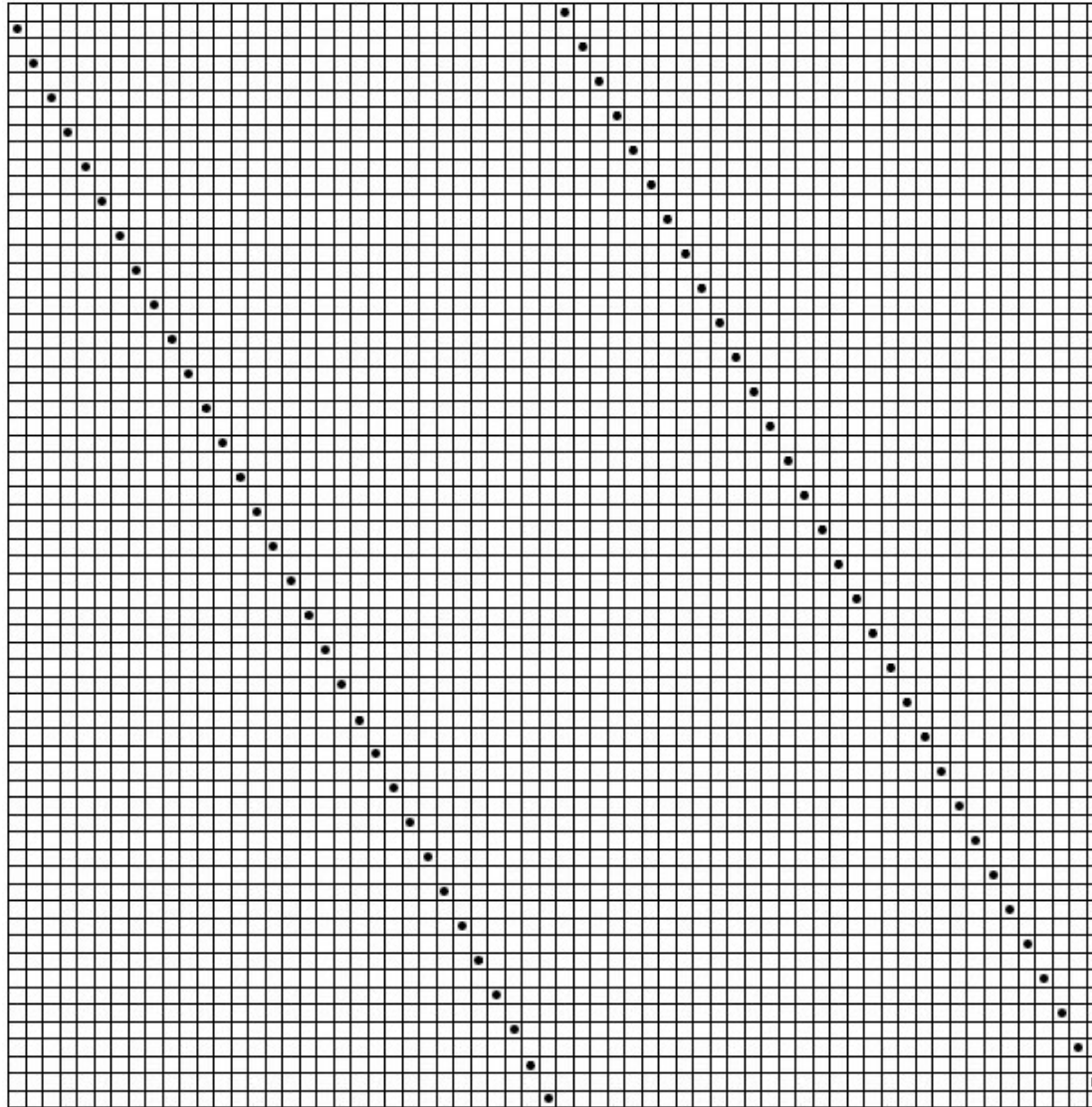
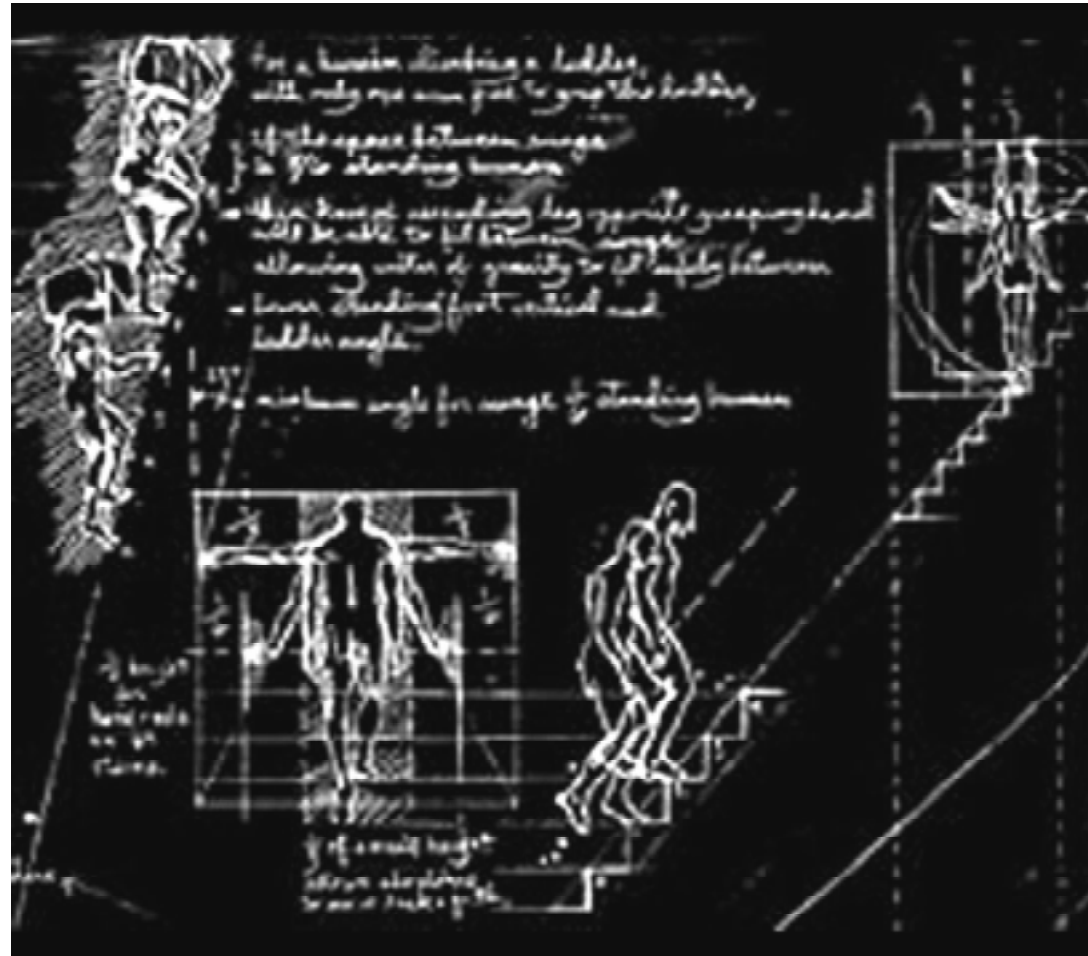




64x64 matrix.



**mathematics** *n.* : the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions and of space configurations and their structure, measurement, transformations, and generalizations *2.* : a branch of, operation in, or use of mathematics



Picture of Stair step drawn by Rad Dike.

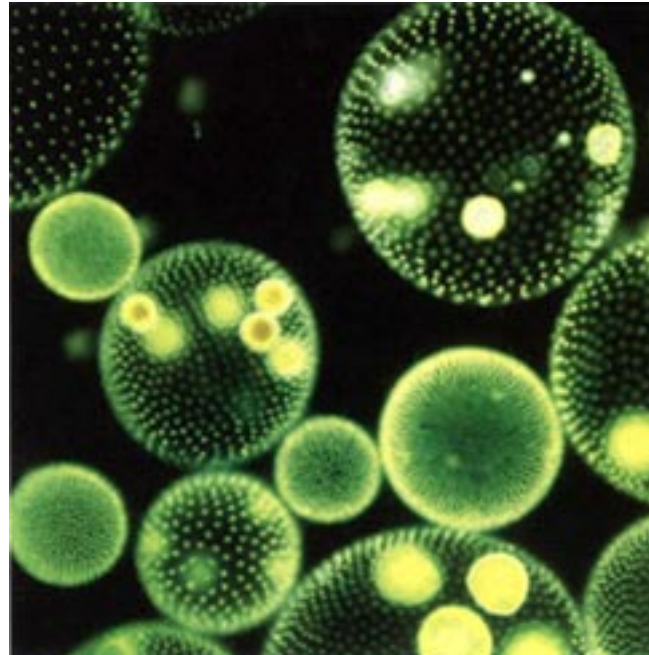
From the above *mathematical* breakdown, we can clearly see the pattern of the repetition of figures. The simple number that has its own structure represents simplicity. The puzzling number, which is more complicated, will become complexity. The structure of its rules is hidden behind the scenes somewhere. Even though we recognize its structure, sometimes we can easily see its structure, other times we cannot. Architecture also dwells on the principle that simplicity can become complexity when it sets its rules intricately.

The photograph of the stairs in Cowgill Hall shows the same repetition of systematic steps. Each floor has the same height, same dimensional landing and each step has the same height and same dimension. All of its structure contains a systematic repetition of roughness and smoothness.



Stairs in Cowgill Hall, VPI&SU Campus.

**na-ture** *n.* **1 a** : the inherent character or basic constitution of a person or thing : ESSENCE **b** : DISPOSITION, TEMPERAMENT **2 a** : a creative and controlling force in the universe **b** : an inner force or the sum of such forces in an individual **3** : a kind or class usually distinguished by fundamental or essential characteristics **4** : the physical constitution or drives of an organism; especially : an excretory organ or function — used in phrases like the call of nature **5** : a spontaneous attitude (*as of generosity*) **6** : the external world in its entirety **7 a** : humankind's original or natural condition **b** : a simplified mode of life resembling this condition **8** : the genetically controlled qualities of an organism **9** : natural scenery



Flagellates.

## Meditation & Materials

Human beings perceive all environmental materials from their simplicity to complexity. It starts from the fact that a point is a basic unit in all arts that can extend. A point becomes a line, a line becomes a plane, and a plane becomes a form with volume. The volume needs mass to make it stand.

The senses of material affect human aesthetic perception from two dimensions, (e.g., shape, color, texture) to three dimensions and imply more dimensions in the human minds. The inner force of materials inspires itself from its unit and environment within the rules of *nature*. According to Garry Thomson (The Skeptical Buddhist, P.89),

"Any kind of object, whether atom, human body or planet can only feel the presence of other bodies if there is a force between them. The most familiar force is the force of gravity. A second force is the electromagnetic force. There are two others, referred to as the strong force and the weak force. We stand two instead of flying off into space because the force of gravity pulls the earth and our bodies together. We see things because they emit light rays which interact with our eyes and light rays are electromagnetic. We feel thing to be solid because their electromagnetic nature sets up a force field which repels the field in our fingers. This gives us the sensation of touch."

Thus, all matters are under the rules of nature.

The force of the inner spirit of material is a principal force of all matters.



A montage of Jupiter with four of its moons.



Aluminum crystals.



Palladium crystals.

**spir-it** *n.* *1*: an animating or vital principle held to give life to physical organisms *2*: a supernatural being or essence: as a capitalized: HOLY SPIRIT *b*: SOUL *2a* *c*: an often malevolent being that is bodiless but can become visible; specifically: GHOST *2* *d*: a malevolent being that enters and possesses a human being *3*: temper or disposition of mind or outlook especially when vigorous or animated *4*: the immaterial intelligent or sentient part of a person *5 a*: the activating or essential principle influencing a person *b*: an inclination, impulse, or tendency of a specified kind: MOOD *6 a*: a special attitude or frame of mind *b*: the feeling, quality, or disposition characterizing something *7*: a lively or brisk quality in a person or a person's actions *8*: a person having a character or disposition of a specified nature *9*: a mental disposition characterized by firmness or assertiveness

"What a column is in steel or concrete is not yet felt as a part of us.

It must be different from stone.

Stone we know and feel its beauty.

Material we now use in architecture we know only for its superior strength but not for its meaningful form. Concrete and steel must become greater than the engineer.

The expected wonders in concrete and steel confront us. We know from the spirit of architecture that their characteristics must be in harmony with the spaces that want to be and evoke what spaces can be.

Forms and spaces today have not found their position in order though the ways of making things are new and resourceful."

—Louis I. Kahn. from Alessandra Latour, ed. Louis I. Kahn: Writings, Lectures, Interviews. p75-76.

What are the characteristics of materials that inspire people to meditate?

The relationship between feelings and materials is considered in order for function and ecstasy to go hand in hand. People know how to produce things with their inner spirit based on qualifications of materials. (E.g., strength, massive, form.)

For meditation, people will feel more comfortable being surrounded with natural materials than with artificial. In this project, four kinds of materials are proposed for experimentation in the meditation space:

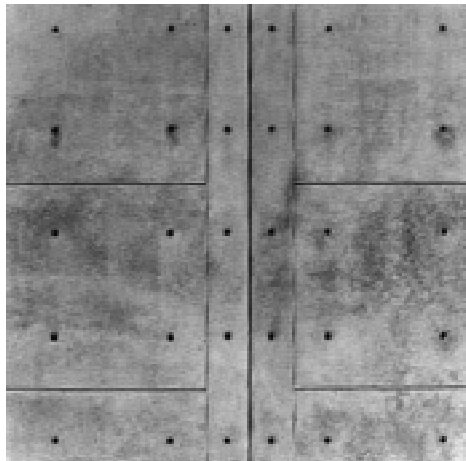
Concrete

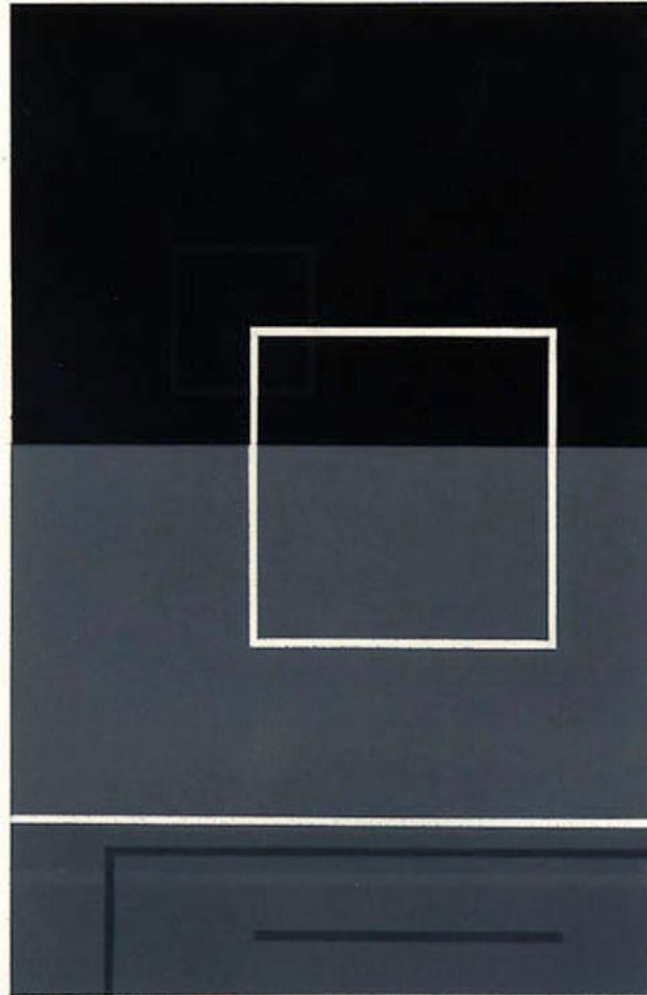
Metal

Wood &

Glass.

As Kahn says, "Architecture though I feel what is its spirit, when asked of its nature I have no touch with it.... The pool, a chair, a school, a palace, or a factory has its light of its presence. If it but what it wants to be, so it can reach the house, be it ever so simple just so its essence is its life, is art."





## Modular: Square

The roles of modularity in architecture should be as a system that covers all man-made objects. A *modul* acts as a simple basic for architectural works. As Le Corbusier states in his book, The Modulor, A Harmonious Measure to the Human Scale Universally applicable to Architecture and Mechanics, (p.185), "The modular is a working tool, a scale to be used in composition... for the mass-production of manufactured articles, and also for the creation, thought unity, of great symphonic works of architecture."

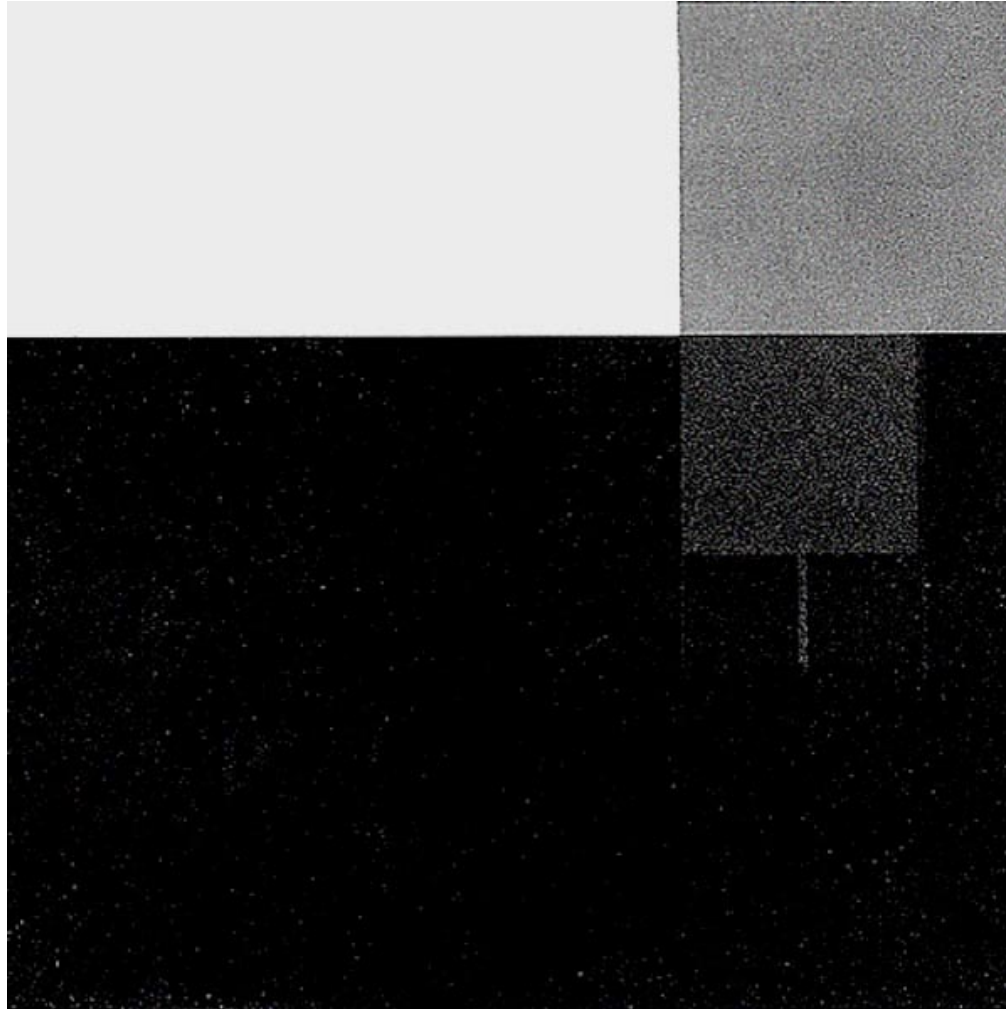
Thus, I set squares as modules of the grid lines in my design to follow the concept of simplicity in meditation.

Printing works: study on simplicity of squares.

**mod-u-lar** *adj.* 1 : of, relating to, or based on a module or a modulus 2 : constructed with standardized units or dimensions for flexibility and variety in use  
- *mod u lar i ty* - *noun*, *mod u lar ly* - *adverb*

**square** *n.* 1 : an instrument having at least one right angle and two straight edges used especially to lay out or test right angles 2 : a rectangle with all four sides equal 3 : any of the quadrilateral spaces marked out on a board for playing games 4 : the product of a number multiplied by itself 5 *a* : an open place or area formed at the meeting of two or more streets *b* : BLOCK 6 : a solid object or piece approximating a cube or having a square as its largest face 7 : an unopened cotton flower with its enclosing bracts 8 : a person who is conventional or conservative in taste or way of life







A map of Thailand and its surround.



An old traditional painting about the settlement of Thai architecture near a river.

## Experiments

The two projects presented on the pages that follow pursue the experiments on lighting and materials with a water element. Both of the projects are located in my home country, Thailand. Thailand has a strong overcast daylight almost throughout the year; the average temperature is about 23.7 - 32.7 degrees Celsius.

Thai architecture is very much related to water. Since the beginning of recovered history, Thai people have settled their houses near a river or a canal and the water culture was started from there. The river is not only for consumption, but for communication as well.

Later on, Thai architecture has been influenced by the West and the surrounding countries. Thai architecture has been developed with its own characteristics for 1500 years, and Bangkok has been the capital province for more than 200 years.