

Course Syllabus

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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.

Time: Wednesdays, 1:00-3:00 PM

Room: 412 Avery Hall

Instructor: Rory O'Neill

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Jan. 22: 1. **An Introduction to Structural Daring and the Sublime**

Jan. 29: 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.).

Feb. 5: 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)

Feb. 12 4. Height, Light and Levitation

(First student presentations)

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

[Massimiliano]

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.

[Florencia]

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

[Jack]

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.

[Yixuan]

Feb. 19 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.

[So Jin]

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

[Eduardo]

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

[Chenyan]

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

[Peter]

Feb. 26 6. Patrons and Desires

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

[Gabriel]

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

[Yulin]

Willis, R., Woodman, F. 1981. *The architectural history of Canterbury Cathedral* (London; Boston).

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).

[Jonathan]

Mar 4 7. The Medieval and Modern Senses of the Sublime

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. There is a PDF in the course Files and is online at [http://www.gutenberg.org/files/48433/48433-h/48433-h.htm#book_2]§ 23-§ 29

[Joud]

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]

Part I, Part II

[Melissa]

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).

Yaxin

Mar. 11. No Class (Kinne Week)

Mar. 25 No Class (conference)

Apr. 1 8. Space, Place and Precarious Architecture

Tuan, Y. 1977. *Space and place: The Perspective of Experience* (Minneapolis).
Intro, Ch. 3-4 (19-50),

[Lihan]

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

[Alex]

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

[Jun]

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

[Shuyue]

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. 189-224.

[Rory]

Apr. 8 9. Workshop: Designing Structural Daring

This workshop session will use the Unity-based structural simulation application to provide for a hands-on approach to exploring structural daring in realtime.

Apr 15 & 22 11. 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 8 double-spaced pages. In the paper, 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.

May 8 Final Papers Due