterotopias." *Architecture, Mouvement, Continuité* 5 (1984): 46-49.

Nov 2 9. **The Medieval and Modern Senses of the Sublime**

Longinus and D.A. Russell 1964. *“Longinus” on the sublime*. (Oxford), I-XVII. [<http://www.gutenberg.org/files/17957/17957-h/17957-h.htm>]

Jaeger, C.S. 2010. “Richard of St. Victor and the Medieval Sublime,” in *Magnificence and the Sublime in Medieval Aesthetics: Art, Architecture, Literature, Music* (New York), 157–178.

Kant, I. 2007. *Critique of Judgement* (Oxford). Second Book.—Analytic of the Sublime § 23–29 [[http://www.gutenberg.org/files/48433/48433-h/48433-h.htm#book\\_2](http://www.gutenberg.org/files/48433/48433-h/48433-h.htm#book_2)] For a brief introduction, start with “Kant's Aesthetics and Teleology: The Sublime” [<http://plato.stanford.edu/entries/kant-aesthetics/#2.7>]

Burke, E. 1885. *On the sublime and the beautiful*. (New York,). Part II. [[http://www.gutenberg.org/files/15043/15043-h/15043-h.htm#PART\\_II](http://www.gutenberg.org/files/15043/15043-h/15043-h.htm#PART_II)]

Nov 9. 1010. **Fear, Medieval Precaria and Precarious Space**

Procopius, *On Buildings*, Book 1, Part 1. *Loeb Classics* [[https://www.loebclassics.com/view/procopius-buildings/1940/pb\\_LCL343.3.xml/](https://www.loebclassics.com/view/procopius-buildings/1940/pb_LCL343.3.xml/)]

Stoppino, E. 2010. “‘Error left me and Fear came in its Place’: The arrested Sublime of the Giants in Divine Comedy, Canto XXXI,” in Jaeger, C.S. (ed.), *Magnificence and the Sublime in Medieval aesthetics: Art, Architecture, Literature, Music* (New York).

Branner, R. 1961. *Burgundian Gothic architecture*. (London), 39–41.

Suger, *De Consecratione*, in E. Panofsky 1979. *Abbot Suger on the Abbey Church of St.-Denis and its art treasures* (Princeton, N.J.), Particularly the excerpt on the trembling arches in the storm.

Nov 16 II. **Sculpture and Precarious Intentions**

Bucher, F. 1976. “Micro-Architecture as the ‘Idea’ of Gothic Theory and Style,” *Gesta* 15, 71–89.

Kenaar-Kedar, N. 1995. *Marginal sculpture in medieval France: towards the deciphering of an enigmatic pictorial language* (Brookfield, Vt.). Ch 3, pp. 77–133.

O’Neill, R. 2015. *Gothic on the Edge: Light, Levitation and Seismic Culture in the Evolution of Medieval Religious Architecture of the Eastern Mediterranean* (New York?). Excerpts from Ch. 4.

pp. 189-206 and pp. 206-224.

Nov 23 12. **Distribution of Daring**

Bony, J. 1983. "The Technical Bases of Gothic Architecture" in *French Gothic Architecture of the 12th and 13th Centuries* (Berkeley), 5-44.

James, J. 1984. "An Investigation into the Uneven Distribution of Early Gothic Churches in the Paris Basin, 1140-1240," *The Art Bulletin* 66, 15-46.

Trachtenberg, M. 2000. "Suger's Miracles, Branner's Bourges: Reflections on 'Gothic Architecture' as Medieval Modernism," *Gesta* 39, 183-205.

Enlart, C. and D. Hunt 1987 (1899). *Gothic art and the Renaissance in Cyprus* (London). Chap I, pp. 33-45. Chap. II, 46-55.

Nov 30 13. **Final Paper Presentations**

Present your ideas for your final research paper (-10 minutes). Please bring several images for your discussion. The paper itself is due on Friday, December 26 and should be no more than 10 double-spaced pages. In the paper, explore some aspect of structural daring in a work or works of pre-modern architecture and its historical or modern sublime response.

Dec 7 14. **Final Paper Presentations**  
(Continued)

Dec 16 **Final Papers Due**