This is a kind of tale of two curricula Two different ideas about how to begin. It began some years ago because our faculty complained about the quality of student work in our Master of Architecture summer program.

When academics have a problem like this they of course blame each other. So first the old guys got blamed. Then different faculty tried and got no better results, then the students got blamed. When the faculty calmed down, they realized that all that what was left was the curriculum. About this time I became the Director of our Graduate Program and Hansjoerg became the Coordinator of the Summer Graduate curriculum.

Proposition

Answers to,

"What is fundamental to design?" and 'What must be taught first now?"

frame what students perceive as the core of their discipline and generate different student learning outcomes.

Mark DeKay, Hansjörg Göritz, Professors, University of Tennessee

We started with a proposition that curricular answers to the questions, "What is fundamental to design?" and “What must be taught first now?" frame what students perceive as the core of their discipline and generate different student learning outcomes.

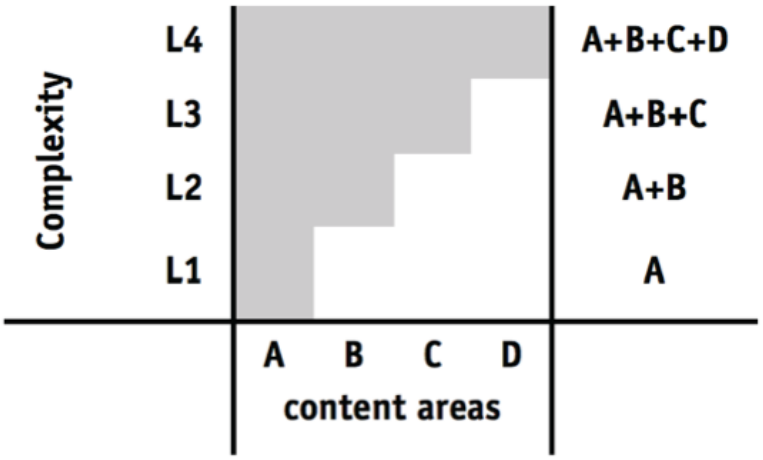
Proposition

Architectural education is a process of developing the architect's consciousness of complexity.

Mark DeKay, Hansjörg Göritz, Professors, University of Tennessee

The second proposition is that: Architectural education is a process of developing the architect's consciousness of complexity from contexts to concepts to implementation. One can think of this in two ways, in an additive way or in an unfolding, developmental way.

Conventional Additive Curriculum



1) Beginning with a single spatial-formal line of development
2) Beginning with pre-architectural abstract composition
3) Sequentially increasing form-driving issues over long periods

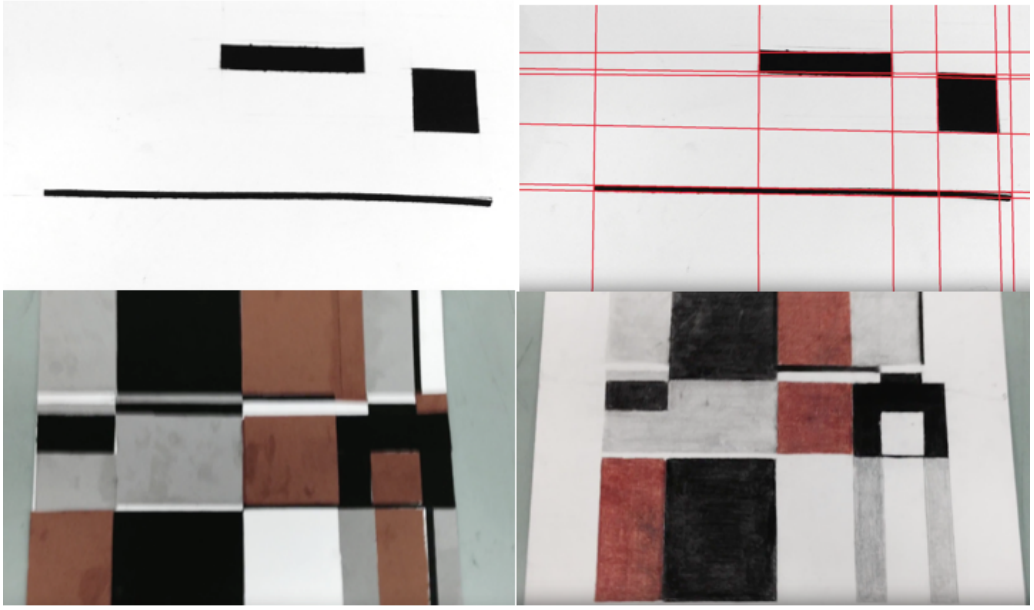
Mark DeKay, Hansjörg Göritz, Professors, University of Tennessee

The most common is additive. In an additive curriculum, topics are introduced one at a time over a sequence of years. In studios, our conventional curriculum starts with SPACE, then Adds PLACE, then adds PROGRAM, then adds TECHNOLOGY. The problem is that students get really good at A and are rank beginners at D. We realized that this is especially problematic for compressed 3-year graduate programs.

Typically, this means:

1) Beginning with a single spatial-formal line of development
2) Beginning with pre-architectural abstract composition
3) Sequentially increasing form-driving issues over long periods

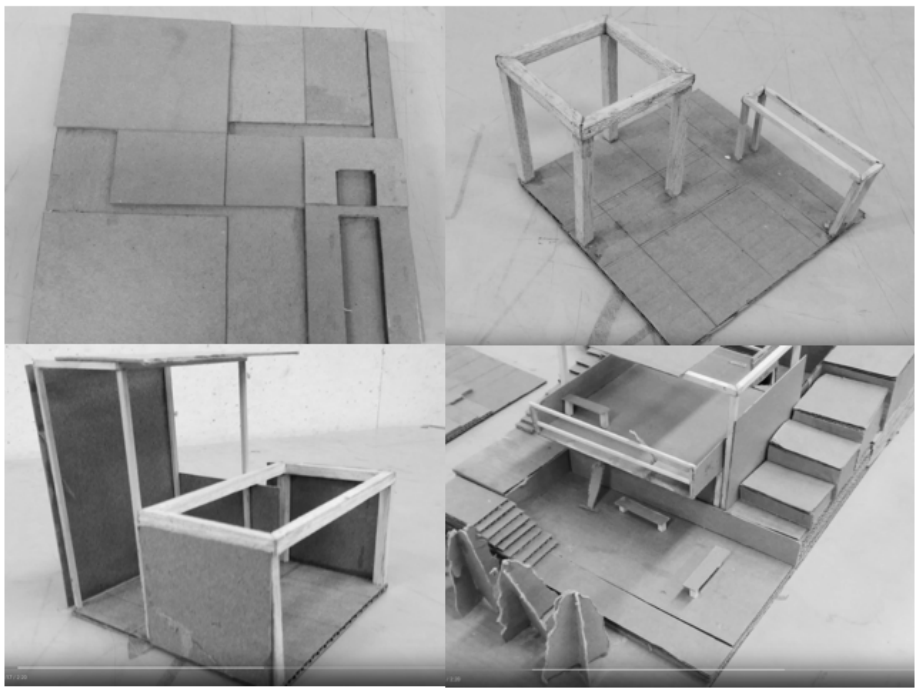
Conventional beginning design problem sequence



Abstraction of abstraction of abstraction of abstraction

This was the kind of beginning linked assignments borrowed from a 28-week first year in the B. Arch program and compressed into 9 weeks in the summer. Starting with 2D compositions, a process of responding to itself again and again, abstractions built on abstractions.

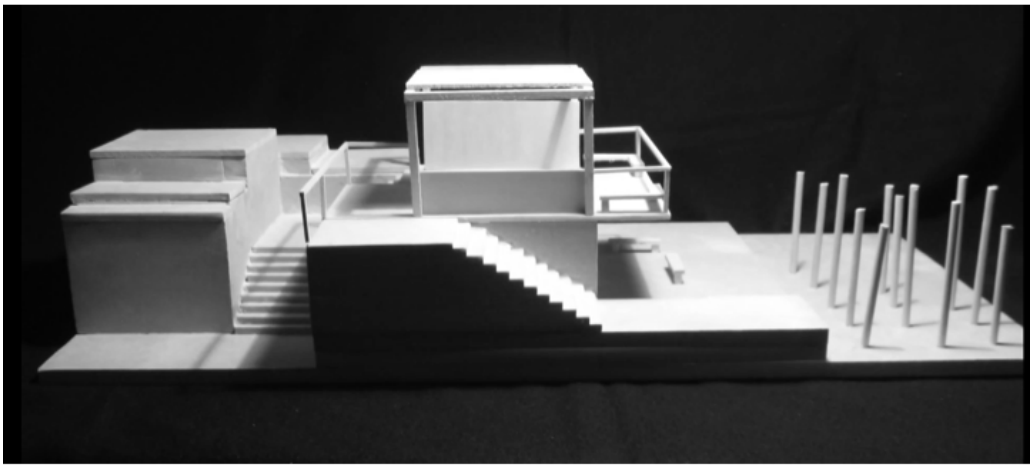
Conventional beginning design problem sequence



3D abstraction of 2D abstraction ^4. Rudimentary inhabitation after six degrees of self-reference

And 2D abstraction gives rise to bas-relief, and morphs into a 3-D construction, then unfolds surfaces, in a process inserts itself into a sloped ground where rudimentary inhabitation manifests.

Conventional beginning design problem sequence



Form is the idea. Placeless a-context. Tectonics without physics.

In looking at our normative curriculum, from the viewpoint of what is fundamental to architecture,
the list of what was NOT traditionally taught was shocking. There were no materials and no means of construction, no site, city, neighborhood, culture or climate. There was nothing alive—no human, animal or plant.

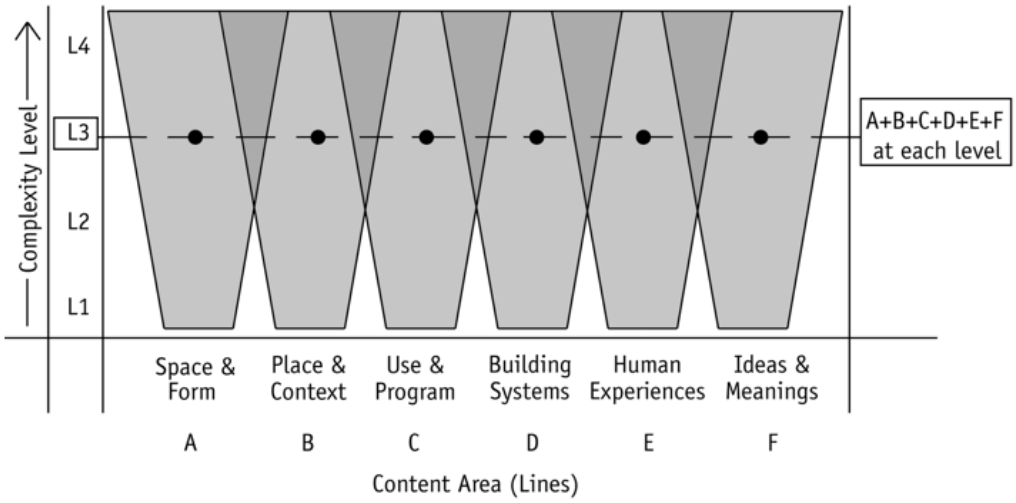
This approach conveyed to students that what is essential is that which is visual
and that the order of space and form is independent of knowledge or external inputs.

We imagined it was possible to learn to design buildings *and* include all the things that, if left out, would make the design *not a building*.

Many of these missing issues seemed essential not just to high architecture but to all buildings.

“We imagined it was possible to learn to design buildings and include all the things that,
if left out, would make the design not a building.“

Curriculum of Unfolding Development



Six integrated lines of design awareness

The second model was this: We imagined an UNFOLDING DEVELOPMENTAL approach
to create a more robust education in a short amount of time.

Instead of a curriculum beginning with a singular focus on form, we envisioned multiple content themes—unfolding simultaneously *from fundamental to complex.* The developmental line of *space and form* is informed by context, use, technology, experience and ideas.

A beginning curriculum is constituted by multiple relationships at 1:1, that is, among the fundamental levels of each line.

Introduction –
Reading Place and Regional Vernacular Methods

Cades Cove, Great Smoky Mountains National Park, Tennessee

Project –
Applying Lessons Learned

Choto Farm, Tennessee

The introductory studio took this developmental approach:

• To start at the beginning—*and t*o start with all the necessary *fundamental* pieces;

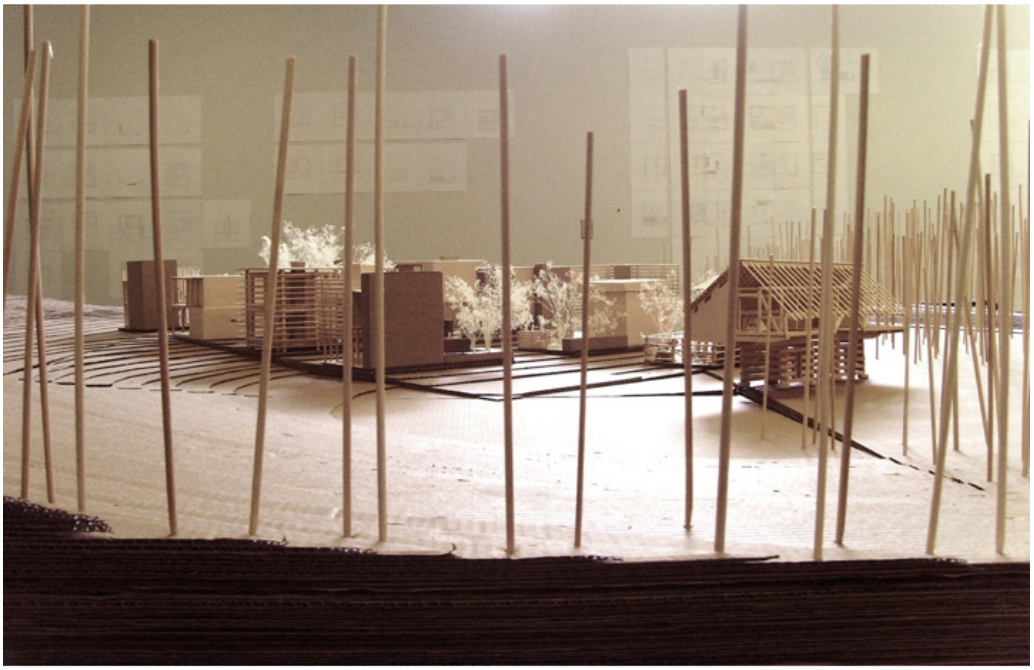
• To start with architecture that organizes:

- simple *spaces* based on
- a simple *site,* in this case on a farm in the Smokey Mountains
- *simple construction,*
- basic *human activities,* in this case a house and garden
- *essential human experiences,*
- and fundamental *architectural ideas.*

...With precedents that could be visited and measured....

- Learning to draw by drawing what was relevant to the design process....
- Learning to model and to abstract from concrete conditions.

...Tectonics that are governed by materials and natural forces. Space arising from its *five fundamental progenitors.*



Habitat + Hortus – Design in Context

.....Site and community design *in context,* with both gardens and houses.

.....Architects *collaborating* in the beginning with Landscape Architects

.....Inhabited by people, in a living landscape.

Final Review Event

....And producing their own exhibit....All in One month.

- Begin at the beginning
- Begin whole, with all the parts
- Develop whole through each stage

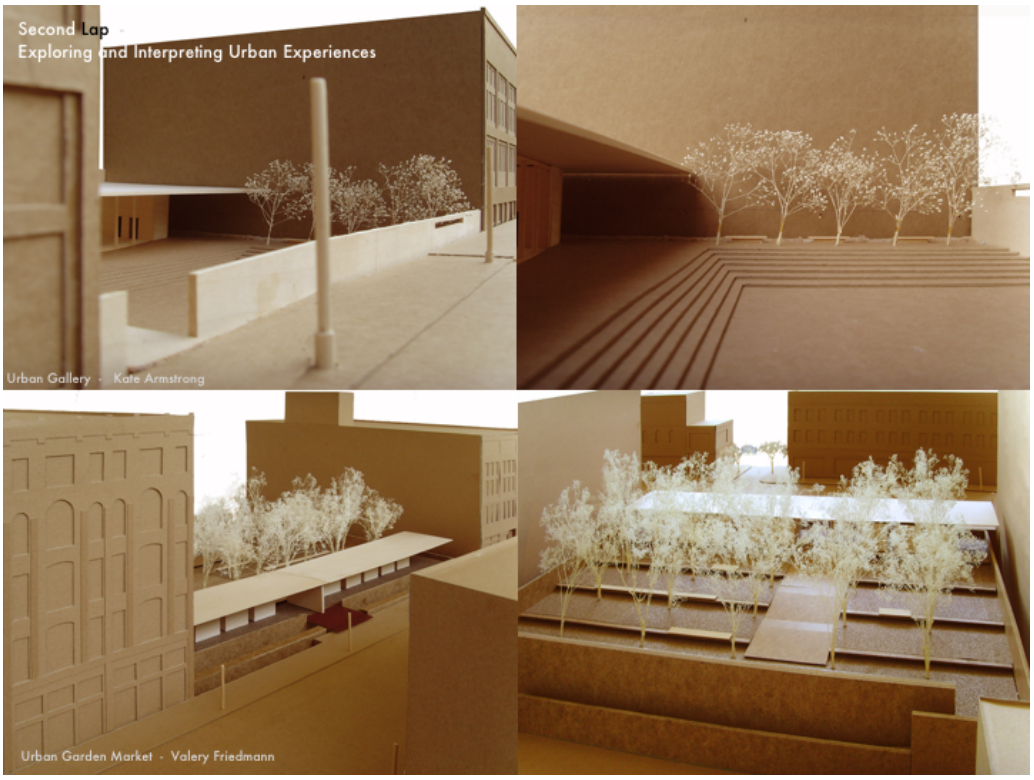
…..Complexity unfolding, not additively at "advanced" future levels, but rather, throughout an education that begins in the beginning.

- Whole, with all its parts…..
- Developing whole like all living things —through each stage…..
- From fundamental to complex.

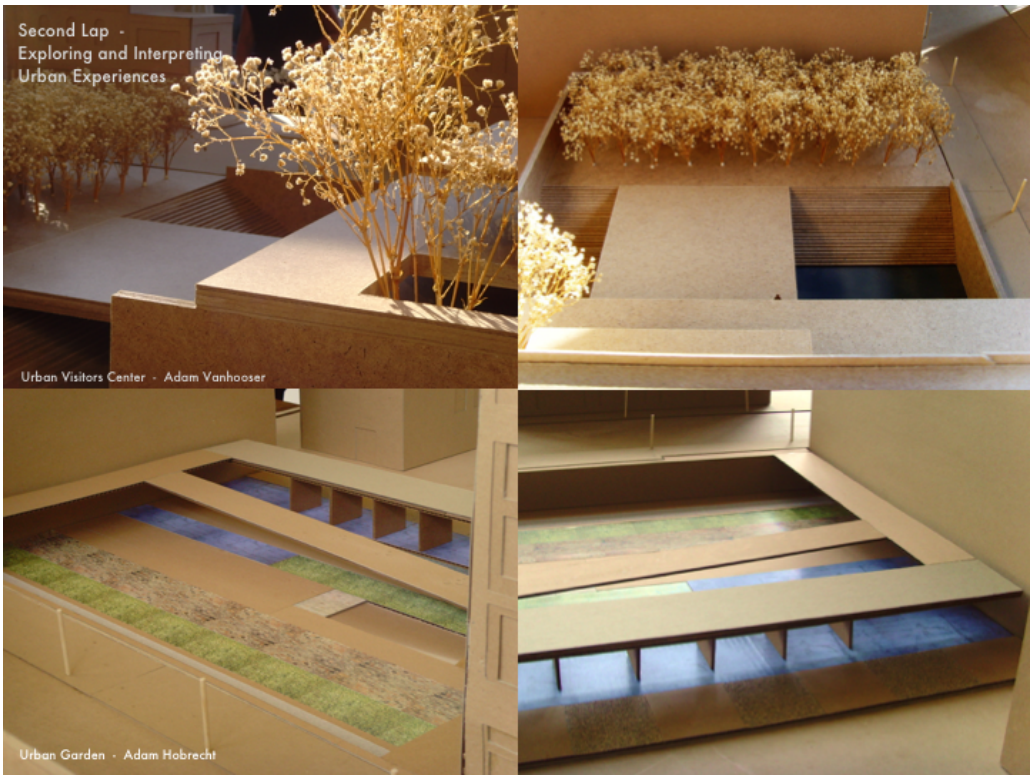
Second Lap

Operating in an Urban Context - A Visitors Experience to Knoxville

The second 4-week round was urban rather than rural.



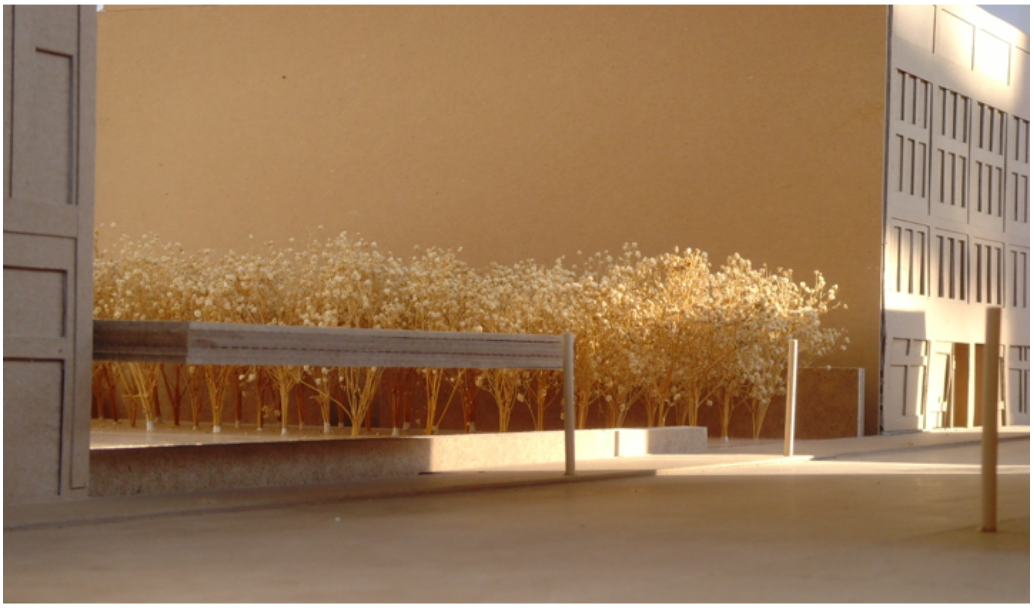
Students designed solutions for characters from the city, as artists places, market gardens, and visitor's centers. Collaborating again between beginning landscape architects and beginning architects.



Focusing on meaning and experience as generative.....

Indoor and outdoor space together.....

Historic and contextual responses.



Urban Visitors Center

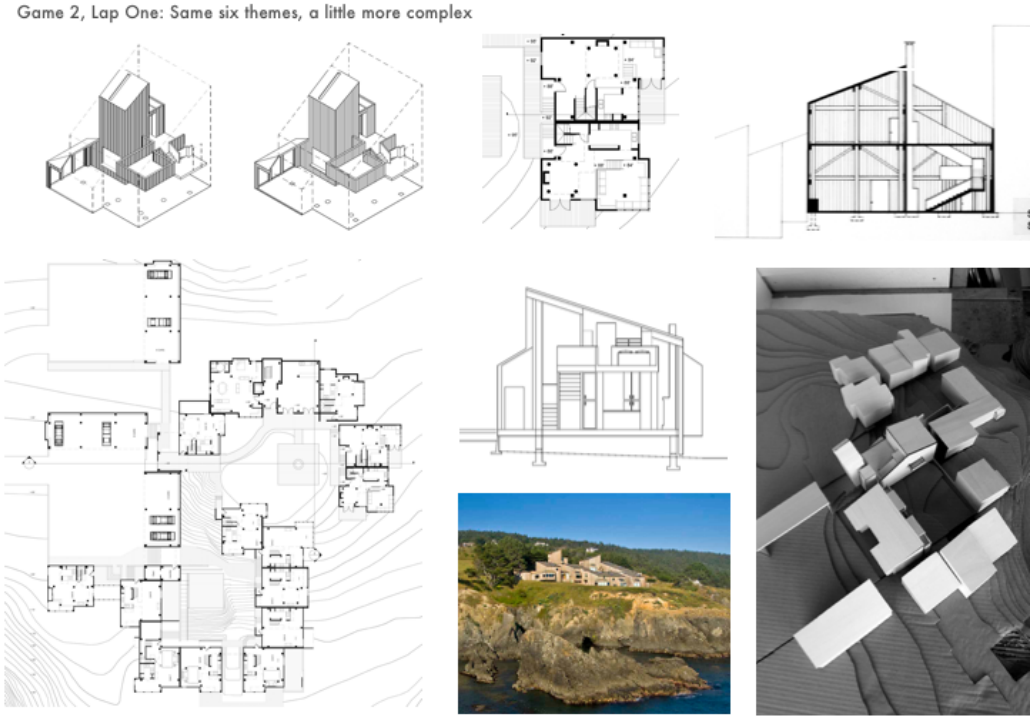
and doing ordinary things with simplicity.

From the beginning, to teach design by having students design buildings with all of the major themes present in real buildings—and, over time, to increase their capacity in each of the six aptitudes—from fundamental to complex.

Our proposition was,

From the beginning, to teach design by having students design buildings with all of the major themes present in real buildings—and, over time, to increase their capacity in each of the six aptitudes—from fundamental to complex.

Game 2, Lap One: Same six themes, a little more complex

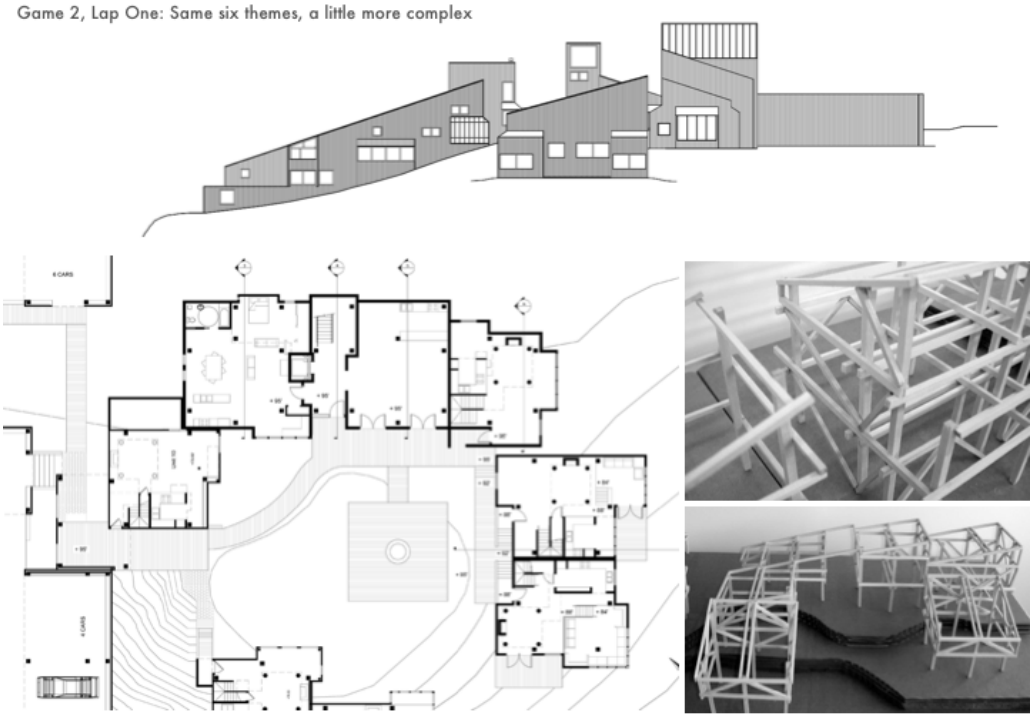


Sea Ranch Condo One Extension

This studio followed the summer intro studio. The project is for an addition to Sea Ranch. Again, it follows the six ever-present themes in architecture, but at one step up in complexity:

- Spatial order present in the precedent
- A coastal, rural site
- Timber construction logics
- Private and community uses
- Experiences along an intimacy gardent
- The ideas of vernacular expression and relationships to landscape

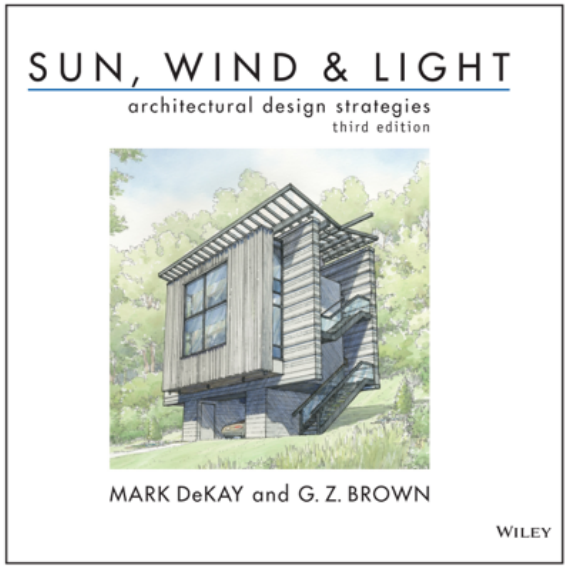
Game 2, Lap One: Same six themes, a little more complex



Sea Ranch Condo One Extension

They collaborated in teams for cluster and courtyard design and designed individual condos.

They built structural models of their designs, and learned both ink (in the elevations) and CAD (for the plans).



We also used strategies from my most recent book, which has 150 schematic design tools and strategies. Even at a first year level, students were able to design with “Level one” concepts and solutions:

- Buildings lighted by the sky
- Cooled by the wind
- Heated by the sun

Game 2, Lap Two

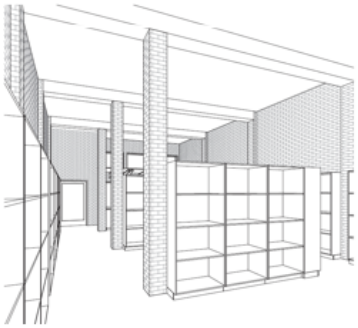
downtown masonry live/work

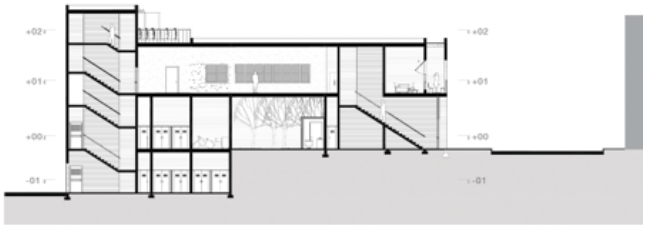
This was followed by a second project on an urban slot site, for mixed-use housing and commercial. Again, the six themes, a bit more complex”

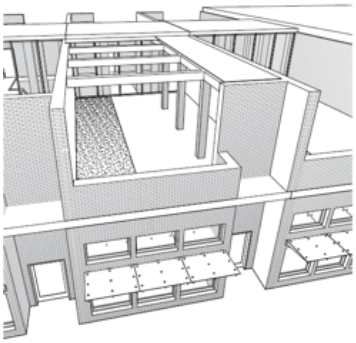
- Contained space & working in section
- Response to urban context
- Logics of masonry
- Experiences of daylight and entry
- Programming for mixed use
- *and* Ideas across multiple scales

Game 2, Lap Two

- WHAT IF buildings were learned as 'wholes' from the first studio?
- WHAT IF each project, no matter how simple, was conceived as having site, use, material, idea, space & experience?







downtown masonry live/work

By employing this model of simultaneous learning along multiple lines at developmentally appropriate levels of complexity, we were able to achieve results in two semesters that the program had never seen in double or triple the time. The fundamental level of any line is not hard to learn. The fundamental relationships among the perennial issues make more sense when they are integrated.

Playing on a New Field
Auburn University Undergraduate Summer Studio

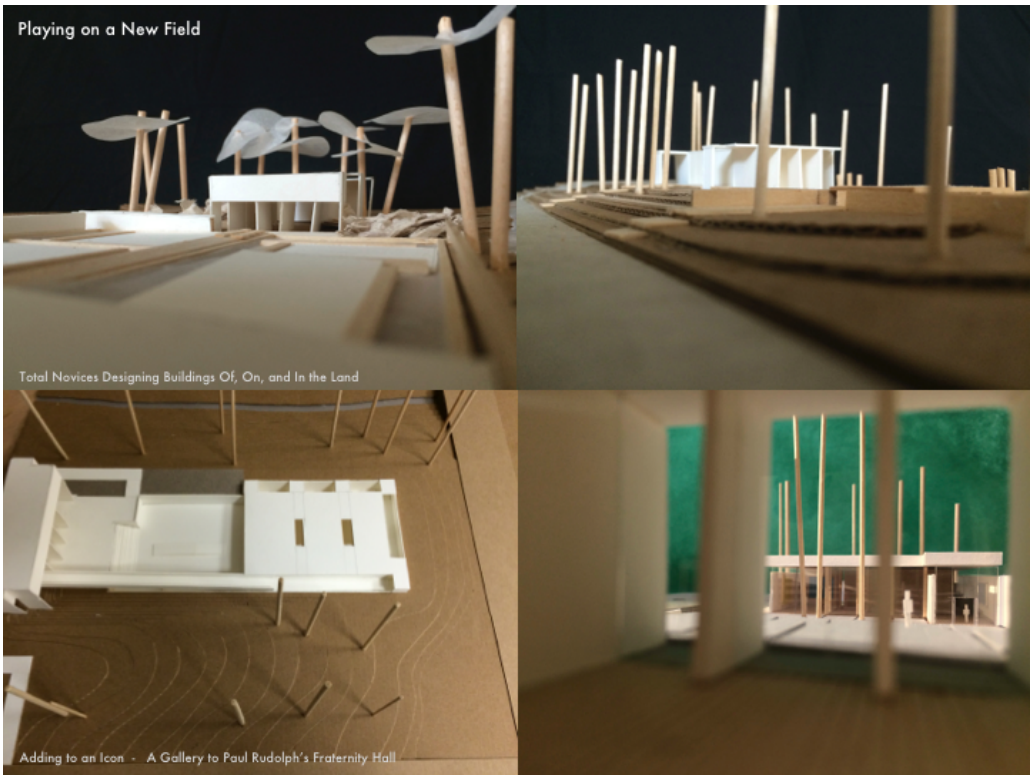
Adding to an Icon - A Gallery to Paul Rudolph's Fraternity Hall

This had worked pretty good we thought with beginning 26 year olds. But would it work for 18 year olds? Hansjoerg spent a summer recently with Matt Hall, one of our former colleagues, now at Auburn. Matt had actually figure prominently in various roles of the summer program at UT.

Playing on a New Field
Auburn University Undergraduate Summer Studio

Work with Physical Models

So they gave a challenge to add a gallery and courtyard to Rudolph's Fraternity house. Again, the themes are present including real sites and precedents, giving rise to situated theory.



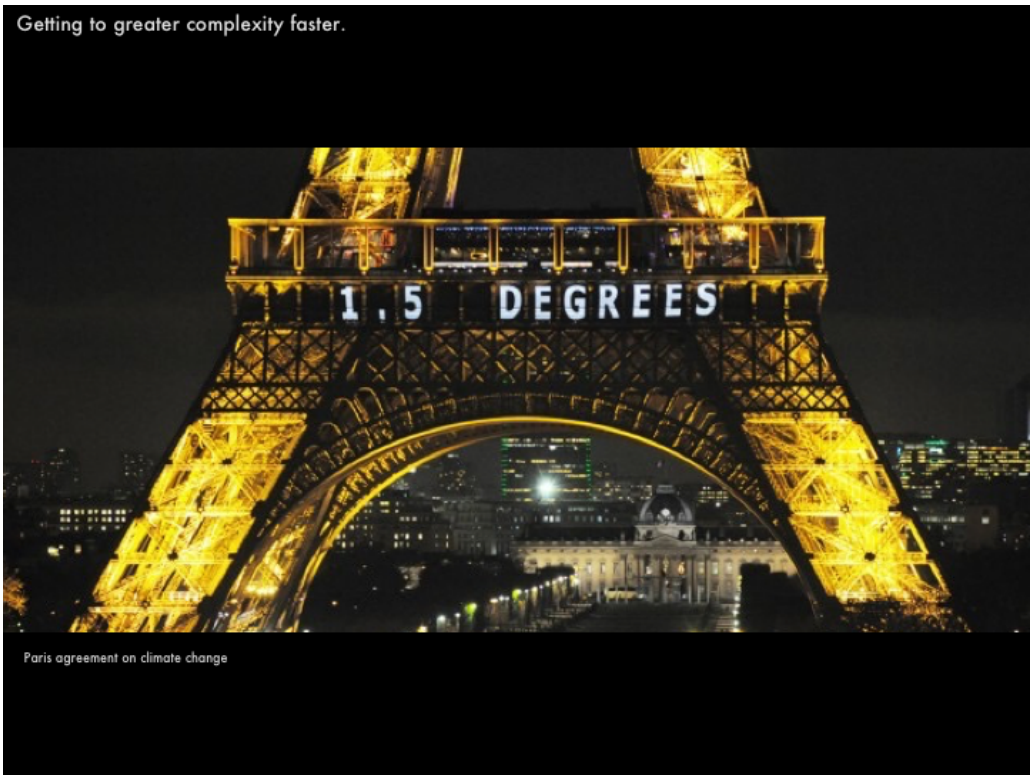
....A simple *use* that beginners can handle.

....A specific way of building

....Challenges for rich human experiences

....Abstraction, and analysis placed in service to building.

And in a very large class of total novices, the result seems to suggest that it is not only graduate students but beginners at any age who can handle “Beginning with Buildings.”



I believe this is an important and necessary evolution. Architecture faces huge social and environmental challenges like never before. A recent *Design Intelligence* survey has 73% of Deans marking climate change as the number one issue facing education.”Solving the climate crisis by design” requires a high order of complex thought.

Any curriculum is limited in time. The complexity students can address in later years is contingent on how complexity is addressed in the beginning. And so we see great promise in Beginning with Buildings.

Epilogue

Absent students' grasping composition informed by a simultaneous range of issues.....

We begin again to teach first year in fifth year.

Both Hansjoerg and I also frequently teach studios that combine 5th year undergraduate with final year graduate students. Despite what we see as some rather radical levels of improvement, neither the undergraduate nor the graduate program curricula at UT has continued along these lines.

We do not therefore currently begin with Buildings We have kept our *additive and sequential* model and have ignored development.

So.... sadly, absent students' grasping nearly the approach of architectural composition informed by a simultaneous range of issues, we begin again to teach first year in fifth year.