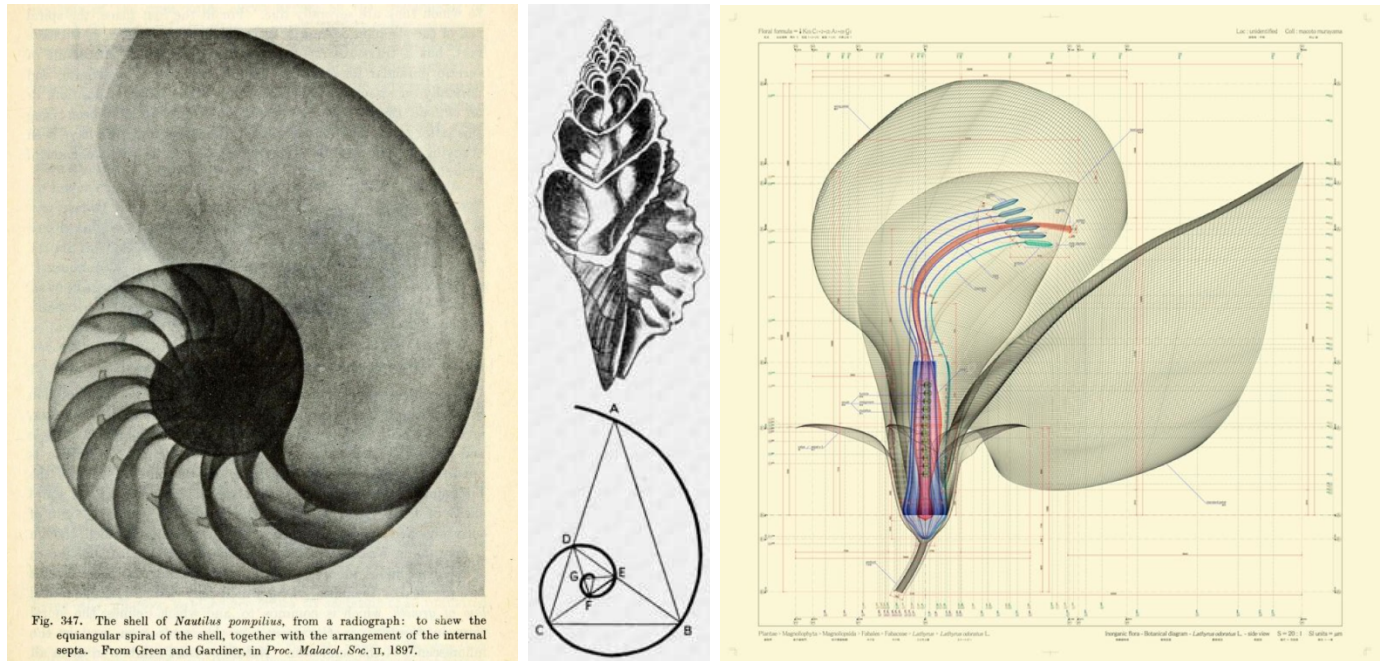


# HYDROLOGIC I

## BRIEF I: Shell



(left) D'Arcy Thompson, *On Growth and Form*. (right) Macoto Murayama, *Inorganic Flora*

"...that vision or concept will come through total risk, freedom, and discipline." - Eva Hesse

"You fail only if you stop." - Ray Bradbury

"Even well-armed males, who, it might have been thought, would have altogether depended for success on the law of battle, are in most cases highly ornamented; and their ornaments have been acquired at the expense of some loss of power. In other cases, ornaments have been acquired at the cost of increased risk from birds and beasts of prey." (Darwin, *The Descent of Man*, 1981, Book II:123).

The semester theme is **hydrologic**, defined as

- 1: the continuous and cyclical interactions between Light, Air and Water that power our planet
- 2: the search for Light, Air and Water by all living things
- 3: the conditions of health and quality of life as influenced by light, air and water

This semester has **3** interrelated briefs. Each brief asks that you exercise control over the materials you deploy, devise ways of describing the actions you perform, use systems of measurement and representation, and challenge the relationships between objects, bodies, space, and atmosphere. The studio's dictum and desire is that by the end of the fall, you will be well versed in the common language that we share as architects, understand both its **research** and **propositional** modes and have a clear sense of the **material properties** of the elements you engage.

The shared architectural language emerges through its own logics and 'grammar'. It allows us to frame our divergences and to formulate individual expressions of form and thought. It is the language we use to transform ideas into elements present in the physical world. We use it to vigorously explore and diligently observe our findings in order to resist preconceived notions.

COLUMBIA UNIVERSITY: GRADUATE SCHOOL OF ARCHITECTURE, PLANNING, AND PRESERVATION  
**CORE I STUDIO A4001: Fall 2013**

Coordinator: Galia Solomonoff

Critics: Christoph Kumpusch, Paula Tomisaki, Pep Aviles, Janette Kim, Mark Rakatansky, Marta Caldeira, Josh Uhl

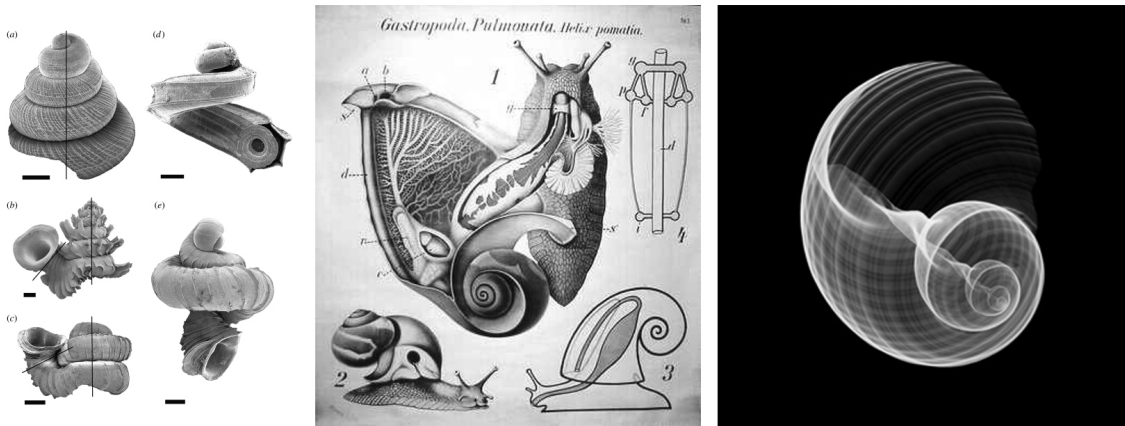
Studio Assistant: Juan Pablo Azares

**Architecture does not need to be a building, yet it is always a construct that structures the relationship of space and form.**

## narrative:

**Measure:** In 1795, the gram was defined to be equal to "the absolute weight of a volume of pure water equal to a cube of one hundredth of a meter, and to the temperature of the melting ice." For practical purposes though, a metallic reference standard was required, one thousand times more massive, the kilogram. Then the mass of one liter of water was precisely determined. Scientists chose to redefine the standard and to perform their measurements at the temperature of highest water *density*, which was measured at 4 °C equal to 39°F."

**Context:** Snail shell – Gastropods grow their shells by secreting calcium carbonate and trace materials in their surroundings as they grow. Transverse stria along the surface act as growth rings, and form each year with variations that register changes in diet, low pH in the soil, and other environmental conditions. Mathematical models championed by Darcy Thompson among others describe a logarithmic spiral pattern in the shell, but others point to irregularities connected to environmental mutations, predation, sexual selection, camouflage, and other influences..



## thesis:

The response to this brief requires minimal input from your critic. It requires self-direction and ability **to read the shell**. Observe, account and **translate** your findings into an effective **drawing/diagram**.\*\*

The objectives are:

- **To decipher ordering systems**
- **To understand the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.**
- **To understand and communicate the interrelation of function and form**
- **To demonstrate ability to raise precise questions, use abstract modes to interpret information and reach well-reasoned conclusions.**

\*\*We request that you strategically observe your subject, calculate your actions, and assume accountability for your results.

COLUMBIA UNIVERSITY: **GRADUATE SCHOOL OF ARCHITECTURE, PLANNING, AND PRESERVATION**  
**CORE I STUDIO A4001: Fall 2013**

Coordinator: Galia Solomonoff

Critics: Christoph Kumpusch, Paula Tomisaki, Pep Aviles, Janette Kim, Mark Rakatansky, Marta Caldeira, Josh Uhl

Studio Assistant: Juan Pablo Azares

## Tasks:

1. You will receive a shell on September 4, 2012.
2. Scan/Draw the shell at least 12 different times.
3. Document the size, color and weight of the shell.
4. Select 6 out of these 12 scans. At some point you may choose to alter the shell in some way.
5. Register the shell's characteristics through a composite, layered drawing.
6. Devise a strategy to layer the drawing in a way the can be read without a verbal explanation.

## Deliverables:

- One landscape 24" x 36" drawing that shows 6 scans of the shell (layers can overlap, horizontal or vertical)
- Consider all the techniques that you know to explain **order, material and change**. These techniques may include section drawings, diagrams, timelines, and charts.
- Consider the drawing medium – opaque vs. transparent, gloss vs. matt.
- Make your drawings express as much information as possible: convey *depth, thickness, motion, rotation, material, surface, geometry, context, aesthetic character, etc.*
- Use **line weight** to reveal what is being cut, what is hidden, what is changing, and what is beyond.
- Write a paragraph, (350 words maximum) about your findings to verbally present at your review.
- Label the drawing with your; LAST NAME/GSAPP/CRITIC NAME/FALL 2012/BRIEF

## rules:

- Understanding that color is a measurable element; it should be mapped– RGB, CMYK, or other codification so that it is reproducible and indicates quantifiable differences.
- Photos can be used as documenting devices/process but **not as final presentation**.
- Choose a consistent format – scale, measure, lettering – throughout the task.
- You may choose to impart **one action** to the shell: heat, slice, cut/sand, flatten, pin, peel, laminate, torque, freeze.

## timeframe:

- Deliver by September 13<sup>th</sup> – All Studios, 2 sections reviews

## references:

Jonathan Massey, *Organic Architecture and Direct Democracy: Claude Bragdon's Festivals of Song and Light*, pp. 578-613 (Dec., 2006)

Elizabeth Grosz, *Art and the Animal*