Nonrepresentational Design: Drawing/Thinking/Making/Computing

Autumn 2017
ARCH 576 AVR Graduate Seminar
Professor Aaron P. Brakke
Credits: 3 hours
Schedule: TBD
Location: TBD

This graduate seminar seeks to bridge theoretical concerns with praxis. Students will examine the peculiar relationship between architectural drawing, new forms of visualization and digital fabrication.

On one level students will gain practical experience with parametric modeling employing software such as Rhino and Grasshopper. Simulation and visualization will be explored with tools like Kangaroo. Fabrication will be accomplished with additive (3d Printing) and subtractive methods (laser cutting, milling with either CNC router or robotic arm). Furthermore, students will explore the generative possibilities found in computational design thinking. Representation has been considered intrinsically linked with making throughout the history of the architectural discipline. In This is Not Architecture, Kester Rattenbury remarked, “Architecture’s relationship with its representations is peculiar, powerful and absolutely critical. Architecture is driven by belief in the nature of the real and physical: the specific qualities of one thing...Yet it is discussed, illustrated, explained – even defined – almost entirely through its representations.” We will critically think about this statement and speculate on new possibilities for practice. There will be an explicit focus on the impact that recent technological advancements have had: Digital tools collapse the gap between design, representation and fabrication.

Readings will include contributions from both historical as well as contemporary practice and will be examined with special attention placed on the use of physical prototyping. In addition to the analysis of precedents, students will actively engage in digital drawing, modeling and fabrication. This work will be considered through the lens of Non-representational theory which has been developed as a mechanism to focus on how the actions of a designer serve as vehicles of knowledge production.