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Issues To Models: A Prescriptive Process for Substantive Architectural Form

Merrill Gaines

"Real curiosity, intense and energy-generating, is the force that makes inquiry productive."¹

"... the model is ... neither pure representation nor transcendent object. It claims a certain autonomous objecthood, yet this condition is always incomplete. The model is always a model *of*. The *desire* of the model is to act as a simulacrum of another object, as a surrogate which allows for imaginative occupation."²

"Funny how different you feel when you know you're gettn' somewheres"³

As all of us who teach design know, the two-headed dilemma of the studio is to assist students in developing work that is both content laden as well as formally interesting. The best students manage this quite nicely on their own; most others have difficulty with one or the other, more often than not the latter.

Recently I have taken to approaching this fundamental teaching task in direct fashion: through the combination of two basic design strategies, unique only in the fact that they are brought together as a single process. Having had its genesis within the academic design studio, the most likely audience for this method will be teachers and their students. However, I'm hopeful there will be something here for the practitioner as well.



1. Michelangelo Buonarroti presenting a model of St. Peter's to Pope Paul III. (c. 1546.)

As might be expected, this approach begins with an insightful examination of the design problem. To be avoided is a skimming-over the obvious programmatic material distributed by instructor, dealt out by client or too-quickly garnered by individual effort. What's needed is a thorough-going

indoctrination of the particular situation, with the intent—and this is most important—of identifying *key issues*.

Dean Robert Harris, University of Southern California, deserves acknowledgement for his writing on "Essence-Seeking"⁴. Although the in-

ducement is to find and record "really beautiful and supportive places", it's his encouragement for the intensity of the search that I find so welcome. My version is this: within each architectural-scale design problem lie perhaps a half-dozen exceptional considerations that must be resolved if the proposal is to be a successful one. The initial struggle, then, for student or practitioner, is to discover these issues. Or, put another way, if key influences are not identified and eventually satisfied in form the attempted solution is, quite simply, a failure.

Let's take as illustration the phenomenon of "home as workplace", an increasingly likely circumstance arising from the national shift from industrial to information society.⁵ Our scenario is the design of a modestly sized suburban-rural development specifically for people who can and wish to work at home. What are the key issues? Surely there are many in a problem as complex as the house, its multiple and its setting, but one of particular importance would be the need for an enhanced sense of community living.⁶ Both the increased stability of the "family unit", whatever its evolving constitution, and the demand for human contact to compensate for the losses within the traditional workplace would suggest increased emphasis on home-centered socialization. If the proposal fails to address this rekindled need for

community, it has clearly missed a central issue.

Making specific the issues, of course, requires background material and saturation time, but perhaps it relies most on common sense—or better yet, “intuition”. I’ve come to accept intuition not as some magical gift, but simply long-term experience internalized as useable knowledge. Here, the professional typically has it all over the student, although surprisingly, once the student appreciates that it is neither a moment of divine inspiration nor a formula in some design book that will give them answers, they can take on the task of informing themselves—preparing for discovery of the major issues—far more productively.

It should be re-emphasized that the studio problem—and especially the client brief—seldom reveals all the key issues. In the case of a well-researched program most may be there, but more likely, additional investigation and reflection on the part of the designer will be demanded.

The identification of the key issues of the design situation is step one, and once there, we’re half-way home. What’s step two? Building models.

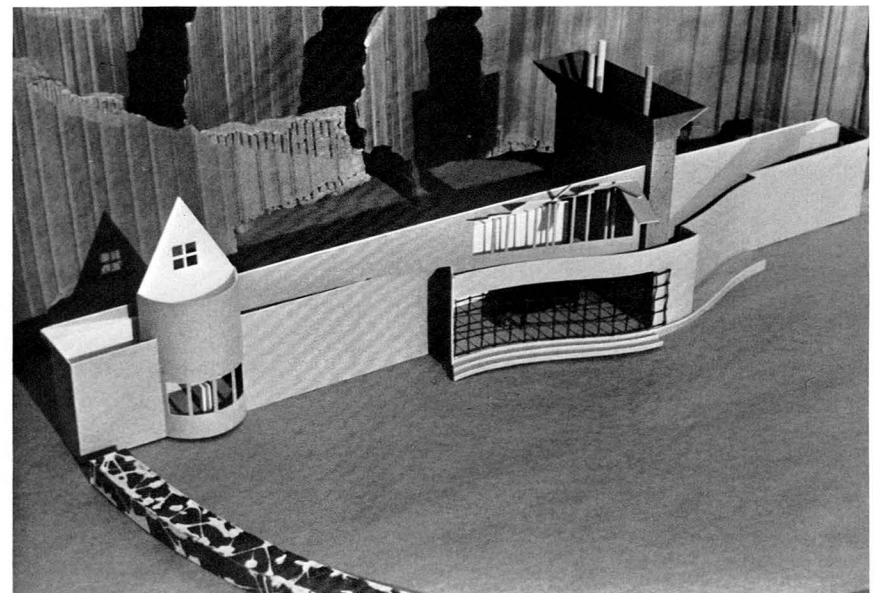
You cannot get much more basic methodology than this. Building models of architectural projects has been around since the Middle Ages.

and very probably before⁷. But until recently, they’ve been used primarily to render projects more understandable to a client (Figure 1) or to provide an after-the-fact record.

Our task is very different than either presentation or documentation, however. We’re going to build a model (or models) for every issue we’ve identified, and we’ll build them, to the extent possible, isolated from all other factors. In other words, these will be *idealized* formal expressions of what the architecture would be like if there was nothing else to consider. In character they are related to concept study models, and in size they are probably most successful if kept small—miniatures, in fact—thus promoting the narrowed focus.

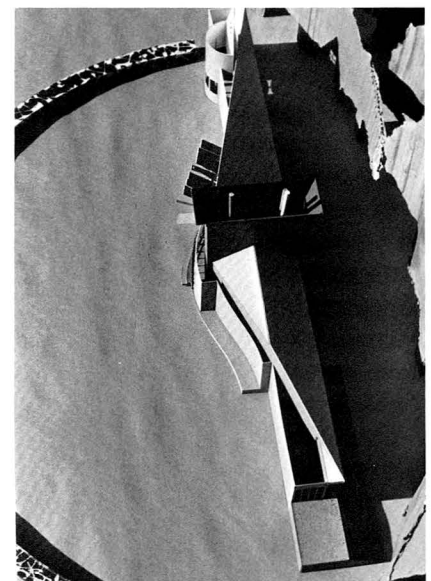
Now, this part is easier for the student than the practitioner. Most students I’ve taught are only too happy to latch on to something that will improve their form-making prowess. At the prospect of a useful technique they’ll be building models contently through the night. The professional, on the other hand,—myself included—is less likely to give up the tried and true and often more expedient ways of getting the job done. Some real benefit needs to be sensed . . . but more about this later.

Perhaps the most difficult phase of this second step of the process lies just ahead: synthesis. The time has



2. Piano Studio Project, final model, Robert Grandmaison.

come when all these elegant little ideas have to be made into “the difficult whole”⁸. And yet, this is far easier when the parts already exist than when the whole has to be invented en masse. What amounts to a strategy of optimization has been loosely inspired by Gerald Nadler’s “Ideals Concept” for management systems design⁹. In Nadler’s approach, an idealized solution is used as the guide for delivering the implemented system. His point is that the resultant system will be far more effective when working from the top down than trying to repair what already exists. My point is that a much more purposeful and comprehensive



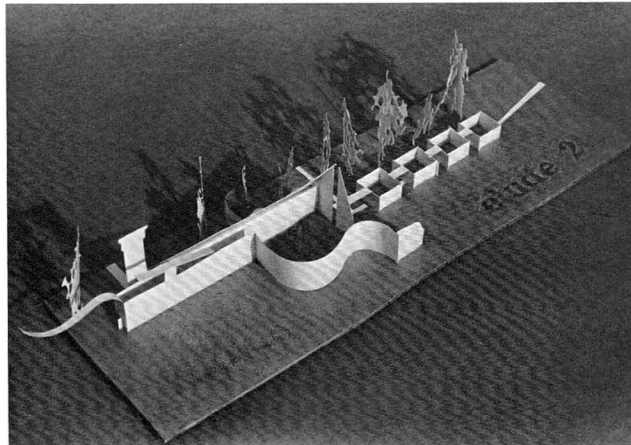
3. Grandmaison model.

architectural solution is possible by maximizing the sub-solutions.

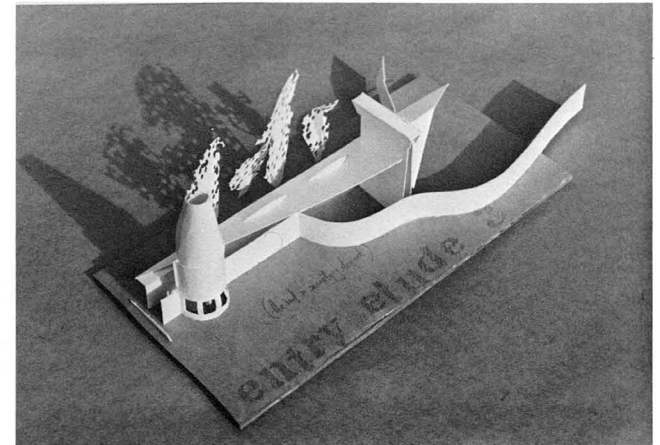
This is the time for careful fitting and refinement. And it's the time to hold on to the essences expressed in those initial forms; compromise is a necessity, but not if it means sacrificing what has already been so carefully determined to be crucial to the design's resolution.

Admittedly, there is a built-in aesthetic to this approach. I would characterize it as dialect . . . or inclusivist—pluralist—even eclectic in the positive sense. That is, the process lends itself to an architecture that embraces many divergencies, one that seeks the richness inherent in solving for complexity. I mentioned above that those of us with existing tools for doing architecture may be reluctant to go running off in some new direction. I can only suggest from student work already witnessed and the fledging attempts of my own using this same method that the process can help immensely in conceiving and realizing a complexity that is a natural outgrowth of the problem. If that is what you seek in your work, it may be well worth the effort.

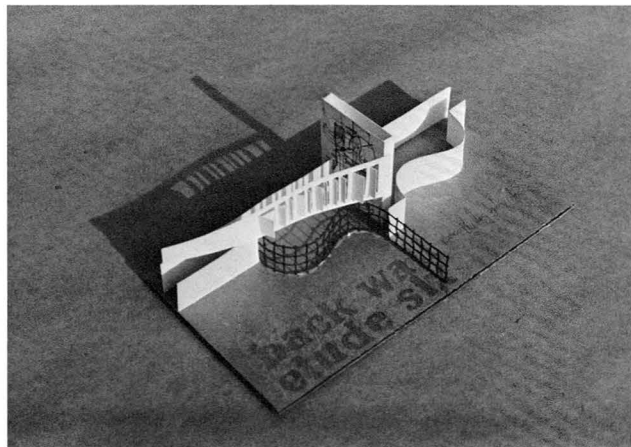
Back to the classroom. The final term design project for the past few years has been a piano studio/retreat in Connecticut. To briefly set the scene, a famous, but hypothetical, New York concert pianist intends to build a small studio on the grounds of his Connecticut estate. It will be primarily a place to practice and to seek refuge from the usual commotion of the main house. Major issues implicit in the problem as I define them are: privacy (or the retreat function) coupled with the requirement for infrequent but large-scale summer entertainment on the lawn of the studio, maximizing the benefits of the site's considerable natural beauty, responding to the regional architectural character, and projecting an appropriate image for a



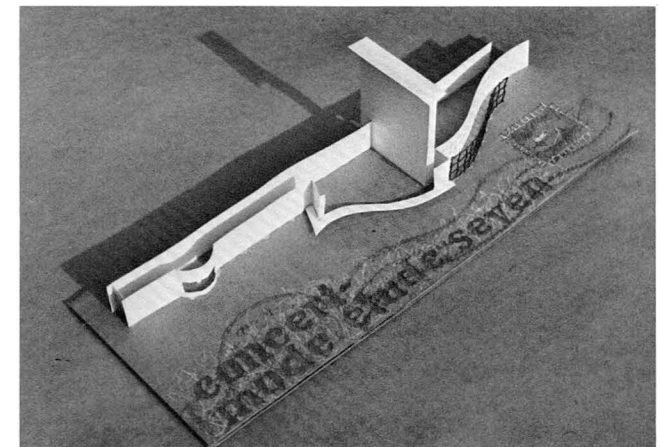
4. First study model, Grandmaison.



5. Second study model, Grandmaison.



6. Fifth study model, Grandmaison.

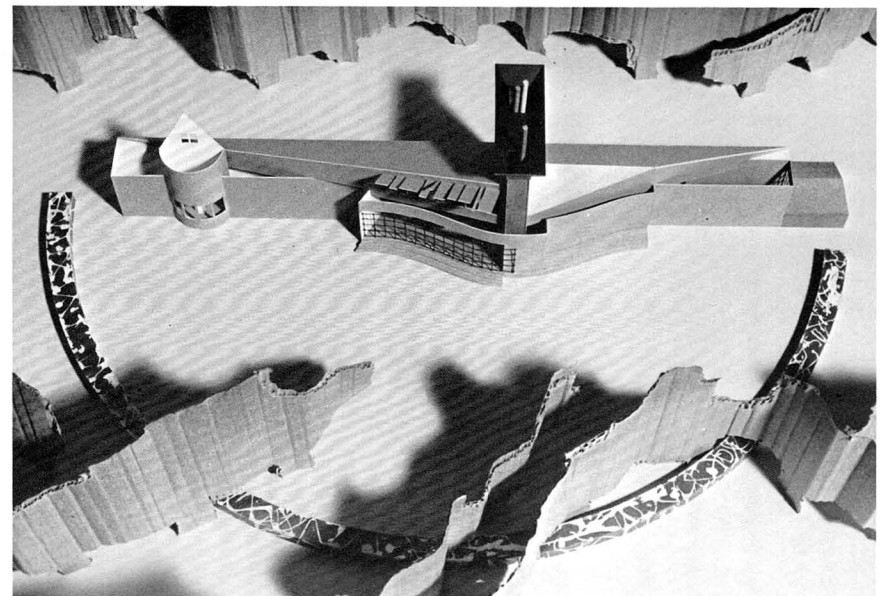


7. Sixth study model, Grandmaison.

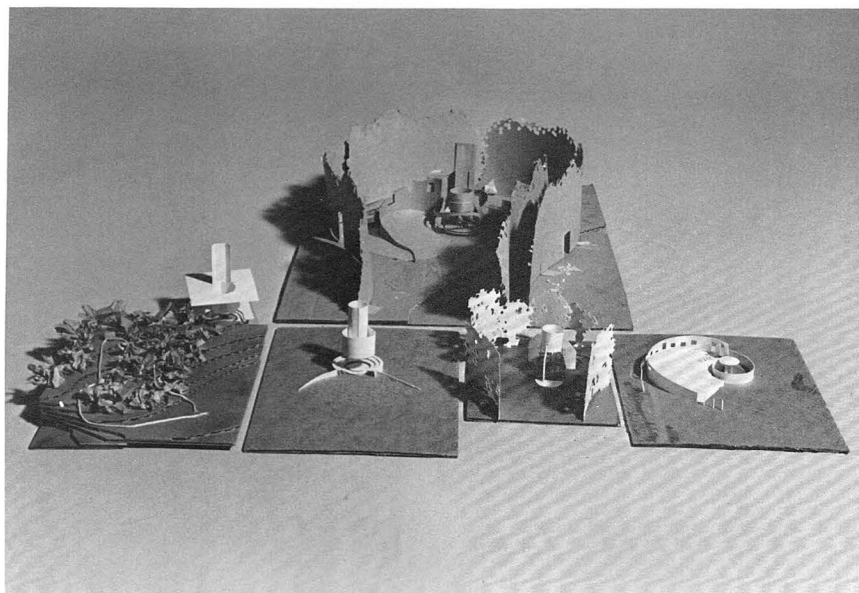
“studio” (as opposed to the easier expression of “small house”, for example).

One of the most provocative and mature solutions of the past year is shown in Figures 2-8, a project by Third Year Design student Robert Grandmaison. Robert's solution begins with his intuitive pre-selection of three of the stated issues as most “obvious” and thus most demanding of resolution: those of the potential relationship to the Northeast's regional architecture (and simultaneously, the built context of the estate), the dichotomy of the studio's public and private realms (retreat and occasional concert stage), and the required “reading” of studio rather than house.

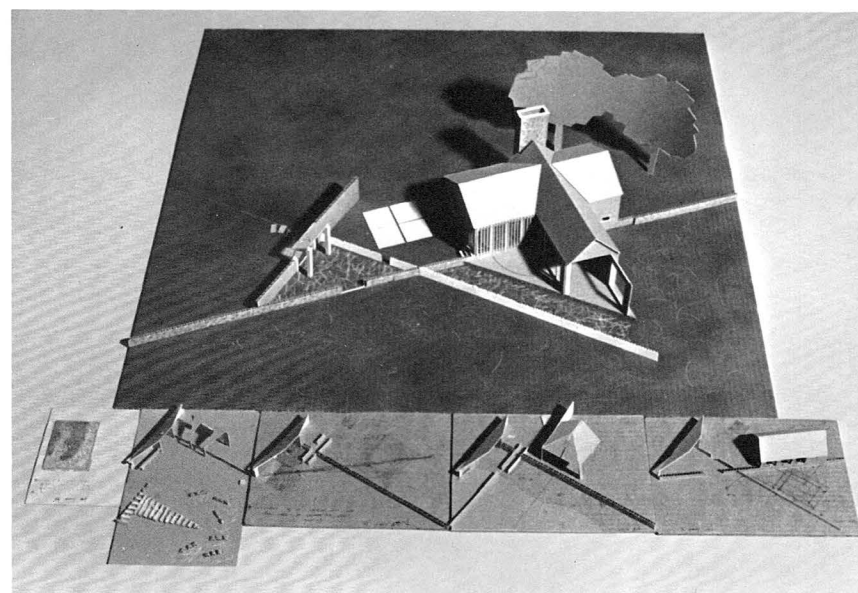
In his first miniature (Figure 4) the dominant roof form appears as does



8. Final model, Grandmaison.



9. Piano Studio project, final model, Greg Taylor.



10. Piano Studio project, final model, John Durschinger.

the linear plan: initial replies to regionalism and distinction between public-private. In the second (Figure 5) the individual pavilions for the private sector are abandoned, but the program-required fireplace appears as a dividing element. Also, the public area receives an entry announcement and a typological gallery space. A third small model (not shown) elaborates on the hearth as divisional piece and takes on some of the responsibility for regional connection.

The fourth model (also not shown) attempts to resolve the private realm using the "cell" or cloister as metaphor but without much success; whereas the succeeding version (Figure 6) begins to show more promise by introducing stronger contrasts between public and private through natural lighting, color, materials, furnishings, and outdoor spatial separation. As finally envisioned in the large model (Figures 2, 3, 8) this expression has the public sector as a spare, white, bright room with the black piano as its centerpiece. By contrast, the private sector is entered through a "secret" passage in the hearth—a dark, intimate room lined with books and furnished with only a cot.

The final small model (Figure 7) explores additional formal consequences of the public/private dichotomy; namely, open to closed forms (shed roof to gable) and a "wrinkled tux versus wrinkled pajamas" environment (formal space to informal space). Also the significance of entry is given additional attention as to position, placement and boundary, and the low garden wall is introduced as demarcation of the exterior public area. Finally, this model focuses more directly on the issue of "studio" versus "house" interpretation. Although emerging in earlier versions, here and in the final model, an unorthodoxy of forms, their distortion and incompleteness are more fully realized.

In actuality, then, there are exceptions to the precise linear process described earlier: that of choosing issues, building models for each, then synthesizing. These exceptions are worth examining in order to determine if the process is a realistic and flexible tool. For one, each of Grandmaison's small models did not deal neatly with a single issue. In some instances, these formal studies addressed several conditions simultaneously, as in the very first iteration where both major issues

of regional expression and public-private separation were explored. Nor was each issue quickly satisfied then put aside: models often refined a formal idea initiated earlier, or as Grandmaison put it, "commitment following exploration". And, there are dead-ends in evidence: the pavilions of the first model, for example, or the early attempt to use the "cell" as metaphor. Finally, Grandmaison's large model, representing a synthesis of ideals to that point in time, is really just another iteration, more sophisticated and convincing than earlier efforts surely, but nevertheless, still evolving.

Many of these deviations were found in the other students' work as well, but in spite of any discrepancies, an appreciation for the "purity" of the process is necessary. The fundamental intent is to establish a clear and simple path to be followed while individual interpretations are being formulated. Each applicant will, hopefully, adjust this pure structure to meet their own particular needs and outlook.

In fact, one test for usefulness of this strategy (or any, for that matter) is its ability to be integrated into an already functioning methodology and emerg-

ing or existing aesthetic. Other student efforts (Figures 9, 10), developed under identical guidelines, demonstrate the latitude of expression possible while satisfying essential design considerations. Actually, all manner of personal interpretation and enrichment is welcomed so that each designer can make the process their own, and in so doing, avoid a force-fit assembly of unrelated forms connected to unrelated issues.

NOTES

1. Robert S. Harris, "Bootstrap Essence-Seeking", *Journal of Architectural Education*, November 1975, Vol. XXIX, No. 2, p. 30.
2. Christian Hubert, "The Ruins of Representation", *Idea as Model*, 1981, New York: Rizzoli, p. 17.
3. From the 1948 United Artists film, "Red River", closing narration by Walter Brennan.
4. Harris, "Bootstrap Essence-Seeking", pp. 30-32.
5. John Naisbitt, *Megatrends: Ten New Directions for Transforming Our Lives*, 1982, New York: Warner, p. 4.
6. Alvin Toffler, *The Third Wave*, 1980, New York: Morrow, p. 204.
7. *Encyclopedia of World Art*, Vol. X, 1965, New York, p. 191.
8. Robert Venturi, *Complexity and Contradiction in Architecture*, 1966, New York: Museum of Modern Art, pp. 88-104.
9. Gerald Nadler, *Work Systems Design: The Ideals Concept*, 1967, Homewood, Illinois: Irwin, p. 23.