Challenging the Pattern

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“...the most wonderful places of the world were not made by architects but by the people.”

Christopher Alexander, et al

A Pattern Language
Christopher Alexander and Yona Friedman suggest the architect is necessarily limited in his or her ability to construct the built environment for all people, or should be limited in favor of participation of the non-architect.

While I agree that all parties of the world should take part in design and construction, I assert that architects through their training are better equipped to design and construct our built environment and in this sense, I am directly challenging the claims made by Alexander, et al.
Christopher Alexander’s book, *A Pattern Language*, uses a complex computational system distilled down to an easily recognizable system of patterns and instructions. It was designed to allow the novice to design their homes and neighborhoods while only relying on the system.

The system contains 253 various patterns that are intended to aid in the development of towns, buildings and construction.

Alexander and team envision a world of inclusive architecture designed and built by all people, not just architects.
Freidman’s Ville Spatiale concept is a space-frame construct at varying scales, but mostly represented at city-scale. Within this framework, users can configure their own spaces, fitting their homes within to create an expansive, user-driven community.

“Inhabitants will be free to decide how their dwelling should look. To get to a balanced combination that would serve to avoid conflicts [Friedman] invented a model for communication.”

**PRECEDENT STUDIES**

**VILLA SPATIALE**

YONA FRIEDMAN

Friedman’s Ville Spatiale concept is a space-frame construct at varying scales, but mostly represented at city-scale. Within this framework, users can configure their own spaces, fitting their homes within to create an expansive, user-driven community.

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Along the lines of A Pattern Language, Flatwriter was software conceived by Yona Friedman to allow the non-architect to redesign their neighborhoods with relative ease. Prior to and as a companion to flatwriter is a comic book-like instruction manual, what Friedman calls his ‘manu-
als.’

“The individual must have an adequate level of know-how in order to be able to make his own decisions. To impart knowledge in a form that could be easily digested, Friedman developed a vehicle for communication, which he calls his ‘manuals’. These are handbooks in the form of a comic book that explain, step by step through text and drawings, issues and choices in architecture and urban planning.”

These manuals would be the basis for his invention of flatwriter, which as it sounds allows users to design their flats.
Home design software comes in many flavors, pictured is the “Expert Version” of 3D Architect Home Designer by Elecosoft.

What comes with free versions from the same software developer and in similar software is a clunky tool with a steep learning curve; likely steeper for those untrained in building design and production. Unlike more elegant software like Sketchup, it does offer rudimentary material take-offs to establish pricing baselines. However, the software exists as a pattern language of its own; further study regarding the implications of technology is a goal of this thesis.
LIMITATIONS

As noted by Friedman, the end user must be capable of managing the technology and built environment autonomously; this assumes the end-user understands building practices, how to fabricate complex assemblies and can do so safely.

Alexander offers a system of patterns to accomplish that end but ultimately the pattern system is a tool for training the non-architect. At what point does the non-architect become an architect?

Ultimately the question of the architect arises. Does training define the architect? Does building or some other subjective or objective metric? Through the hypothetical process of end-user training, adaptation and construction, does the user not become an architect of sorts?
THE KIT OF PARTS

LOBLOLLY HOUSE
KIERAN TIMBERLAKE

Kieran Timberlake took the kit of parts approach to an extreme outcome, however highly custom. The system designed was intended to become a system that was reconfigurable.

Kieran Timberlake studied mass-production methods extensively, citing OEM design philosophy and aerospace production (with performative goals being the primary driver of design) not unlike attempts by architects like Le Corbusier.

Additionally, Kieran Timberlake paid particular attention to aesthetics and end-user needs as well as context, tailoring the home for the resident, the site and avoiding the one-size-fits-all approach of the modernists.
The inspiration for the thesis comes from my midterm project in studio; a regular gridded system intended to be modified and encourage an ad hoc build-out. This system would be abandoned later in studio but establishes how I might follow through with this thesis.
THE EXPERIMENT

In an effort to test my thesis against Alexander and Friedman’s theories regarding novice architecture, I have devised a simple, not scientific experiment.

Volunteers will be provided a kit of parts, a set of tools as well as a basic pattern language as to how to assemble those parts, but not are provided an exclusive set of instructions. Ideally participants will begin to push the limits of the instructions. Users will be made aware the project is an experiment in architecture and encouraged to “think outside the kit” using only kits parts and produce something, anything in a thirty minute time frame within the bounds of their 12” x 12” base board. Data will be recorded in the following ways:

A video recording of the activity of assembly.
Notes taken to assess the process and progress.
The final models will be collected, rendered permanent with glue and then recorded in Rhino.
The final output of each trial will be a model as built by the participant, an axon, plan and two elevations.

This experiment doesn’t seek to identify an ideal architecture, only determine if there is a difference between the novice and professional in producing what amounts to a basic sculptural form. I am not trying to perform a demographic analysis beyond that, it is intended to be inclusive of all people.

The vast majority of trials will take place over the summer months in preparation for the beginning of the Fall Semester.
STUDFINDR
BESLER & SONS

Studfindr is a software project by Besler & Sons that generates wall stud solutions for complex geometries. These geometries are hand-drawn on a touchscreen and the solutions are rapidly generated by the software into a three dimensional wall. The software then catalogs the design. Using this solution, a builder can then precisely reproduce the wall from dimensions from the software.

"StudFindr, a project by Besler & Sons in collaboration with ATLV, is cataloging and compositing digital models of user designed rooms together to create a new design, which will one day be built"
INSTRUCTIONS

*THESE ARE SUGGESTED OPERATIONS BUT NOT EXCLUSIVE*
An undesired outcome of this experiment is single-perspective subjectivity. Objectively assessing the outcome is important to the success of this thesis.

To avoid my singular subjectivity, some precautions will be taken starting with the collection of a large dataset per trial and inviting outside input in assessment.

Ideally, the outcome of the experiment will take place in a curated gallery format with outputs displayed anonymously, encouraging participation of anyone to share their analysis of the outcomes in a balloted format.

Should my theory be correct, the jury will identify trained users through their outputs.
FUTURE STUDY

Distilled down, there are two possible but equally interesting outcomes:

1. My thesis is proven correct and the model outputs of trained architects are identified by the jury. From there, my goal would be to assess whether off-the-shelf technology has the potential to blur the lines between architect and novice.

2. My thesis is unresolved by the experiment, to which I will have the opportunity to study Alexander’s pattern system in a different way, by treating each output as a separate pattern in a larger assemblage.

“It is possible to make buildings by stringing together patterns, in a rather loose way. A building made like this, is an assembly of patterns. It is not dense, it is not profound. But it is also possible to put patterns together in such a way that many many patterns overlap in the same physical space: the building is very dense; it has many meanings captured in a small space; and through this density, it becomes profound.”5
While Yona Friedman and Christopher Alexander have developed intensive systems of language intended to be accessible by all, there are some problems. Their systems offer knowledge of architecture to a much broader audience, but in doing so invariably create architects by experience.

Through challenging the application of this pattern language in a more simplified format, this thesis hopes to delve into the possibilities, first by identifying whether there exists a difference between the professional and novice, and then to assess how far that difference may go through the introduction of technology.


The experiment as structured for Thesis Preparation final review privileged professional users over the novice and the first output using the prototype kit seemed to verify this. In an effort to determine the differences between groups without ensuring these differences, several steps will need to be taken.

The kit itself will need a major revision or series of revisions since it is the fulcrum from which this thesis pivots. As well, revisions to the instructions are necessary as they are the pattern language through which the kit becomes activated.

As offered by the committee, a multiphased approach should taken using different kits. Agility in the design and implementation is necessary to accommodate unforeseen outcomes as they happen.

The best approach might be a first phase to determine the validity of the language with a simpler kit. The second phase could be to verify the kit itself with an eye on the spatial relationships that can be developed.

Rather than a ballot system to identify the outputs from different users, the gallery depicted in these pages could be set up to form a dialog between groups and discuss the value of the language and kit; rather than try to form a discourse between participants, the kit and language system would be on trial through the dialog, so-to-speak. Alexander and his team developed their Pattern Language over eight years, while this thesis will attempt to engage it in discourse in less than eight months.