

## Precedent, Diagram, and the Activation of History

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This session asks a number of tough questions about the continuing relevance of architectural history coursework—at least as traditionally conceived and delivered. Of these questions, one in particular provides a focus for my paper: “Can the ‘content’ of history and theory be taught without dedicated history and theory classes?” I will consider this question through the lens of the ‘precedent study’—the most typical means by which historical objects are addressed in the studio setting. While I would argue that the enduring value of history coursework lies in its *distance* from typical studio-based precedent investigations, I also advocate the critical deployment of studio methods within history and theory classrooms. Rather than a balkanization of disciplines, or the absorption of history into the studio, I propose that reconfigured history coursework has the potential to set up dialectical exchange between design knowledge and historical knowledge. History teaching, I conclude, can be made more effective and pertinent through a critical adoption of studio methods—one that resists their tendency to reduce historical questions simply to formal analyses.

Instead of offering a detailed mapping of precedent-study strategies, I will extract examples from my own teaching—both in studios and in history courses—that illustrate the potential and limitations of these projects. In the process, I will ask larger questions more pertinent to the theme of this session. First: What is the role of the historical object in fostering design knowledge, and how does the configuration of past-as-precedent relate to the objectives of historical education? More importantly: What exactly are these objectives? While the widening per-

spectives of historical inquiry are well established within the discipline, how should these be brought to bear on the education of design professionals?

The study of precedent is firmly established within architectural education, and there is at least enough consensus about its value and definition to assign it a distinct performance criterion within the NAAB accreditation procedures.<sup>1</sup> Despite this, I am reluctant to characterize precedent studies in an exclusive way, since the methods and objectives of these activities can vary widely. ‘Precedent’ can refer simply to a prior instance or previous case; alternately, it can be held up as exemplar, standard, or measure. The ‘study’ of precedent can involve the most cursory cut-and-paste; alternately, it can be the basis for highly sophisticated analysis.

Though precedent-analysis exercises are broadly employed in syllabi, the wide-ranging purposes assigned them reveal the ambivalence of our discipline’s regard for the past. Examples are often drawn from history, but their study is not generally intended as an investigation of the works’ historical meanings per se. Instead, buildings and projects are typically extracted from their historical contexts, unhitched from their ideological and cultural underpinnings, and wiped-clean of circumstance and accident. Whereas the historian endeavors to anchor the work in its historical position, studio instruction demands its transport into the present, in order to unlock information deemed relevant for contemporary design. It is the interpretive act—the *analysis* of precedent—that is capable of uncovering the precedent’s value. To the extent that analytical engagements with precedent are primarily formal

in nature, precedent studies carry an implicit argument about the role of history in the architectural curriculum: that questions of ideology and intent, geographical and cultural context, and political and economic circumstance are all secondary details of concern to the historian rather than the designer.

This observation--that precedent studies are most concerned with formal rather than contextual issues--is neither radical nor particularly profound. It is also not meant to diminish the considerable contribution of precedent analysis exercises to the development of both design knowledge *and* historical knowledge. But it is important to see the prominence of studio-based precedent studies in the context of criticisms of the role of history within the discipline. These concerns reached their peak two decades ago, and were clearly expressed in the then-emerging discourse about precedent.

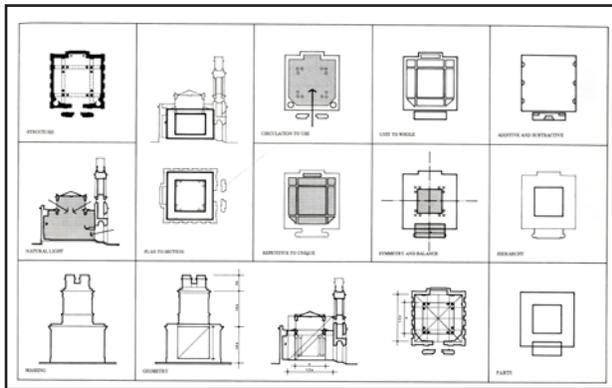


Figure 1: Analytical Studies, St. Mary Woolnoth, London, Nicholas Hawksmoor. From Roger H. Clarke and Michael Pause, *Precedents in Architecture*

In the introduction to his 1985 publication *Precedents in Architecture*, Roger Clarke defined the role of precedent as inherently a-historical, in that it seeks to identify “generic solutions to design problems which transcend time...”<sup>2</sup> In the studies published by Clarke, the goal is to employ design knowledge—through formal analysis—as a means of reaching beyond certain limitations of historical pedagogy:

History studied in the academic sense of seeing our place within a continuum, or in the strictly scholarly sense of knowing the past, can limit our knowledge as architects to little more than names, dates, and style recognition. Seeing between and beyond the layers of historical styles, within which architecture is generally categorized and presented, can make history a source of enrichment for architectural design.<sup>3</sup>

What is proposed here is a clearer view of the historical object, facilitated by the analytical powers of the designer, and unencumbered by the scholarly apparatus of the historian. One can certainly take exception to Clarke’s characterization of this apparatus, especially as it has evolved and expanded since he wrote these words. It is ironic, however, that this bracketing of historical context ultimately sought to re-establish the authority of the historical object, by illuminating its formal truths, previously obscured by the academic concerns of historians.<sup>4</sup>

Similarly, Amos Rapoport has questioned what he sees as the monumental orientation of traditional architectural history, advocating instead a more ambitious and egalitarian collection of historical examples.<sup>5</sup> Here, however, the objective is not so much the recovery of formal authority, but the consolidation and deployment of historical artifacts in the service of a scientific approach to environment-behavior relationships. Robert and Rivka Oxman have extended this vision, calling precedents “fundamental sources of architectural knowledge,” useful precisely because they can be understood “without recourse to historic stylistic justification.”<sup>6</sup> The past supplies a “rich body of architectural knowledge in an incipient state of formalization.”<sup>7</sup> Rejecting the esoteric formalizations of historians, the Oxmans have proposed using computational methods in order to more effectively process and deploy history’s data-points.

This vision of the precedent as contributing to a body of scientific evidence contrasts with the analytical approaches of Clarke and others, in which the precedent is seen as the source of formal-spatial revelation. But both views share a distrust of the usefulness of traditional historical pedagogy. Both can also be linked, I believe, to Robert Somol’s more recent discussion of the turn to the diagrammatic within architectural discourse and practice over the last several decades.<sup>8</sup> For Somol, the ascendancy of the diagram followed two distinct paths. In one, initiated through the writings of Colin Rowe, the diagram organized considerations of “formal or analytical truth;” in the second, represented in the work of Christopher Alexander, the diagram described imperatives deriving from “operational or synthetic truth.”<sup>9</sup> These two poles of diagrammatic activity correspond closely to the applications of precedent studies I have thus far outlined. While the analytical approach of Clarke ex-

tends from Rowe's humanist leanings, Rapoport's social-scientific appeal to precedent stems from the design-method theories of Alexander.

More importantly, though, Somol describes both of these paths as "inadequately diagrammatic," agreeing with Colin Rowe that both "condemn us to no more than simple repetition."<sup>10</sup> This argument has been extended by Anthony Vidler, who sees these approaches as alternating between the nostalgic and the excessively rigid.<sup>11</sup> Confronted with these dead-ends, a new generation of architects have given the diagram new life, as digitalization has allowed the collection of complex "topographies" of information and their mapping as form. In these cases, the diagram "becomes less an icon and more and more a blueprint."<sup>12</sup> These developments ultimately call into question the authority of precedent, as they transfer diagrammatic procedures away from formal or typological analysis and towards a new role as direct generator of architectural form: the building as diagram.

As the diagram abandons the past in favor of the future, and as architectural history becomes less and less a concern of theorists, the position of historical inquiry within the studio—especially as represented by precedent studies—becomes increasingly tenuous. At the same time, the precedent study has become institutionalized, due both to accreditation requirements and curricular traditions. At risk of becoming a vestige, the precedent is also now ripe for critical experimentation and re-appropriation. Having originated as a means of staking out territory—of protecting the historical object from the methods of historians—precedent studies might now provide a crucial point of overlap between studios and history classrooms.

To illustrate a range of approaches to this opportunity, I'd like to contrast a series of projects—all employing three-dimensional physical models of case studies—that have been pursued by students I have worked with in recent years. In the simplest of these, students constructed sectional extraction models in order to study the site and enclosure strategies of a number of important twentieth-century buildings. The objective was to help students to see the complex possibilities embedded within the act of enclosure. In each of the selected case studies, approaches to enclosure transcended the mere provision of walls and windows, comprising instead

multiple physical layers with rich experiential ramifications. Moreover, enclosure strategies were shown to grow out of more elemental approaches to siting and anchoring the building. By modeling sectional fragments with monochromatic materials, students undertook a simplification of complex technical systems, emphasizing instead relationships between layers and material qualities, rather than precise identification of details and assemblies.

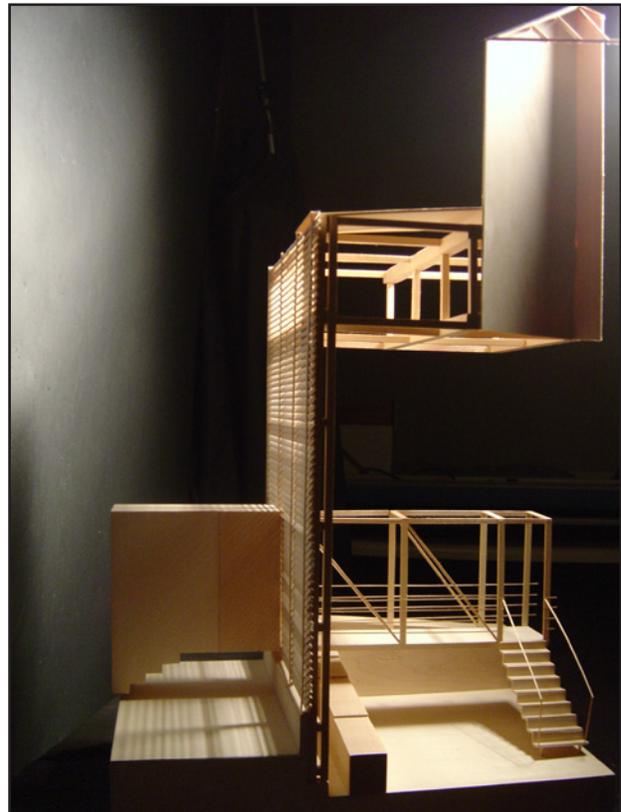


Figure 2: Archaeological Shelter. Peter Zumthor. Chur, Switzerland. Model by Craig Culbertson and Bryon Oster.

While the potential for extracting lessons from the historical object was assumed, these were sought within focused and limited aspects of the design. Rather than ascribing profound truths to the precedent—either as formal exemplar or programmatic guide—the exercise sought to enlist the case-study and the modeling process in helping students to look more closely and critically at clearly defined issues. Avoiding the quickness and ease of drawn diagrams, the construction of physical models required students to employ research, to make critical choices

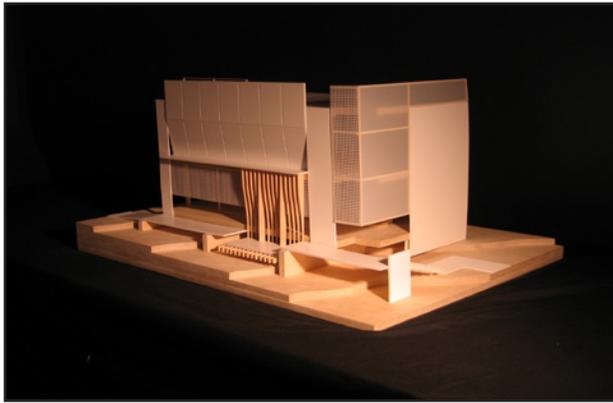


Figure 3: Laura Bergman. Enclosure Study.

about which sections of the cases to model, and to use the act of modeling to test and reinforce evolving conceptions of the building in question. Nevertheless, these objectives still hinged on an understanding of precedent as source—on a conviction that the historical example is important primarily for its ability to provide formal lessons for subsequent practice.

A second project in the same studio suggested an extension of the role of precedent beyond that of formal source. In this project, students were asked to design their own enclosure systems, and to study the visual and experiential possibilities of interacting material qualities, independent of programmatic application and technical detail. To this end, the project's variables were intentionally limited: the topographic conditions were generic and the program was indeterminate. Prior to design, students conducted photographic investigations of material relationships, working from a series of textual prompts. They analyzed proportioning systems and employed these for dimensional guidance. Finally, structural constraints were bracketed by the assumption of an existing supporting armature.

This last element in the scenario provided the project with a mechanism for engaging architectural history. The specific structural setting for students' enclosure studies was taken from Le Corbusier's well-known 1915 depiction of his Dom-ino reinforced-concrete structural scheme. Though students carefully modeled this hypothetical setting for their work, and were made aware of its historical origins, discussions of Corb's specific elaborations on the Dom-ino system were avoided. Students were encouraged to consider and profit from

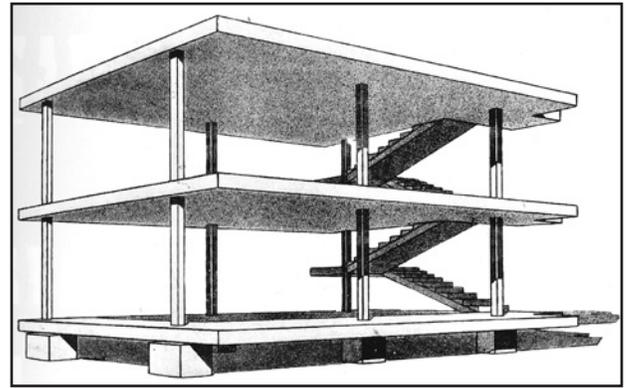


Figure 4: Maison Dom-ino Structural Diagram. Le Corbusier.

the freedom the structural system allowed, and especially its disassociation of enclosure from structural column and slab. Even absent detailed knowledge of Le Corbusier's early approaches to enclosure, students could see that this simple statement of modernist structural principles presented fertile ground for creativity and innovation, despite its silence about the specific directions these might take. The historical object acted as a conceptual site—as a constructive landscape awaiting actualization through design.



Figure 5: Laura Bergman. Enclosure Study.

A year later, the same students encountered the Dom-ino frame again, in a course on the history of modern architecture. Through the earlier design exercises, they had developed knowledge of

the formal and material specifics of the scheme, as well as the extent to which it structured, suggested, limited, and liberated design. With this design-based knowledge as context, the particulars of Le Corbusier's employment of the Dom-ino structural frame could be understood with more clarity and nuance. Most importantly, the students' own experiences designing enclosure systems—with the Dom-ino frame as site—encouraged critical consideration of historical narratives attached to Corb's work. The famous perspective diagram, for example, presented as an emblem of the structural system as mass-producible object, supports arguments for the technological determinism of the Corbusian housing schemes. The students' own earlier interventions on the Dom-ino frame—informed by different objectives and intentions—had led them in very different directions, and allowed them to better grasp the ideological content in Le Corbusier's work.

In the above example, the Dom-ino structural model exists less as *precedent*—as example for contemporary action—than as *site*. Formal analysis of the structure is not an intention of the project. Instead, formal, spatial, and material enclosure strategies are studied within the context of the historical object. It is helpful, for these purposes, that the object in question resists formal celebration. Instead of describing a built work, or even a proposal for a built work, the Dom-ino drawing merely represents a structural idea—though one at the core of subsequent formal investigations. The Dom-ino scheme can't be diagrammed. Rather, it is itself a diagram. And this returns me briefly to Somol's and Vidler's discussions of the diagrammatic orientations of recent architecture. Against the instrumental employment of diagrams either as analytical revelations of formal truths, or as codifications of design-input data, Somol places a third path, one following diagrammatic "orientations" that are "projective" and that open "new... territories for practice."<sup>□</sup>

The Dom-ino enclosure study is also presented as an argument for the construction of integrative knowledge across discrete curricular areas. In the studio, design activities direct analysis of the historical site. This analysis then provides a foundation for a more receptive attitude towards historical arguments about the work in question. The layering of design knowledge and historical knowledge

allows a dialectical rather than a linear engagement with the subject matter. In the Dom-ino enclosure assignment, the historical object is treated as a conceptual and physical site for design, rather than as a target for formal analysis. But the kinds of design knowledge fostered by the project allow another, deeper sort of analysis—one shaped by active, critical, and creative engagement with the historical site. This experience suggests opportunities to transform history teaching through direct appeals to design knowledge.

Architectural historians have varying objectives for design students enrolled in their courses. Depending on the approaches of individual instructors, historical coursework sharpens interpretive skills, fosters reflective and critical practice, and traces lines of connection between architecture and the wider culture. For most historians today, I would argue, the selection and dissemination of canonical lists of significant monuments is of secondary importance to these broader goals. Nevertheless, educational strategies within history curricula still often aim at the formation of skills employed by the professional historian. This approach is most apparent in traditional semester-long research paper assignments, through which students model the practices of historians by means of miniaturized works of historiography.

The merit of these assignments is in their intentions: to strengthen research and critical thinking skills, to build organization and clarity in writing, and to foster understandings of historical methodologies. I would argue, however, that these objectives are better served when design knowledge and studio methods are brought to bear on historical issues. The reclamation of studio-based precedent analyses as historical case-studies provides one means by which we can build within the history classroom a more richly layered, synthetic understanding of historical issues.

A final example will illustrate this: a semester-long research project aimed at reconstructing formal realities and discursive narratives surrounding certain key, but vanished works of modern architecture. The project is intended to model historical problems and methodologies using skills borrowed from the design studio alongside those more typical of the history classroom. In the assignment, students work in teams to research buildings that

lived short lives, but that have nonetheless figured prominently in histories of the period. Aware that their eventual task will be to model the building, students' initial research is focused on the challenge of 'knowing' the building using only spotty graphic documentation. Assigning buildings that cannot be fully known is intended to stand for the historical project in general. More importantly, the limited visual evidence counters the more typical experiences of students when they are asked to conduct precedent research on existing buildings. In the latter cases, the surplus of evidence can make research too easily and uncritically conducted. Inquiry into the past becomes sharpened when Flickr collections and Google Earth fly-overs are made unavailable; here only grainy black-and-white imagery and the odd plan or section drawing act as guides to an ephemeral past.

Written components of the project are aimed at identifying and investigating the historiographic questions surrounding the vanished building. The process here is clearly spelled out and comprised of discrete steps. First, pertinent quotations are extracted from primary and secondary sources. This is followed by synthesis activities, in which the quotations are arranged in thematic and hierarchical diagrammatic structures. The idea here is to appeal to skills and ways of thinking normally associated with the design studio: information gathering, spatial analysis, diagramming, programming. Only then are students asked to bring their own textual voices to their conclusions, in essays that map the narrative roles played by their assigned buildings within histories of modern architecture. Even here, the essays are intended to be clear and succinct rather than elaborately argued. The goal is not to model the products of professional historians; rather, historical methods are modeled through analogous activities transferred from the design studio.

The conclusions drawn from this process are not summarized through lengthy research papers; instead, they are captured in a physical model that attempts to accurately reconstruct aspects of the assigned building. As with the project in general, these models are intended as analogies of historical understanding. Like historical writing, the models aim at accurate reconstructions of the past, even as they reflect students' awakening sensitivity to the limits of claims to historical truth. Like historical writing, the models are expected to have

a thesis and to make a clear argument. This allows discussion and consideration of the subjective points of view that are always embedded in any representational strategy.

Ultimately, the point of this project is to re-appropriate the use of historical examples, translating the studio-based precedent study back into a historical language, and in the process reinstalling issues of intention, ideology, and culture. The objective is not, however, to firm up barriers between studio and classroom, or between design knowledge and historical knowledge. Rather, design knowledge lends essential skills and outlooks to the acquisition of historical knowledge while, conversely, historical questions help students to become more critical about their application of design strategies to broader issues.

## ENDNOTES

1. National Architectural Accrediting Board, *NAAB Conditions for Accreditation For Professional Degree Programs in Architecture*, 2004, p. 13.
2. Roger H. Clarke and Michael Pause, *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis*, Third Edition (Hoboken, New Jersey: John Wiley and Sons, 2005), p. v.
3. *Ibid.*, p. xi.
4. On the origins of precedent as "authority," see John W. Stamper, *The Architecture of Roman Temples: The Republic to the Middle Empire* (London: Cambridge University Press, 2005), pp. 1-5.
5. Amos Rapoport, *History and Precedent in Environmental Design* (New York: Plenum Press, 1990), p. 5.
6. Robert Oxman and Rivka Oxman, "The Computability of Architectural Knowledge," in *The Electronic Design Studio: Architectural Knowledge and Media in the Computer Era*. Ed. Malcolm McCullough, William J. Mitchell, and Patrick Purcell (Cambridge, Mass. and London: MIT Press, 1990), p. 178.
7. *Ibid.*
8. R. E. Somol, "Dummy Text, or the Diagrammatic Basis of Contemporary Architecture," in Peter Eisenman, *Diagram Diaries* (New York: Universe Publishing, 1999).
9. *Ibid.*, p. 24.
10. *Ibid.*, p. 7. Somol quotes Rowe from his essay "Program versus Paradigm: Otherwise Casual Notes on the Pragmatic, the Typical, and the Possible," published in *As I Was Saying*, vol. 2. (Cambridge, Mass. and London: MIT Press, 1996), p. 10.
11. Anthony Vidler, "Diagrams of Diagrams," *Representations* 72 (Fall 2000): 16.
12. *Ibid.*, p. 17.
13. Somol, p. 23