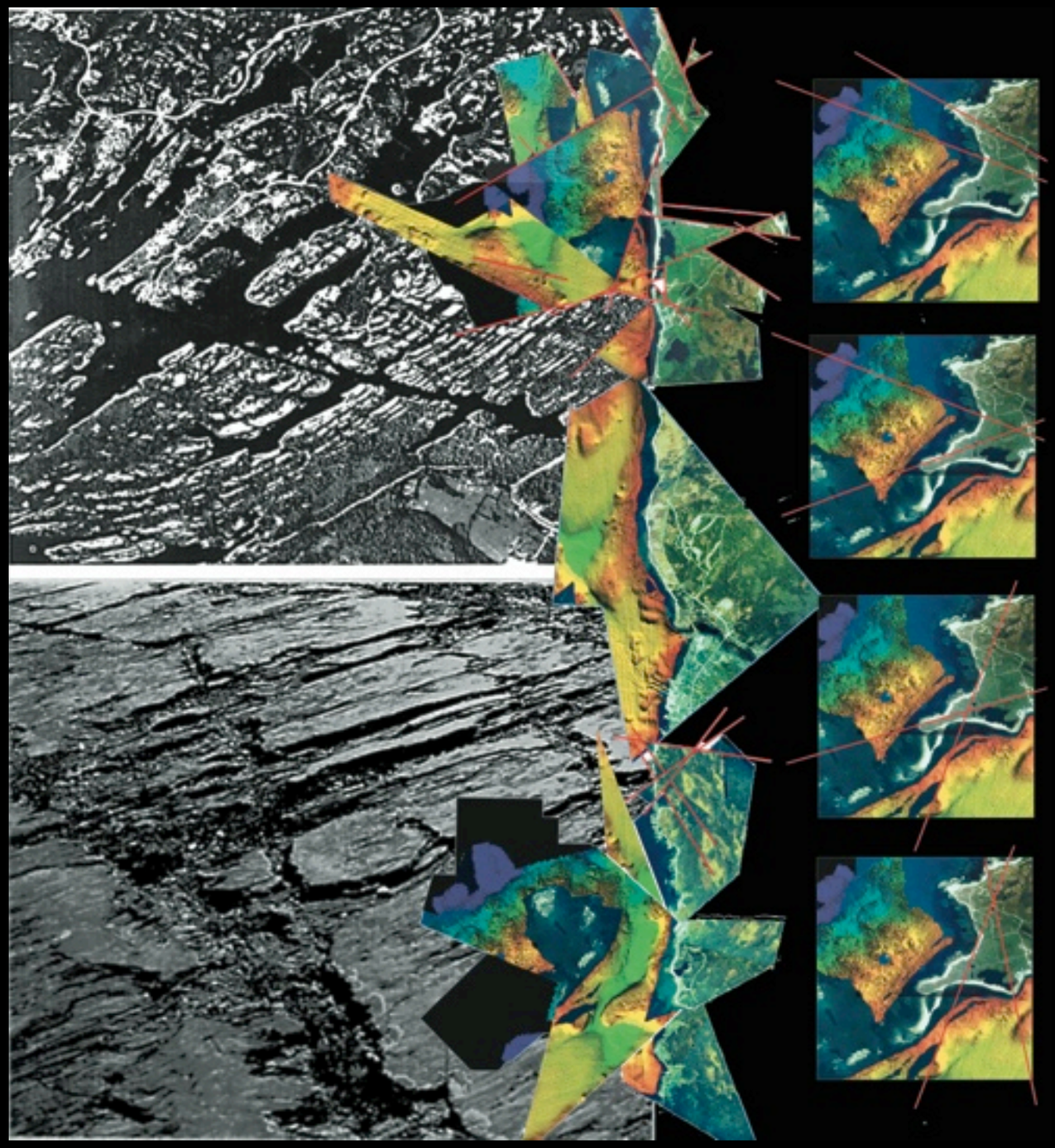

# Architecture, Technology, and Education

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Most of us are educators and architects, defined by two disciplines. The name and content of this journal reflects this double aspect, but we leave much unsaid about the opportunities and difficulties in the overlap. By and large, we assume a common socially constructed view of architectural education based in studio and downplay differences in our curricula from school to school. Diversity of approach to curricula, though validated by professional accrediting criteria, rarely rises to the level of fruitful debate. Instead, diversity and critical discussion reside in the authorial content of studio projects and in the different teaching strategies and concentrations of content found in courses. This diversity and doubling have led some to portray construction as marginalized within our curricula whereas, more likely, construction is more complex than teaching building conventions and includes all that technology construes: culture, knowledge, innovation, craft, building science, and practice. For most of our schools, locating (or marginalizing) construction is a critical and defining aspect within the curriculum.

There are many ways of framing architects' common concern for technology, among them are the phenomenology of material; the sequence of building; the theory of structures; the culture of construction, production, and consumption; the organization of practice; and the life cycle of a design. Some of these stretch our understanding of technology as phenomena . . . as culture . . . as organization. Technological innovations in building construction have had significant effect on architecture and architectural practice. This theme call was for design work and articles that investigate new building practices and either situate them within a historical and critical framework or probe the social construction of conventions in building and architectural practice. It starts to explore construction in its cultural context.

Of the forty articles submitted, some wrote about the place-making qualities of brick manufacture, products of engineering in 1950s Belgium, arguments for teaching construction historically, and reconsideration of model-making and of stereotomy in the contemporary context. Many more investigated the studio application of construction. This is not surprising. In the past twenty years, occasions such as the ACSA technology conferences have elicited presentations about architectural technology and educational strategies for architectural technology in equal measure. Whereas the lecture and seminar room has remained the venue for teaching history and the studio has been a stable location for design, the mode of teaching architectural technology is not as easily decided. The choices of mode and location range from the graduate seminar on technological thought to the hands-on design-build field exercise. Curriculum choices include such thorny pedagogical decisions as the considered introduction of construction conventions or the early emphasis on technological innovation. Of course, it's possible that some schools do not make these decisions consciously, and it's clear that the engagement with the teaching of architectural technology varies from the perfunctory to the pervasive. Nevertheless, it's fair to suggest that each school of architecture in North America is defined by its choice among the variables of teaching architectural technology.

This call for articles on the history, theory, and practice of construction followed this trend. More responses discussed education than the content of construction, and of those that concentrated on construction alone nearly all were situated as history. In this issue, Thomas Leslie discusses the history of the Chicago high rise as it was determined by two unique technological opportunities: cheap energy for local glass industries and the refinement of electric lighting systems. David Monteyne situates the light-wood frame in its twentieth-century context of production and consumption. Ann Komara unearths a little known overlap between engineering and landscape during the introduction of concrete in France. In this set, there is clearly a technologically determinist bent: the authors leave little room for us to imagine, with Thomas Hughes, "how it might have been otherwise." Are we to be swept along by our technological history such as those of glass, electricity, and wood, or can we, as readers, imagine enough latitude for architectural creativity? In Komara's very particular history, do we see it as a unique response to time and place, or can we imagine its more general appropriation and, therefore, entertain the use of history as the depository of unrealized potential?

If technology is akin to the water we swim in, then the remaining articles are making much of the swimming. The techniques are diverse, displaying an interesting consciousness of the relationship between the unique educational moment and the technology of production. The design submission by Lisa Iwamoto considers computers and making in the design studio, Nils Gore considers making as the crafting of traditional materials in the design studio, Peter von Buelow works with a real client and an unusual agenda (helping challenged kids into a tree house), and John Fernandez considers design tools for integrating new industrially produced materials into the design process. This is a sampling of the range of construction issues that architectural educators deal with everyday and an indication of the thought-provoking issues that technology generates in studio teaching.

*JAE* has published a number of theme issues about technology: *JAE* 54/3 "Technology and Place" and *JAE* 51/1 "Rethinking Architectural Technology: History, Theory, and Practice." Nevertheless, much more has to be recorded. Architectural educators frequently refer to their work in the studio, and in technology generally, without reference to any pedigree. The call for improved technology teaching of the 1990s has been heeded, and now much work needs to be done to establish the parameters and content of that teaching. Hopefully, these articles are the early representatives of this discipline-building task.



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PAGE 1 COMMUNITY VISUALIZING
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PAGE 2 STUDENT DESIGN BUILD
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PAGE 4 & 5 SCIENCE CENTRE PROJECT
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PAGE 6 STUDENT DESIGN BUILD
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PAGE 7 STUDENT DESIGN BUILD
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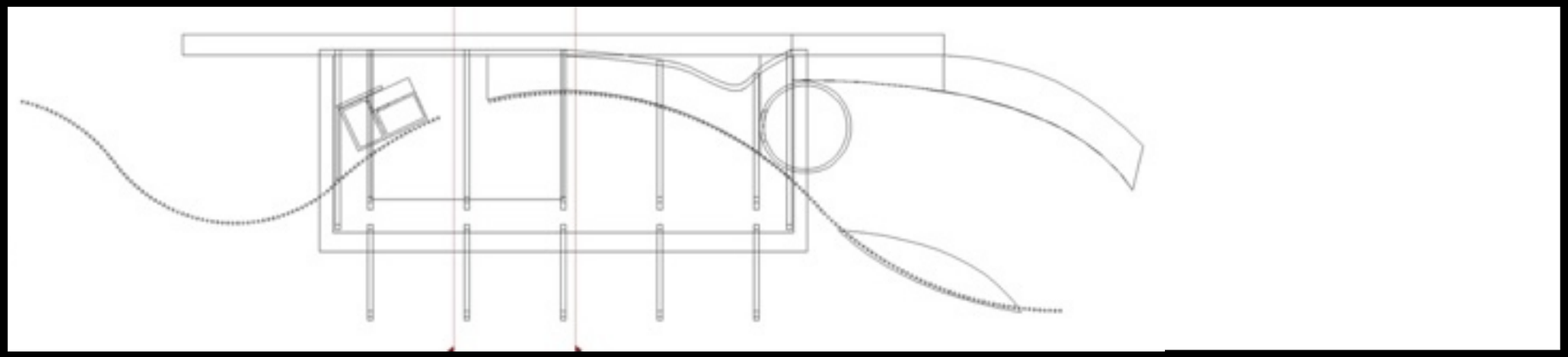

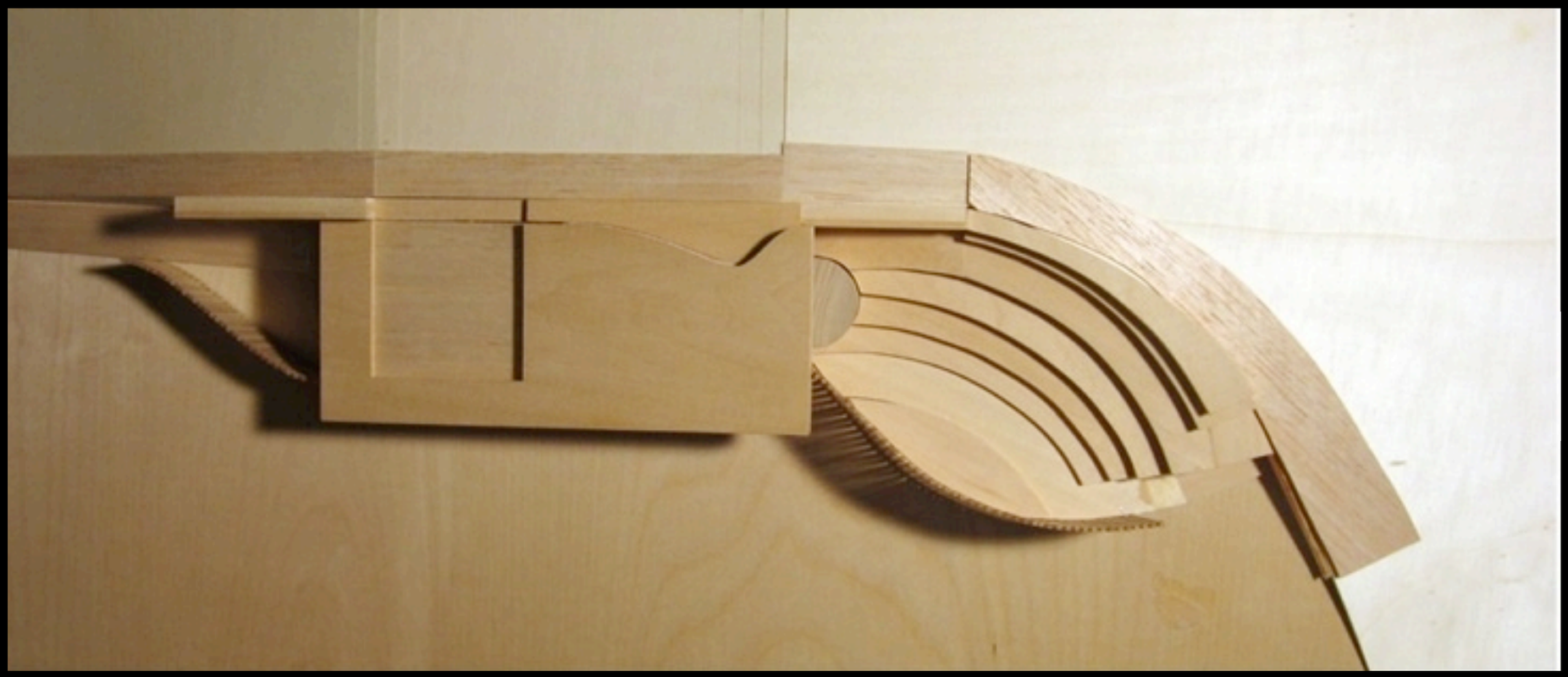



Camera Obcura Pavilion -- Cheverie Salt Marsh
under construction starting October 2010